DEPARTMENT OF CORRECTIONS RISK INTERVENTION SERVICES OUTCOME EVALUATION

CRG
Crime Research Group

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Executive Summary

Background
In 2016, four of the Department of Corrections facilities began offering Risk Intervention Services-- an innovative suite of services including behavioral programming curricula, educational courses, and workforce development. Risk and other assessments at prison intake determine who is eligible to participate in RIS and identify which services should be administered.

Methods and Objective
This study explores the impact of RIS participation for individuals who received behavioral programming services between 2016 and 2019. RIS participation data for 731 individuals was matched into Vermont Crime Information Center data to examine RIS participation's impact on recidivism. Researchers considered RIS's impact using the statutory definition of recidivism, as well as academic conceptualizations of recidivism.

Key Findings
Using three different definitions/measures of recidivism, the study found RIS participants to have a recidivism rate of 14% (modified statutory definition), 27% (running recidivism rate), and 23% (three-year recidivism rate. These recidivism rates are lower than the 89.96% recidivism rate for high risk/high need Diversion participants found in a 2019 study.

Using the three-year recidivism rate for any new conviction, analysis found no statistical correlation between an individual's risk score and subsequent conviction. This suggests RIS is having a positive impact on participants recidivism rate.

Notably, RIS participants with a domestic violence conviction (90) had a three-year conviction rate of 21%. This was lower than the rate of recidivism in a 2011 study which found a recidivism rate of 37% for those with prior history of domestic violence conviction.

Limitations
During the study period (2016-2019), the DOC was not consistently or uniformly collecting data on all Risk Intervention Services. As such, this study was limited to exploring the impact of behavioral programming services on recidivism and did not investigate the impact of corrections education or workforce development services. Further, data on those who were eligible but declined and those whose sentences were too short to participate was not available. Therefore, the study was not able to investigate if the program was serving marginalized people equitably.

Recommendations
The DOC Risk Intervention Services model appears promising.

The DOC should consider creating an administrative control group of people who did not receive services when the assessment tools were validated. Because these individuals did not receive the service, they can provide a benchmark recidivism rate for comparing RIS recidivism rates.

Future studies should use a three-year recidivism rate and focus only on new convictions rather than furlough violations and readmissions. This will make it easier to compare rates across years and programs and give a more holistic understanding of a person's behavior after programming is complete.

Acknowledgements

Table of Tables and Figures

List of Abbreviations

DOC   Department of Corrections

DVSI-R   Domestic Violence Screening Instrument- Revised

OMS   Offender Management System

ORAS   Ohio Risk Assessment System

PIT   Prisoner Intake Tool

RIS   Risk Intervention Services

SSISA   Simple Screening Instrument for Substance Abuse

VASOR   Vermont Assessment of Sex Offender Risk

VCIC   Vermont Crime Information Center

Introduction

The Vermont Department of Corrections (DOC) created an innovative suite of Risk Intervention Services (RIS) designed to increase the success of eligible offenders when they return to the community after periods of incarceration. RIS began serving people in 2016. Offenders who score moderate to high risk of reoffending on validated risk assessment tools and have at least six months left on their minimum sentence are eligible for the program. This outcome evaluation looks at those who attended their first programming appointment inside a correctional facility from 2016-2019.

The services started around the same time that DOC switched offender management systems. The new system was not ready to capture all the data for RIS. Some data were kept on spreadsheets, some in the new system, and some data were not collected at all. This outcome evaluation is missing critical information and should be read in conjunction with the Data Quality Assessment (see Appendix A). DOC has since remedied many of the data issues that were present in 2016-2019. This report can help DOC and stakeholders continue to refine data collection practices and outcome measures.

Methods

The Department provided several extracts from their Offender Management System (OMS) and the spreadsheets used by the RIS program. The extracts included the offenders who were listed as participating in RIS and information about their programming, risk scores, movement between facilities, and releases from facilities. These data were matched into the Vermont Crime Information Center (VCIC) criminal histories to determine if the person was reconvicted of a crime after release from DOC custody or completion of their programming.

