Recidivism Findings Among Participants of the Sex Offense Treatment and Assessment Programs (SOTAP)

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Executive Summary

The purpose of this research study was to evaluate the outcomes of people who completed the Sex Offender Treatment and Assessment Program (SOTAP) provided by the Washington State Department of Corrections (DOC). The study was requested by the managers who oversee the program implementation, clinical quality assurance, and training of the treatment providers. Beginning in October 2018, a new treatment program was implemented, giving rise to the current intention to examine participant outcomes and determine if there were measurable improvements compared to the outcomes of participants of the original treatment program.

The population for the study was selected for inclusion by completing the core SOTAP program course prior to release from a DOC facility. Based on the dates of participation in SOTAP, the population was separated into three groups—one for the Original Treatment group prior to September 2017, a second for the Transition Treatment group that was treated during the interim year while the new SOTAP program was revised and providers were fully trained, and a third for the New Treatment group that was treated beginning in October 2018 onwards. A release date of March 2020 for inclusion in the study population was selected to allow sufficient time in the community to obtain an initial picture of recidivism for all three groups.

Several outcomes were analyzed to present a wide picture of recidivism. The first outcome examined how many participants were re-admitted to prison in twelve-month increments. Findings showed that there were more people in the Original Treatment group readmitted to prison for new offenses than for the people in the New Treatment group during both the first- and second-years following release. In total, only four of the 191 people (2.1%) who participated in the New SOTAP program were readmitted to prison for committing a new offense. Of the 674 people who participated in the Original SOTAP program, 50 people (7.4%) were readmitted to prison for committing a new offense. Second, the length of time to return to prison was examined using survival analysis. People in the New Treatment group were more likely to be readmitted to prison for revocations and less likely to be readmitted for new offenses than people in the Original Treatment group.

Third, we analyzed the relationship between risk scores and readmissions for either revocations or new offenses, and risk scores and violation hearings. Fourth, we examined the reasons for the violation hearings where the individual was found guilty of at least one violation. The most common reason for a first-time violation hearing was for using controlled substances, and consuming alcohol was also one of the most frequent reasons. Fifth, we examined the types of new crimes for which people were readmitted to prison. Failure to register offenses were most often committed by people from the Original Treatment group, and these offenses were strongly associated with committing new general offenses, but not with new sex offenses. Two people from the New Treatment group and twelve people from the Original Treatment group committed new sex offenses. Completing community-based sex offender treatment in the community was consistently found to reduce all types of reoffending. Indeed, those people who completed treatment in the community were less likely to be readmitted to prison, and if readmitted to prison, take much longer time to do so.

Overall, we found that the new program is having a positive impact on recidivism by reducing readmissions for new crimes. We recommend that SOTAP services be expanded to provide the new treatment to more eligible people given these favorable findings, and that DOC continues to support the current structure of SOTAP requiring on-going treatment for one-year post-release. Recidivism can be further reduced when supplementary wrap-around services are provided to those who need it. One area identified in this study was substance use disorder treatment services for many people who had violated the conditions of their community supervision.

Summary of Past Research

In the Washington State Department of Corrections (DOC) 25.4 percent of the incarcerated population has a sex offense as their most serious current offense (DOC, 2022). Most of the people in this study are incarcerated for perpetrating sex crimes against children (See Table 1 in Appendix A: Characteristics of the Research Study Population). The proportion of sex offenders in the overall prison population has increased over the last few years owing to circumstances such as the increase in sentencing alternatives and resentencing initiatives being available to individuals convicted of drug and property offenses. Among the population on active community supervision, 27.6 percent have sex offenses listed as their most serious offense (DOC, 2022). The growing proportion of individuals in confinement for sexual or sexually motivated offenses underscores the importance of and need for evidence-based treatment programming for sexual offenders.

Between 2005 and 2009, the Washington State Institute for Public Policy (WSIPP) published a series of studies of the Washington state's sex offender laws, sentencing practices, registration and notification requirements, risk level classification tools, treatment, and recidivism (Barnoski, 2005a; 2005b; 2006a; 2006b; 2006c; 2006d; Drake, 2006; Drake, 2009). As part of their research, WSIPP performed literature reviews and identified evidence-based treatment practices (Song & Lieb, 1994; Song & Lieb, 1995), and summarized findings on whether registration and notification laws have any deterrent effects (Drake, 2009). Sex Offender assessment instruments have also been reviewed (Klima & Lieb, 2008). In their study of sex offenders who were incarcerated in Washington State prisons, WSIPP researchers found that offense seriousness levels consistently and strongly separated sex offense cases from all other felony cases (Barnoski, 2005a). They also found that sex offenders have the lowest recidivism rates for felony offenses and violent felony offenses compared to the full population of felony offenders (Barnoski, 2005b). The overall likelihood was very small (2.7 percent), however new sex offenses were most likely to be committed by people whose original conviction was for a sex offense (Barnoski, 2005a).