Description of the Cohort

We were able to match 731 people into the VCIC data. Table 1 shows the demographic information of the participants.[1] The participants were overwhelmingly white and male. The

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[1] To protect the identity of participants, and asterisk will be placed in Tables containing categories with less than 5 people.

Table 1. Participant Demographics	
Participants	**(n = 731)***
Age	38 (12)
Gender	
Female	44 (6.0%)
Male	687 (94%)
Race	
Asian	*
Black	51 (7.0%)
Indigenous	*
Unknown	6 (0.8%)
White	666 (92%)
Missing	4

*Mean (SD); n (%)

average age of the participants was 38, with most of the participants falling between the ages of 26 and 50. Not available in the data were how many people were eligible to participate but declined, or how many people were excluded from the program because their sentences were too short. Investigating these questions will help determine if the program is serving marginalized people equitably.

The services are designed for people who score moderate to high on the Ohio Risk Assessment System (ORAS) Tool which measures an individual's chance of re-offending[2]. The ORAS is administered on a timetable based on a person's release date. The most common score we had was for the Prison Intake Tool (PIT). Other assessments in the data included prisoner re-entry tools and community supervision tools. If warranted by the offense for which the person was serving time, scores measuring the risk of committing a new sexual violence crime or a new domestic violence crime were used as well. Participants were also screened for substance use disorder. Not only were these scores used for program eligibility, but they helped to personalize the participants' curricula to best meet their needs.

Risk Assessment and Substance Use Screening Scores

It should be noted that the data did not specify which specific scores the program used to help craft the plan the participant would follow. Scores were missing for 222 participants,[3] and we used the individual's most recent score before they started programming in the facility.

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[2] Case workers have discretion to refer people with a low ORAS score, especially if there is a higher score on the Domestic Violence or Sex Offense assessments. This discretion should be monitored for bias in decision making.

[3] We note that there was a miscommunication on the data needed for the evaluation. DOC gave us data on the participants, but only data for the years 2016-2019. If people had scores that were recorded prior to 2016 then we did not receive those data.

Table 2. Prison Intake Scores (Males)

Score	n	Percent	Valid Percent
Very high	19	4.01%	4.58%
High	151	31.86%	36.39%
Moderate	191	40.30%	46.02%
Low	54	11.39%	13.01%
Missing	59	12.45%	-
Total	474	100.00%	100.00%

We had at least one score of any type of instrument for 474 males in the cohort, as shown in Table 2. There was an ORAS Intake Tool for 415 men. Forty percent (191 people) scored at a moderate risk of re-offending. Thirty-one percent (151) scored at a high risk, while four percent (19) scored at a very high risk of re-offending. Eleven percent (54) scored at a low risk on the ORAS.

Table 3 shows the scores of other assessments for men that scored low on the intake tool. Twelve of the 54 had a moderate or high risk of committing a new domestic violence offense. The same people are represented in the Static 99 and VASOR- 2, both measure the risk of committing a new sex offense, 9 scored low on both assessments. Five people scored High on the Static 99 and five different people scored High on the VASOR. Seven of the 54 indicated screening for substance abuse was warranted. DOC should study the group participants who scored Low on the ORAS and did not score high or moderate on other risk assessments to make sure that programming is the appropriate intervention for them.

Table 3. Other Assessments (Males)

Score	DVSI-R	Static-99R	VASOR-2	SSISA
High	7	0	*	-
Moderate high	0	0	0	-
Medium	5	0	0	-
Low/Moderate	0	6	2	-
Low	0	11	14	-
Positive - Recommend or Refer for Evaluation	-	-	-	7
Negative - Not Recommended for Further Evaluation	-	-	-	22

Women have a separate ORAS PIT. Table 4 shows that of the 35 women in the cohort for whom we had any assessment score, 31 had the Prison Intake score. No women scored very high, 7 women scored high, 19 scored moderate and 9 scored low. Of the women who scored low, none scored high on another assessment. Only 2 scored moderate on another assessment. It is not clear why the women who scored low were in the program.

The RIS program uses the Simple Screening Instrument for Substance Abuse (SSISA). This is a self-administered questionnaire about the person's relationship with alcohol and other drugs within the previous six months. Of the 35 women in the cohort with any assessment scores, only five had any score for this screening.

Table 4. Prison Intake Score (Females)

Score	n	Percent	Valid Percent
Very high	0	0.00%	0.00%
High	7	20.00%	22.58%
Moderate	15	42.86%	48.39%
Low	9	25.71%	29.03%
Missing	*	11.43%	-
Total	35	100.00%	100.00%

The questionnaire appears to mostly have been administered to some of the male participants. As reflected in Table 5, there were no scores for 189 males, 159 were recommended for further evaluation, and 126 were not recommended.

Table 5. Substance Use Screening (Males)

Score	n
Negative - Not Recommended for Further Evaluation	126
Positive - Recommend or Refer for Evaluation	159
Missing	189

Behavioral Programming Attendance

The Department provided data on the participants' attendance in behavioral programming up until January 2020. We assume we do not have the full data for those who were in the program and continued receiving services after 2020. The information presented below in Tables 6 and 7 is for the 489 (465 men and 24 women) people who completed their programming before they were released from the facility.

The program offered various cognitive behavioral and substance use courses for participants. Most courses were offered 2 times each week, for 12 weeks. Table 6 shows the ORAS men's scores and the number of classes they attended. Thirty men (6.4%), attended fewer than 13 classes, indicating they did not complete one full course. More than 25% of the male participants completed over 122 sessions.

Table 6. ORAS Score by Number of Sessions Attended (Males)

Score	Number of Sessions Attended									
	5 or less	6-12	13-24	25-48	49-72	73-96	97-121	122+	NA	Total
Very high	*	0	*	*	*	*	*	*	0	13
High	5	*	5	19	15	13	10	26	*	95
Moderate	*	5	9	10	24	21	25	32	0	128
Low	*	*	14	5	*	*	7	8	0	46
Missing	6	*	11	21	21	25	45	50	0	183
Total	18	12	40	58	62	65	89	120	*	465

Women participants were more likely to follow through with courses than the men. All but one woman completed at least one full quarter of programming.

Table 7. ORAS Score by Number of Sessions Attended (Females)

Score	Number of Sessions Attended								
	5 or less	6-12	13-24	25-48	49-72	73-96	97-121	122+	Total
Very high	0	0	0	0	0	0	0	0	0
High	0	0	0	0	0	0	0	*	*
Moderate	*	0	0	*	*	*	0	0	12
Low	0	0	0	*	*	*	0	0	5
Missing	0	0	0	*	*	0	0	*	6
Total	*	0	0	7	7	5	0	*	24

Results

Recidivism is one metric used to judge program effectiveness, and there are several ways to measure recidivism. However, by statute, DOC is required[4] to report recidivism using the following calculation:

> The Department shall calculate the rate of recidivism based upon offenders who are sentenced to more than one year of incarceration who, after release from incarceration, return to prison within three years for a conviction for a new offense or a violation of supervision resulting, and the new incarceration sentence or time served on the violation is at least 90 days.

The statutory definition will not cover all participants in RIS and counts people as "eligible to recidivate" upon release from incarceration. But because the program's structure allows for behavioral services to continue in the community setting, participants may be deemed "eligible to recidivate" even before they have finished participating in behavioral services programming. Further, this definition allows for disparate and potentially inequitable discretion of probation and parole officers on what constitutes a violation of supervision. Therefore, we do not recommend using the statutory definition of recidivism as a measure to gauge the effectiveness of the RIS program.