In 2006, WSIPP researchers conducted a study of the DOC's SOTAP program (Barnoski, 2006a). They compared a group of participants who completed SOTAP treatment to a group of sex offenders who did not participate in treatment. They compared 5-year recidivism rates between the two groups but did not find any statistically significant differences for felony and violent felony recidivism rates. The most common reason that sex offenders recidivate is for failing to register with local law enforcement authorities. The WSIPP study found that one in five sex offenders who are required to register are convicted of violating the law by failing to register (Barnoski, 2006b). The failure to register convictions are responsible for a large proportion of recidivism among this population. Additionally, sex offenders convicted of failure to register have higher subsequent recidivism rates than those without a conviction (Drake, 2006).

The types of sentences for people who have been convicted of sex offenses in Washington State vary depending on when they committed their crime. If the sex offense was committed prior to 1984, they were sentenced to an indeterminate length and their eligibility for release on parole will be determined by the Indeterminate Sentence Review Board (ISRB). If the sex offense was committed after the establishment of the sentencing guidelines in 1984 through 2001, they received a determinate sentence. It is common for these types of determinate sentences to be served in full and the people are only released from prison following the expiration of their sentence. In September 2001, the legislature modified the sentencing guidelines so that certain sex offenses would need to be reviewed by the ISRB for release eligibility. These cases are known as Community Custody Board (CCB) cases. Therefore, the path to release is different depending on the date of the sex offense and these types of cases are scrutinized much more carefully before granting release approval.

Likewise, the duration of community supervision for these individuals is affected by the timing of the commission of the sex offense. It was common for people with convictions for sex offenses prior to 1984 to be ordered to serve three years of community supervision following release from prison. People who received determinate sentence lengths have a wide range of lengths of time on community supervision. People with CCB cases are more likely to be on community supervision for the rest of their lives.

Background of the SOTAP program

The SOTAP program provides a range of services to enhance community safety by reducing the risk to reoffend for individual clients, by serving as subject matter experts for the agency, and by consulting with stakeholders and policymakers to use evidence-based practice in the management of this population in the community. The primary goals of SOTAP are to help individuals convicted of sex offenses, or who have a history of sexually motivated offenses, learn to reduce and manage their risk to reoffend for successful reintegration back into their communities and increase community safety. SOTAP uses a combination of treatment techniques including group therapy, psycho-educational classes, behavioral interventions designed to address deviant arousal, and family involvement. SOTAP also aims to provide information to aid DOC decision-makers and the community to monitor and manage individuals more effectively by offering timely and relevant offense-related consultation and information. Since 2013, the SOTAP program has instituted procedure and policy changes consistent with the Risk, Need, Responsivity Model to screen, assess, and engage higher-risk, incarcerated individuals who have entered DOC for committing a sex offense with the aim to increase treatment admission and retention.

The SOTAP program is guided by the objective of effectively using a finite quantity of resources while maximizing the benefits of safety to the community. SOTAP adheres to the risk principle, which states that individuals should receive levels of services commensurate with their risk to reoffend. Individuals who come to DOC to serve sentences of incarceration for convictions on sexually motivated offenses are administered a specialized risk assessment named the Static-99R which provides a baseline level of risk to reoffend. These individuals are considered for treatment based on amenability, having identifiable risk factors consistent with the supporting literature, and meeting the qualifying criteria. The assessment and screening process help staff to establish treatment priority within the SOTAP program, meaning that people assessed with high needs and high risk are prioritized over those people with low needs and low risk. The eligible individuals commence treatment in the SOTAP program 14-18 months prior to their scheduled earned release date from prison.

Within the first 30 days of commencing treatment in the SOTAP program, an additional assessment is administered to all male treatment participants as part of developing an individualized treatment plan. The second assessment is known as the Stable-2007 assessment, and it is administered to participants at appropriate points throughout the duration of their DOC and community treatment programs to always have a current risk score on file.

Individuals who complete the prison-based treatment program transition to community-based SOTAP therapy when they are released to community supervision. Both the prison-based portion of the SOTAP treatment program and the post-release portion of SOTAP that occurs in the community are provided by dedicated DOC SOTAP staff and not contracted providers. Both prison-based and community-based halves of the treatment program are contained within the single umbrella program known as SOTAP.

Each SOTAP participant has an updated treatment plan developed by the community treatment provider based on the most recent completed risk assessment, continuity of care meeting with the prison treatment provider staff, program records, and an interview with the client. Based on these recommendations, a community treatment plan identifies which areas the client should target for improvement while in treatment for the next year. The purpose of treatment in the community is to achieve these goals and augment the gains the client made in the prison program. Upon completion of the community-based treatment program, the individual is discharged and assessed with a final administration of the Stable-2007 as part of the final review process.