Instead, a measure of the effectiveness of the RIS program can be determined using one of two options outlined below which use non-statutory definitions and measurements of recidivism for RIS participants. The first is a "running recidivism rate" which looks at all RIS participants who were released and calculates if any of them were reconvicted, regardless of how much time has passed since their release. The second is a standard three-year new conviction rate, that "starts the clock" after the person has finished programming.[5] These definitions encompass more people, more treatment, and more types of behavior than the statutory definition. Another advantage of these definitions is that they avoid having to account for changes in furlough policy and practice, making comparisons of rates across years more clear-cut. We believe they are better and more effective measures of success.

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[4] See 28 V.S.A. § 4.

[5] For this report, the end of programming is the release date because we did not have all the data necessary to calculate the end of programming in the community.

Modified Statutory Definition of Recidivism[6]

Of the 731 individuals in the cohort, eighty-seven percent (635 people) had been sentenced to one year or more when they started RIS programming. Seven percent (46) of those people have died and were removed from analysis, leaving 589 in the cohort. Eighty-four people were reconvicted and sentenced to 90 days incarceration after release, resulting in a modified statutory recidivism rate of 14%. Figure 1 below shows how many months it took for a person to be arraigned for a new offense that they earned a conviction and sentence of 90 days or more. Most of the recidivists were arraigned at or before 12 months from release for the new offense.

Figure 1. Months to New Arraignment
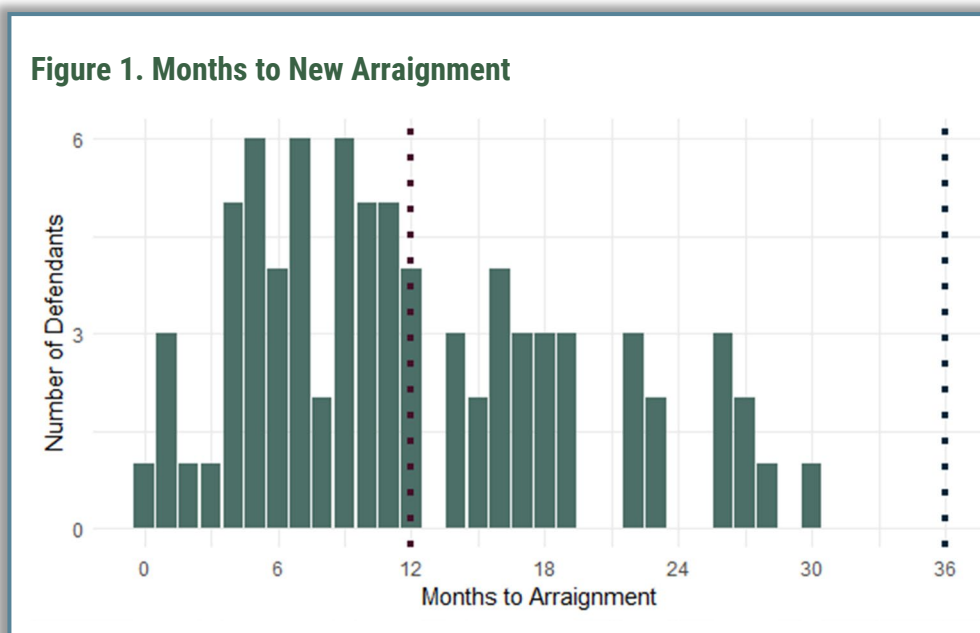
Running Recidivism Rate

The second measure looks at a running recidivism rate for all people who were released, regardless of their original sentence or subsequent sentence. We were able to access release dates for 713 of the 731 original cohort participants.[7] Fifty-one of those participants are now deceased and they were removed from analysis, leaving 662 participants to remain in the cohort.

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[6] The criminal histories do not contain information on the punishment for violations of parole or probation. We could not calculate if someone was returned to DOC custody for 90 days or more on a violation.

[7] We used the DOC public use file to get the release dates after January 1, 2020.

One hundred and eighty earned a new criminal conviction between their release date and January 2023. This resulted in a running recidivism rate of 27%. Figure 2 shows that most people were arraigned on a recidivist charge within 18 months of release. A small percentage of people were arraigned on a recidivist charge more than three years 3 years from release.