In October 2017, SOTAP treatment providers began the transition to a new program to continue to support its main goals. The former treatment program and materials had become outdated over the years and there seemed to be a lack standardization across program sites, therapists, and supervisors. This inconsistency yielded confusion in new staff, and more importantly, produced no reliable conclusions as to the program's effectiveness. The revised program was fully implemented by October 2018 and has been the only treatment program used in SOTAP through the present time. Although, the revised program has been used for nearly five years, it was curtailed to a large extent beginning in March 2020, due to restrictions arising from the COVID-19 pandemic when many prison programs were suspended for about two years.

The revised SOTAP program utilizes Risk, Needs, and Responsivity (RNR) principles which focus on who should be treated, what to focus on in treatment, and how the individual is treated, signifying that treatment is relative to the individual's risk to reoffend. The revised model expects there to be differences and variability among individuals, especially with risks and needs. By using RNR principles, SOTAP clinicians can customize the delivery of the treatment for a more focused and efficient treatment program. The SOTAP management staff take great measures to ensure quality assurance across the different locations where the SOTAP program is offered. Treatment model standards are developed, regularly monitored, and staff are coached to adhere to established best practices in the field of sex offense treatment and cognitive behavioral therapies.

Participants must successfully complete both the prison-based and the community-based treatment programs to be successfully discharged from the SOTAP program. Although encouraged to participate, an incarcerated individual may refuse to do so. Individuals may choose to withdraw from the program, or they may be unsuccessfully discharged (terminated) for failing to maintain the programming in their treatment plan. If unsuccessfully discharged from the SOTAP program, there is an appeal process whereby the individual may contest their unsuccessful discharge. If unsuccessfully discharged from the program, the individual may request to be reconsidered for admittance and return to the program at a later date.

The SOTAP program is offered at the Airway Heights Corrections Center (AHCC) and within two living units at the Monroe Correctional Complex (MCC). There is also a SOTAP program offered to women at the Washington Corrections Center for Women (WCCW) that treats 10-25 women per cycle. However, this current study focuses exclusively on the male treatment participants at AHCC and MCC. The programs at AHCC and MCC are for adult men sex offenders, including a small number of transgender individuals who identify as women, and each has the capacity to treat up to approximately 180 incarcerated individuals at a time. Prior to the onset of the COVID-19 pandemic, there were approximately 250 clients actively participating in SOTAP between the various sites. The program provided treatment to approximately 400 clients annually.

Study Population

This is the first evaluation of the new SOTAP program. The participants have been placed into three groups, depending on whether they received treatment in the previous original program, during the transition period, or in the new revised program. The previous program has more participants than the transition and new treatment groups, owing to the longer time in which that original treatment program was in use. For this study, participants who started SOTAP treatment between November 2015 through September 2017 have been designated as the Original Treatment group. Participants who started SOTAP treatment during the transition period, from October 2017 through September 2018 will be designated as the Transition Treatment group. Finally, those participants who started the revised SOTAP treatment between October 2018 through the end of February 2020 will be designated as the New Treatment group.

The current study does not include a non-treatment comparison group. The small population of individuals who did not complete SOTAP in prison was insufficient to create a matching group of people with whom to make outcome comparisons. The second reason behind this decision was that the SOTAP program receives annual recidivism data for its treatment participants that includes comparisons with those individuals convicted of sexual offenses who did not participate in SOTAP treatment while in prison. This recidivism data shows a consistently lower recidivism rate among SOTAP participants compared to those people who did not participate in SOTAP treatment. Therefore, the data already exists to show that SOTAP treatment significantly reduces recidivism compared to people who did not participate in SOTAP treatment.

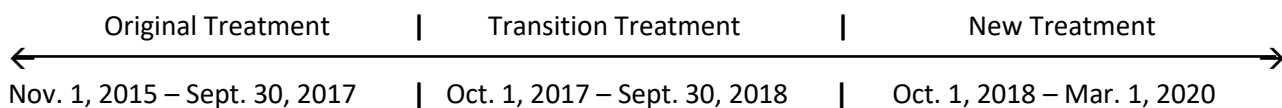*Figure 1. Timeline of Different Stages of SOTAP Programs.*

Original Treatment		Transition Treatment		New Treatment
Nov. 1, 2015 – Sept. 30, 2017	|	Oct. 1, 2017 – Sept. 30, 2018	|	Oct. 1, 2018 – Mar. 1, 2020

Table 1. Number of Participants in the Three Treatment Groups in the Research Study Population (N=1,119).

SOTAP Program Group	Nbr. Participants
Original Treatment	674
Transition Treatment	254
New Treatment	191

The two common attributes shared by people in all three groups in the study are that they successfully completed the prison-based portion of their treatment, and they have all been released from prison. Slightly more than one-half of the people in the study had completed both the prison-based treatment and the community-based treatment at the time of the study. Completing the community based SOTAP treatment took an average of nearly 500 days following release. Since there are many SOTAP participants within the new treatment group who have not been released into the community for that length of time, the study will look at both partial (prison only) and full treatment completions (both prison and community). We used this important difference in our study groups to determine whether the community-based treatment was influential in lowering the recidivism rate of SOTAP participants.

Table 2. Number of Participants who Completed SOTAP in Prison or in Both Prison & Community (N=1,119).

SOTAP Completions	Nbr. of Participants & Percent	
Prison-only Treatment	549	(49.1%)
Prison & Community Treatment	570	(50.9%)

There were 1,119 participants who met the criteria to be included in the study. All participants in the study are men or transgender individuals who identify as women who received treatment at AHCC or MCC. More than three-quarters of the people in the study are white, while the remaining one-quarter are people of color, specifically Black/African American (11.6%), Hispanic/Latino (8.0%), Asian, Hawaiian, Pacific Islander (1.7%), and Native American and Alaskan Native (4.8%). We were unable to include approximately one-third of the Hispanic/Latino participants who had completed the prison-based SOTAP treatment in the study, owing to their being taken into custody by the Immigration and Customs Enforcement (ICE) federal agency following their release from prison. Since we could not calculate the time in community for these individuals, they were omitted from the study. We recognize that this exclusion might affect the significance of any outcomes related to Hispanic or Latino males. Lastly, we excluded those participants who were subsequently civilly committed under Washington's civil commitment law for sexually violent predators and people for whom the DOC has been notified that they died following their release from DOC institutions and before completing the community portion of SOTAP.

Most individuals in the study were serving a sentence in prison for the first time (70 percent). In other words, although they might have committed less serious offenses in the past, they entered as first-time admissions after being convicted of a felony offense serious enough to merit time in prison. The remaining 30 percent of participants were categorized as re-admissions to prison.

One direct consequence of longer terms in prison for persons convicted of sex offenses is that they tend to be older when they are released. The average age at release from prison for the SOTAP participants in the study was 41.5 years of age (Median = 39). The youngest person was 20 years old at the time of release. The oldest person was 84 years old at the time of release. This is important because age itself is an important factor influencing the pace and the scale of offending behavior. Most people involved in criminal behavior are in their teens, twenties, and thirties. And most people age out of general criminal behavior in their mid-forties. However, research on sex offenders indicates that their risk to reoffend does not significantly decline until they are approaching the age of 60. This is important to keep in mind when we are examining recidivism since about one-half of the men in our study are over 40 years old, and less than 10 percent of the participants were between ages 55 to 76.

Although the SOTAP participants were convicted of sex offenses or offenses characterized by sexual motivation, there were many who were serving sentences for other types of crime as well. These other crimes ranged from convictions for theft and burglary to robbery and murder. These other offenses contributed to the sentence length overall, as well as to conditions of community supervision. In their 2005 study of sex offenders, WSIPP found that the only incarcerated individuals who were serving longer sentence lengths on average than sex offenders were those who were convicted of homicide (Barnoski, 2005b).

Risk assessment scores from the Static-99R and Stable-2007 were combined into an overall risk score. The risk assessment scores of most SOTAP participants ranged from High to Very High at the beginning of treatment. After completing the SOTAP program, the risk assessment scores have dropped substantially so that over 70 percent of participants score either Low, Low-Moderate, or Moderate-High in risk to re-offend. The current study will examine whether these post-prison SOTAP completion sex offender risk assessment scores are significantly correlated with recidivism outcomes.

If we rank the five risk score categories from Low (1) to Very High (5), we can calculate an average risk score for each treatment group. The Original Treatment group's average score is 2.80, equivalent to just below the Moderate High risk score category. The Transition Treatment group's average score is 2.73, slightly lower than the former group. Finally, the New Treatment group's average score is 2.60, which is slightly lower than the two previous groups.

Table 3. Risk Scores of SOTAP Participants by Treatment Group after completing Prison-based Treatment.

Risk Score Category	Original Treatment	Transition Treatment	New Treatment	Total
Low Risk	127 18.8%	47 18.5%	44 23.0%	**218** **19.5%**
Low Moderate	148 22.0%	67 26.4%	55 28.8%	**270** **24.1%**
Moderate High	167 24.8%	61 24.0%	36 18.8%	**264** **23.6%**
High	161 23.9%	59 23.2%	46 24.1%	**266** **23.8%**
Very High	56 8.3%	17 6.7%	10 5.2%	**83** **7.4%**
No Score	15 2.2%	3 1.2%	0 0.0%	**18** **1.6%**
Total	**674** **100%**	**254** **100%**	**191** **100%**	**1,119** **100%**

Of interest to this study, we found that those people who assessed as Low or Low-Moderate following completion of the prison-based SOTAP program were much more likely to complete the community-based SOTAP program. On the other hand, those people who scored as High or Very High were more likely to have completed only the prison based SOTAP treatment (See Table 4 below for this connection). This finding that risk scores can predict completion of community-based treatment suggests that the risk scores may predict a far wider range of behavior than just violations, revocations, or committing new crimes.

Table 4. Risk Scores of SOTAP Participants by Prison-only Completion (N=549) or Prison & Community Treatment Completion (N=570).