Figure 2. Months to First Arraignment (Any Conviction)
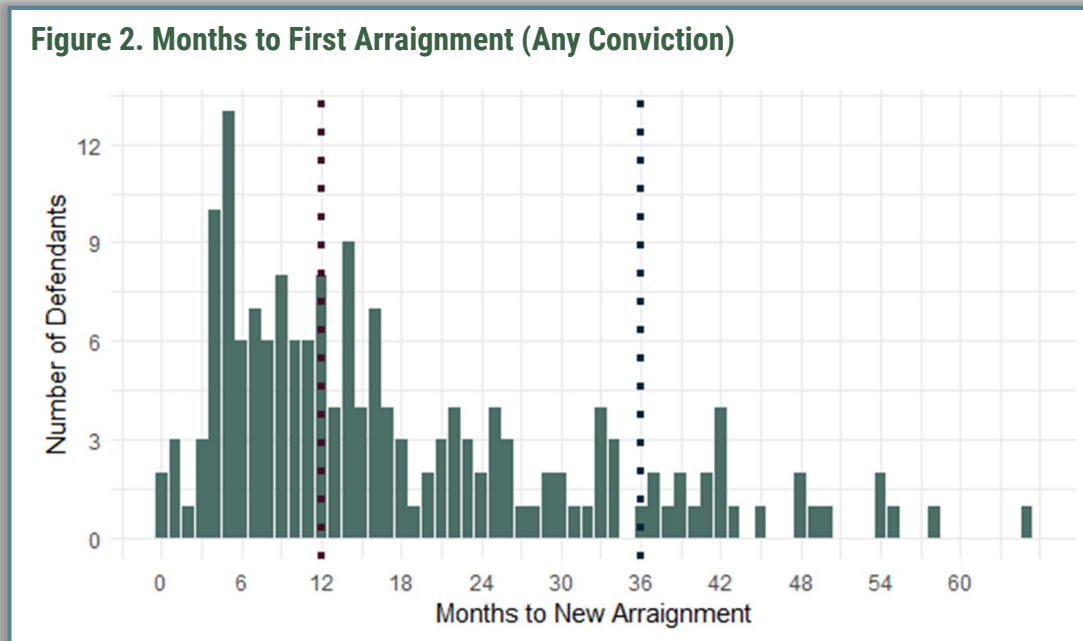
Three Year Recidivism Rate

The final recidivism rate looks at a three-year recidivism rate from the time the person was released (see Figure 3 below). Six hundred and forty-eight people were released at least three years ago. Forty-nine (7.5%) are deceased and were removed from the analysis, leaving 599 in the cohort. One hundred and thirty-eight people earned a new conviction within three years, with a resulting recidivism rate of 23%.

Figure 3. Months to Arraignment within 3 years of release
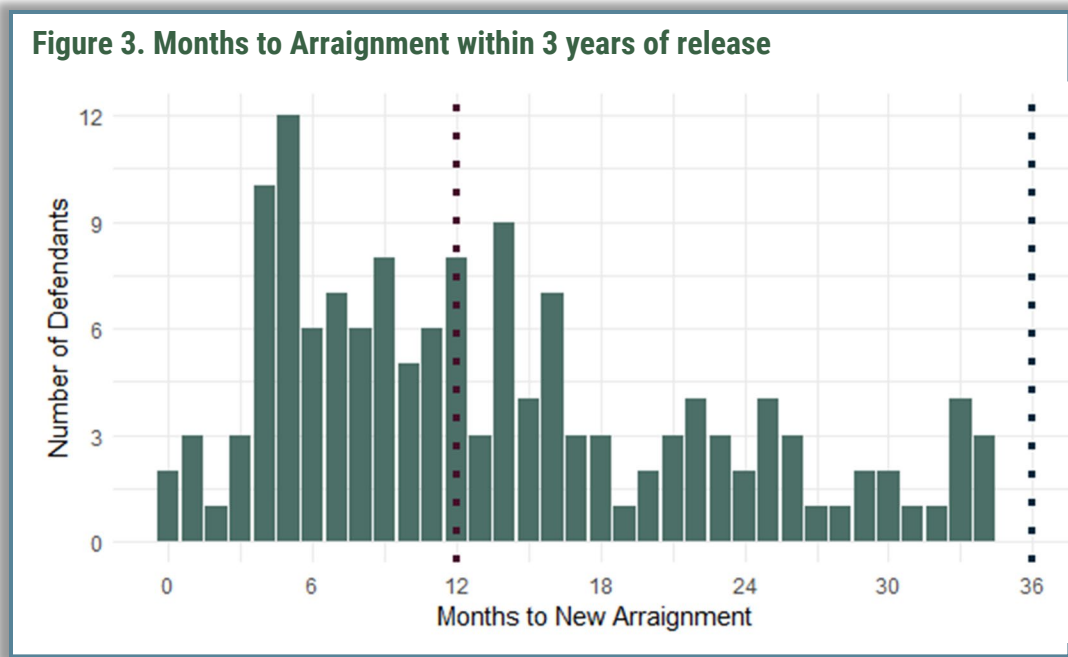
Rate Discussion