Risk Score Category	Prison-only Treatment	Prison & Community Treatment	Total
Low Risk	60 10.9%	158 27.7%	**218** **19.5%**
Low Moderate	110 20.0%	160 28.1%	**270** **24.1%**
Moderate High	138 25.1%	126 22.1%	**264** **23.6%**
High	170 31.0%	96 16.8%	**266** **23.8%**
Very High	63 11.5%	20 3.5%	**83** **7.4%**
No Score	8 1.5%	10 1.8%	**18** **1.6%**
Total	**549** **100.0%**	**570** **100.0%**	**1,119** **100.0%**

Outcome Measures

To examine whether the new revised SOTAP program is more effective in reducing recidivism among participants who completed the prison-based treatment, we looked at four outcomes. First, we looked at how many participants were re-admitted to prison within twelve months and within 24 months following release. We were unable to measure out to 36 months following release owing to the insufficient numbers of people in the New Treatment group. Second, we looked at the length of time to return to prison in a comparative analysis. Next, we examined the reasons for the readmission, namely whether it was for violations of the conditions of community supervision or whether it was for a new crime. Finally, we examined the types of new crimes for which people were readmitted to prison. We were particularly interested in seeing whether any new criminal conviction was for a sex offense or other sexually motivated crime.

Recidivism can be measured in many ways, but most research studies look at either new arrests, new convictions, new admissions to prison, or some combination of two or all three of these measures. This study is limited to DOC data; thus, we will define recidivism as returning to a DOC prison facility. It is possible that the people in the study were arrested or committed minor crimes or infractions that did not result in a return to prison. However, with the strict nature of conditions of community supervision for sex offenders, we feel confident that our data captures serious behaviors and provides an accurate picture of recidivism for this population.

Both legal and extra-legal factors were selected for inclusion and examination in the current study. The demographic characteristics of the SOTAP participants who completed the prison-based portion of treatment included age at admission to DOC on the current sex offense, age at release from prison, and the individual's race and ethnicity. The selected legal factors included the type of sex offense that brought them to prison, the

amount of time spent in prison, the geographic county where they were being supervised in the community, and, for those who recidivated, the type of readmission to prison, and details concerning violations of supervision and/or new offenses of conviction. Factors specific to SOTAP such as the combined Sex Offender Risk Assessment Score, which SOTAP program they completed, the number of SOTAP treatment specialty groups completed while incarcerated, and whether they also completed the community-based SOTAP treatment were included in the model as well as factors specific to the incarceration experience, such as the amount and kinds of other treatment, educational, vocational, or enrichment programs they completed while in prison.

Outcome #1 – Readmissions to Prison

> **How much recidivism was there, what kind, and by whom?**

Readmissions to prison may result from a revocation from community supervision resulting in a return to confinement or for committing a new felony offense resulting in a sanction of confinement. A person can be revoked to prison for either violating the conditions of their community supervision, for being convicted of a new offense, or for both reasons. Those who received determinate sentences have already served the full length of their incarceration sentence and cannot be revoked for violating terms of supervision; they can be sent to jail for violating the rules of community supervision otherwise known as a technical violation. Likewise, those with CCB cases can be revoked and sent back to prison at an ISRB hearing rather than waiting for a court to convict them of new offenses. The findings in this report will focus on all readmissions to prison, but we will also distinguish between revocations and new offenses. Examining all readmissions will allow us to paint a broad picture of the types and frequency of readmission events.

To begin our evaluation, we compared rates of first-year readmissions for SOTAP participants to rates of first-year readmissions for the overall general prison population (all offense types, including sex offenses). For SOTAP study participants who were released between the years of 2016-2022, the rate of readmission within the first year was 6.8%. By comparison, the average first-year readmission rate for the general population for releases in years 2016-2020 was 10.6%.

Next, three-year rates of readmissions were examined for the entire study population and compared in two ways to the general population. First, we compared the rates to average three-year rates of readmission for the entire population released in calendar years 2016-2018. Examining three-year rates necessitated the exclusion of almost all people in the New Treatment group but did include almost all people in the Original and Transition Treatment groups. Second, we compared the rates to people who had a sex offense as their most serious offense, although there is a large degree of overlap in this second comparison.

Table 5. 3-Year Readmission Rate Comparison

Study Group vs. Comparison Groups	3-Year Average Readmission Rate
SOTAP Participants	16.30%
Sex Offense (Worst) CY 2016-2018	16.73%
Entire Population CY 2016-2018	30.53%

As noted previously, the participants in the study are not a homogenous group. Some people are mandated by court orders in their convictions to participate in SOTAP treatment as a specific treatment condition while others are not. Some people are rated as "Low Risk" on a sex offender risk assessment scale and are not offered treatment unless there is an override. Some people decline to participate in SOTAP treatment in prison. Some people participate in SOTAP treatment while on community supervision; others seek out a private service provider upon release. Overall, the comparison shows that individuals who completed SOTAP had a slightly lower rate of three-year readmission to prison than those with a sex offense as their worst offense and a significantly lower readmission rate when compared with the overall general population.

There were about three times the number of readmissions for revocations as there were for new offenses. Of the 191 New SOTAP participants, 30 people (15.7%) were revoked and readmitted to prison. Of the 674 Original SOTAP participants, 103 people (15.3%) were revoked and readmitted to prison. Finally, of the 254 Transition SOTAP participants, 36 people (14.2%) were revoked and readmitted to prison.

Table 6. Overall Total Recidivism for the Original and New Treatment Groups (excluding Transition Group).

Treatment Group	N	All New Offenses	All Revocations	Total
New Treatment Group	191	4 2.1%	30 15.7%	34 17.8%
Original Treatment Group	674	50 7.4%	103 15.3%	153 22.7%
Total	**865**	**54** **6.2%**	**133** **15.4%**	**187** **21.6%**

We examined "first-time" readmissions as a subset of "all" readmissions and found that, while there were individuals in both the Original and Transition Treatment groups who had committed new offenses on their first-time readmissions to prison, there were no participants from the New SOTAP Treatment group who had committed new offenses on their first-time readmission to prison. In other words, for New Treatment group participants, there was a revocation or violation admission that occurred prior to the readmission for a new offense. Future analyses may address whether this finding of significantly fewer new offenses among the New Treatment group participants is a result of the higher revocation rate, or for some other reason.

The recidivism reported in this study was dispersed across the counties of Washington, following population patterns. The counties with the largest number of individuals on community supervision for sex offenses were also the counties that had the largest numbers of violations and revocations. Nearly one-third of readmissions to prison came from King County (80), followed by Snohomish (25), Pierce (24), Spokane (19), and Clark (14) to round out the top five counties with the highest readmission numbers.

A chi-square test is used to examine whether two variables are significantly related to one another. A chi-square test was used to examine if there was a significant difference between treatment group and committing a new felony offense. The results showed that people who completed the New SOTAP program were significantly less likely to commit a new offense as compared to those who completed the Original SOTAP program. The number of people in the Chi-square analysis decreases from 1,119 to 865 due to the exclusion of the people in the

Transition Treatment group. The chi-square statistic was significant, indicating that the differences between the Original and New Treatment groups for readmissions due to new offenses were significantly different.

Table 7. Treatment Program Group and New Offenses – All Time Follow-up (excluding Transition Group).

Treatment Group	No New Offense	New Offense	Total
New Treatment Group	187 (n) 97.91% (row %)	4 2.09%	191 22.08%
Original Treatment Group	624 92.58%	50 7.42%	674 77.92%
Total	**811** **93.76%**	**54** **6.24%**	**865** **100%**

$X^2 = 7.207$, degrees of freedom=1, p=0.007

Similarly a chi-square test was calculated to test whether the differences between the Original and New Treatment groups for readmissions due to revocations were significant. Owing to the overall similar distributions of people who were revoked compared to people who were not revoked, there was no significant difference between people in the Original and New Treatment groups found in this overall test.

Table 8. Treatment Program Group and Revocations – All Time Follow-up (excluding Transition Group).

Treatment Group	No Revocation	Revocation	Total
New Treatment Group	161 (n) 84.29% (row)	30 15.71%	191 22.08%
Original Treatment Group	571 84.72%	103 15.28%	674 77.92%
Total	**732** **84.62%**	**133** **15.38%**	**865** **100%**

X^2=0.021, degrees of freedom=1, p=0.88

Among the 1,119 people included in the study, a total of 169 people were revoked (15.1%) and returned to prison during the entire follow-up period (03/01/2020 through 06/30/2022). This percentage remained steady across treatment groups. Secondly, there were 64 people who were readmitted to prison following a court conviction for a new offense. Of note, there were 11 people who were readmitted to prison for both a revocation and for a new offense of conviction and were therefore counted under both types of readmissions. Hence, the overall total of readmissions among the entire study population was 222 people out of the 1,119 SOTAP participants (19.8%).

Next, we examined the timeframes in which the readmissions occurred. We calculated twelve-month intervals from the release date of each participant, and only included people who had sufficient time in the community to be included in the recidivism calculation for that group. These time calculations permitted an "apples-to-apples" comparison since the majority of the people in the Original Treatment group have been released for longer periods than the people in the New Treatment group. For example, of the 674 people in the Original Treatment group, there were eight people who had less than 12 months since they were released. This reduced the number of people having a minimum of 12 months post release to 666 people from this treatment group. Of the

191 people in the New Treatment group, there were 11 people who had not been released from prison for a minimum of 12 months. This reduced the number in the New Treatment group to 180 individuals.

Incorporating this time comparison, we found that the recidivism rate for revocations for the New Treatment group participants remained steady in both the first- and second- years following release, and that this occurred at a consistently higher rate than the other two comparison groups. Frequently, people from the New Treatment group's first and second 12-month intervals overlapped with the COVID-19 pandemic, which appears to have had a significant effect on decisions to revoke during this time. The following table shows the percent of revocations and new offenses that occurred within the first 12 months of release.