We recommend the Department use a three-year recidivism rate that focuses only on new convictions and not furlough violations or readmissions. Furlough policies and practices change, which makes comparison across years and other programs particularly difficult. Changes in furlough policies may reduce returns to the facilities, and hence reduce recidivism. This makes it difficult to measure the impact of the program. Focusing on new convictions, rather than new admissions, gives a program a more holistic understanding of a person's behavior after programming is completed.

Using the arraignment date (or date of offense if available) as the recidivism date, as opposed to a readmission date or conviction date, will allow the Department to see the pattern of re-offending. For RIS participants, it is clear that the first year of release is when a person is most likely to re-offend. Further research is needed examining who is successful in desistance during that first year and why.

Recidivism by Risk

Using the three-year recidivism rate for any new conviction, the following analysis in Table 8 looks at the risk scores and recidivism rates for males. After removing the deceased from the

Table 8. Prison Intake Score and Recidivism (Males)

Score	No New Conviction	New Conviction	Total
Very high	14	*	18
High	91	25	116
Moderate	132	31	163
Low	34	6	40
Total	271	66	337

analysis, there were 337 people in the male cohort with the ORAS Prison Intake Tool completed. The recidivism rate was 20%. There was no statistical correlation between the risk score and a subsequent conviction ($p = .88$). The Department validated the ORAS in 2018 and confirmed that the score is correlated to recidivism. The absence of a correlation here suggests that the program is having a positive impact on the recidivism rate.

Table 9 examines the three-year recidivism rate for people who had a DVSI-R score. There were 90 people in the cohort after removing the deceased from the analysis. The recidivism rate for this cohort was 21%, and the DVSI-R score was not correlated with recidivism (p=.70). The lack of correlation indicates the program is influencing behavior after release. In a prior study, conducted before RIS was introduced, this author found that offenders who had a prior history of domestic violence had a recidivism rate of 37% for a new conviction. [8] The difference in recidivism rates also points to the program positively affecting outcomes.

Table 9. DVSI-R Score and Recidivism

Score	No New Conviction	New Conviction	Total
High	39	12	51
Medium	32	7	39
Total	71	19	90

The program also appears to have had a positive affect on the re-offending behavior of sex offenders. Table 10 shows the recidivism for those who were scored on either the VASOR or the Static -99. The recidivism rate was 6% for this cohort. In this cohort the risk assessments were

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[8] Domestic Assault Recidivism in Vermont, 2004-2008

weakly correlated to the recidivism rate (VASOR, p =.45, Static- 99 p = .35), however this is likely because the people who scored "low" on the risk assessments did not recidivate (100%).