Table 9. Recidivism within the first 12 months following release (Year 1).
(The number of people (N) are those who are at least 12 months post-release from incarceration.)

	N	Revocations	New Offenses	Total Recidivism
Original Treatment	666	24 (3.6%)	5 (0.8%)	4.4%
Transition Treatment	249	24 (9.6%)	2 (0.8%)	10.4%
New Treatment	180	19 (10.6%)	1 (0.6%)	11.1%

Each of the treatment groups experienced some attrition as we calculated the number of people who were at least 24 months post release from prison. These people are a subset of the people in Year 1. The Original Treatment group decreased from 666 to 431 people who had been released from prison for at least 24 months. The New Treatment group decreased from 180 to just 78 people who had been released from prison for at least 24 months. The following table shows the percent of revocations and new offenses that occurred between 12-24 months after release from prison.

Table 10. Recidivism within 13-24 months following release (Year 2).
(The number of people (N) are those who are at least 24 months post-release from incarceration.)

	N	Revocations	New Offenses	Total Recidivism
Original Treatment	431	16 (3.7%)	14 (3.2%)	7.0%
Transition Treatment	151	7 (4.6%)	3 (2.0%)	6.6%
New Treatment	78	10 (12.8%)	3 (3.8%)	16.7%

After the second year, there was a steep attrition rate in the New Treatment group. There were only seven people in the New Treatment group who were at least 36 months post-release from prison. Due to insufficient numbers, it was not possible to examine and compare recidivism rates during the third year after release between the treatment groups. This attrition rate results in a perceived inflation of the percentage of individuals who recidivated in the new treatment group, as only 40% of the new treatment population has been in the community for twenty-four months compared to 65% of the original treatment group. The rates of total recidivism in tables 10 and 11 are largely driven by the percentage of individuals who were revoked and returned to confinement. Due to this finding, we conducted further evaluation of revocation for each group.

Setting aside any time comparisons, being convicted of new offenses was the least likely reason for being readmitted to prison. Overall, only four of the 191 people (2.1%) who participated in the New SOTAP program were readmitted to prison for committing a new offense. Of the 674 people who participated in the Original SOTAP program, only 50 people (7.4%) were readmitted to prison for committing a new offense. Of the 254 people who participated in the Transition SOTAP program, only ten people (3.9%) were readmitted to prison for committing a new offense.

We wish to emphasize that the rate of revocations has increased over time regardless of which treatment program group and whether community SOTAP was completed. The revocation rate peaked in calendar years 2020 and 2021, with preliminary signs of reducing in 2022. Conversations with subject matter experts attributed this increase in revocations to conditions arising from the COVID-19 pandemic. The restrictions on movement out in public spaces and suspensions and/or modifications in treatment programs in the community contributed to this unparalleled situation.

The two largest suspected contributing factors to this increase in revocations were that county jails were not receiving people for violating conditions of community supervision and access to vital community services such as mental health, substance use disorder, and SOTAP treatment were significantly curtailed or limited to exclusively virtual access. Without available jail space, violators were more likely to be sent back to prison and revoked from their community supervision to meet swiftly evolving violation management protocols. After March 2020, treatment in the community went to virtual platforms. However, sex offenders were unable to receive sex offender telehealth services due to restrictions in the Washington Administrative Code (WAC) of Washington State Law. The SOTAP program had to apply for an emergency rule granting them an exception to the in-person treatment requirement and had to renew the emergency rule every 90 days throughout the pandemic. Until community services were again available for in-person treatment both for sex offense specific issues as well as mental health crisis and chronic care needs, many people experienced difficulties in accessing the treatment that they needed while residing in the community.

Table 11. SOTAP Treatment Program Type and Revocations – By Year

Year	Original Treatment	Transition Treatment	New Treatment	Total
2016	1	--	--	**1**
2017	1	--	--	**1**
2018	8	--	--	**8**
2019	17	7	--	**24**
2020	33	13	4	**50**
2021	32	11	15	**58**
2022	11	5	11	**27**
Total	**103**	**36**	**30**	**169**

This unique environmental factor of the COVID-19 pandemic impacts the comparison of the revocation rates between the different program groups, as those who completed the new, revised SOTAP program have only been in the community in the years 2020-2022. This overall uptick may be disproportionately impacting the New Treatment group. Future evaluations should revisit this outcome.

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Table 12. Revocations – By Year and by Prison-only Treatment Completions vs. Both Prison & Community Treatment Completions.

Year	Prison & Community Treatment	Prison-only Treatment	Total
2016	1		**1**
2017		1	**1**
2018	1	7	**8**
2019	7	17	**24**
2020	15	35	**50**
2021	15	43	**58**
2022	8	19	**27**
Total	**47**	**122**	**169**

As shown in Table 12, nearly three-quarters of individuals who revoked had completed only the prison portion of SOTAP treatment. This column includes people who were not participating in the community SOTAP treatment, people who were participating but had not yet completed the community SOTAP treatment, and people who were unsuccessfully discharged from community SOTAP treatment.