Table 10. VASOR/Static-99 Score and Recidivism

Score	No New Conviction	New Conviction	Total
VASOR			
High	5	*	6
Moderate/High	11	*	12
Moderate/Low	14	*	15
Low	19	0	19
Total	49	*	52
Static 99			
High	*	*	5
Moderate/High	12	*	13
Moderate/Low	21	*	22
Low	14	0	14
Total	51	*	49

Equity Analysis

The ORAS PIT uses five domains to assess risk. These include: 1) the person's age; 2) criminal history; 3) economic past and prospects; 4) family and support systems; and 5) substance abuse and criminal lifestyle. Structural racism impacts each of these domains. People of color are discriminated in housing, employment and in the criminal justice system. This discrimination is then used against them in the risk assessment. For example, if a biased prosecutor charges a people of color with felony when the same behavior by a white person would be a misdemeanor, that bias then becomes part of the person's criminal history. If that person pleads guilty to the felony, that conviction is then used in the assessment.

Table 11 shows that Black people had a higher percentage of very high ORAS scores vs. White people in

Table 11. Prison Intake Tool by Race (Males)

Male ORAS-Prisoner Intake Tool	Black	White
Very high	6.2%	5.0%
High	40.6%	41.8%
Moderate	53.1%	53.3%

the program.[9] While the difference was not statistically significant (p = 1.00), an equity analysis of all scores used in programming should ask if they tools are promoting equity or reproducing structural inequalities.

Conclusion

The DOC RIS- model appears promising. The three-year recidivism rate was 23%. The results are particularly encouraging in domestic violence offenders, where recidivism was 16 percentage points less than a similar study done in 2011. The recidivism rate was also lower than the 89.69% of high-risk/high need Diversion participants found in a study done in 2019.[10] Policy makers should discuss how to move the success of the RIS program into community-based settings.

DOC should consider creating an administrative control group from the cohort that was used to validate the ORAS risk assessment tools. Those people did not receive RIS services when the assessments were validated and can provide a benchmark recidivism rate to compare RIS recidivism rates to.

In addition to using the required statutory definition of recidivism, DOC should adopt a definition of recidivism that can be used consistently over time. The statutory definition includes returns to the facility for furlough violations, and policies and procedures on furlough violations go through frequent changes. The three-year new conviction definition allows for a more consistent measurement.

DOC should also define what else it wants measured, including what constitutes services completion, services withdrawal, and services terminated. Metrics should also be developed to help frame any subsequent criminal activity that might represent a demonstrable positive change for the person, even if a new crime results in a conviction, (for example, if the person is no longer

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[9] Those who scored Low on the ORAS were excluded from this chart because there were other risk factors that made them eligible for the program. There were too few people of Asian, Indigenous or Hispanic descent in the cohort to report out on any differences.

[10] Diversion Study

committing violent acts, felonies, or other crimes that could signify movement towards desistance).

Appendix A

Data Quality Assessment

The State of Vermont requires research partners from outside state government who are engaged in research involving personally identifiable information (PII) to go through a process designed to protect the security of the data. At least three government agencies are involved: the agency or department holding the data, the Agency of Digital Services (ADS) which oversees all data transfers in the state and the Attorney General's office which reviews the paperwork. For this data transfer, we provided the data fields we wanted to the Department of Corrections (DOC) and a map of CRG's computer network and network security policies to ADS. These elements formed part of the Interconnection Security Agreement; a 23-page document ADS requires for all data transfer to entities outside of state government. The standards the state uses can be found here. This process took over a year.

Data Acquisition

The next hurdle to data acquisition was the availability of DOC staff to pull the data. DOC has a dedicated small team that responds to all the data needs of the Department. During our funded period, the team was involved in a very heavy data lift for the state's Justice Reinvestment II initiative, in addition to their regular reporting and legislative duties. We did not receive the data until four months prior to the expiration of our grant funding. We are grateful to BJS for granting our no cost extension to finish the work.

Data Completeness

We recognize that a new data management procedure is in place for current RIS participants and that some of the recommendations below may have already been adopted. The following items would make evaluating the effectiveness of RIS more robust.

1. Participant Status or Refusals
   a. The data the Department provided did not identify who had successfully completed services, who refused to participate, who had their participation terminated or who withdrew. These statuses are necessary to evaluate the impact the services have on participants. This will also help identify any patterns in people who refuse to participate or who withdraw/or are terminated.

2. Schedule of Services Per Quarter and Expected Duration of Particular Services
   a. The data the Department provided included the date, time, location, name of the curriculum of the services being offered, and whether or not a participant attended. It was difficult, especially for services offered in the field, to determine when a particular quarter started/ended and if some participants attended make up sessions, all required sessions etc.
      i. The Department should consider assigning sections to the same curriculum delivered in the same location during the same quarter will help distinguish what is being delivered. (e.g., Thinking for a Change A, Thinking for a Change B, Thinking for a Change C – where they all meet in the same location but either different times or different leaders).
      ii. The Department should consider naming the sessions to indicate what number session of how many sessions it is. Not all curricula were offered on a 2 times a week 12-week session. (e.g., Texas Christian University A, 1 of 4). This will help track participation and fidelity to the curricula being delivered and the overarching goals of RIS.

3. Which Scores the RIS Used
   a. The Department provided data on all risk assessment scores for a participant. We used the last risk assessment score before the first appointment date a person had. In some cases, the risk score and appointment date were the same day. Which score was being used to determine services the person should participate in will help in evaluating fidelity to the model as envisioned by RIS.
   b. Document why participants with Low scores are being referred to services. A categorical variable of the most common reasons is fine.

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4. Eligibility Dates and Start Dates

   a. We were unable to calculate if people were waiting for services and how long they waited to receive services. Having an eligibility determined date, a program acceptance date (accepted by the participant) and a start date will help understand the flow of participants through the system.

Measures of Success

The outcome evaluation, found here, proposes a three-year recidivism rate that is calculated at the end of programming[11] and based on a conviction for a new criminal offense. This is at odds with how DOC is required to calculate recidivism. Recidivism rates, however, are only one measure of a successful of a program. Other measures should also be explored.

1. Participant Evaluations

   a. The voice of the participants is missing in the data. Anonymous evaluations of the behavioral services providers should be conducted. Evaluations should cover how people experienced the group leader, the relevance of the curriculum to their situation and overall satisfaction with the course.

2. Victim Voices

   a. DOC suggested that measuring complaints from victims to DOC about the behavior of their offenders before they begin RIS and after. The data were not available to do this. Operationalizing the parts of this measurement would be helpful. For example, which victims complain? Are they domestic violence victims who the offender is calling? Are they family members of larceny offenders with substance use disorder? Clarifying who is able to complain and what characteristics their offenders have would make the measurement more meaningful.

3. In Facility Behavior

   a. DOC hypothesized that participants filed fewer grievances while they were receiving RIS. The data provided did not allow us to test that assumption. Further

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[11] An in-services recidivism rate can also be calculated. This would measure if the participant earns a new conviction for an offense committed prior to the end of programming.

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operationalizing of the concepts and parts of the measurements should take place. For example, fewer grievances compared to earlier in their sentence? Fewer grievances compared to a prior sentence in the same facility? Because RIS is delivered toward the end of a sentence, and some people may have to be moved from an out of state facility to begin RIS. Fewer grievances may not be related to RIS, but related to acclimation to life in a facility or to the facility they were in prior to RIS. Finding ways to control for those factors should be explored.

b. DOC also hypothesized that participants were more compliant and suffered less use of force because of RIS. The data provided did not allow us to measure that. As above, operationalizing the concepts and accounting for other influences on the behavior should be explored.

4. Control Groups

a. RIS is offered to everyone who is eligible. There is no natural control group. It may be possible to create a control group from offenders who were incarcerated prior to the start of RIS. This is less than ideal, but would give a benchmark of measures to compare participants to.

Data Quality

We did not audit the data for accuracy. DOC has internal procedures for auditing accuracy. They readily acknowledge when some fields are not as accurate. Based on their assessment of their data, we did not use the educational attainment field or the veteran status field in the demographic data they provided.