Overall, these initial tests showed that only a small portion of the SOTAP treatment population were returned to prison due to a new felony offense, with the majority returning due a revocation. This was true for all three treatment groups. The new treatment group had the lowest rate of return for new felony offenses with only four (2.8%) of the individuals returning, a statistically significant difference from the original treatment group who had 50 (7.42%) returned due to a new felony offense. The rates for revocations were not statistically significant between groups, with all average approximately 15% returns due to revocation. Lastly, revocations were most likely to occur in the first year after release to the community, while new offenses were more prevalent in the second-year post release. Due to less of the new treatment group having been in the community for more than two years, it is difficult to make solid conclusions on their rates of recidivism at this time. We recommend further testing be conducted in the future to examine this discrepancy and the impact of time on both the new and original treatment groups and rates of recidivism.

➢ **Regression Analysis Findings for Readmissions Due to New Offenses**

To begin building a model, simple linear regressions were conducted separately on each outcome variable to create a correlation matrix of each dependent variable with either readmissions for revocations or readmissions for new crimes. A third set of linear regressions was performed to check for correlations with a combined readmission variable that included both revocations and new crimes. Independent variables that showed significant correlations in the ANOVA tables of the regression outputs were risk scores, completion of community treatment, time (months) in the community, and whether they had violation hearings. On the other hand, there were several variables that showed no significant correlation with readmissions due to revocations or new offenses. Non-correlated variables included race/ethnicity of the SOTAP participant, if they were previously on community supervision, how many SOTAP classes they completed while incarcerated, and what county or DOC section where they were being supervised in the community. Among the seven categories of

programming, only family-related programs were not significant across any of the regression models. See Table 3 in Appendix A for a full list of variables.

Next, we turned to logistic regression to test models with several independent variables simultaneously. We used stepwise logistic regression to find the best fitting models. These models also permitted us to check for multicollinearity between variables and test for interaction effects by combining variables. Stepwise logistic regression uses an iterative process whereby one least significant variable is removed in each iteration until it reaches an iteration where there are only significant variables left in the model (See Tables 4 & 5 for in Appendix A for the stepwise regression output tables).

Following the stepwise regression analysis, a binary logistic regression model was created and tested for the dependent variable of readmission due to a new offense conviction where "0" represented no readmissions for a new offense and "1" represented a readmission for a new offense and was designated as the event of interest in the model. The Treatment Group parameter was specified as a nominal (categorical) variable, and therefore appears twice in the model using dummy variables. Using dummy variables allows us to test the null hypothesis that all coefficients pertaining to this variable are 0. In other words, it gives us a test of whether belonging to a specific Treatment Group has any impact on the probability of being readmitted for a new offense.

The logistic model assumes a nonlinear relationship between the probability and the explanatory variables. Hence, a logit coefficient of 0.25 would tell you that the log-odds increases by 0.25 for every 1-unit increase in the explanatory variable (e.g., risk score). To better understand what the log odds increase means, we can transform the number into a probability. For the Original Treatment group, 50 out of 674 people were readmitted for committing a new offense, so the overall proportion is 0.074. This is the probability from which we are starting for this variable when there is a nonlinear relationship. We then take 0.074 and multiply it by (1 - 0.074) and we get 0.069. By multiplying 0.069 with each coefficient, we translate the log-odds increase into a probability that provides a straightforward comparison. Continuing with the example, the probability of a person who belongs to the Original Treatment group being readmitted for a new offense increases, on average, by 0.024 for each unit increase in Risk Score level when we look at Risk Score independently.

The following tables show the results of the binary logistic regression model. From Table 1, "Analysis of Maximum Likelihood Estimates," we get coefficient estimates, their estimated standard errors, and test-statistics for the null hypotheses that each coefficient is equal to 0. The test statistics are labeled "Wald Chi-Square." They are calculated by dividing each coefficient by its standard error and squaring the result. From this table, we can see the results of our testing, e.g., that people in the New Treatment group are much less likely to be readmitted for a new offense than people in the other treatment groups.

The estimates in Table 1 can be interpreted as saying that, on average, the probability of being readmitted for a new offense is -1.3487 lower if the person belongs to the New Treatment group compared with people who belong to the Original Treatment group. Similarly, on average, the probability of being readmitted for a new offense is -0.6535 lower if the person belongs to the Transition Treatment group compared with people who belong to the Original Treatment group. For each 1-unit increase on the Risk Score scale (0 to 5), the probability of a readmission for a new offense is 0.3557 higher on average. Completing SOTAP in the community lowers the probability of readmission for a new offense by -1.1781 compared to those people who had not completed the community portion of SOTAP. If the person's current prison term was a readmission, the probability of being readmitted for a new offense was 0.9625 higher than if the person's current prison term was a first admission to DOC. The length of time in the community (months since release) was negative, indicating that the probability

of being readmitted for a new offense declined by -0.0355 as each month passed. Finally, the number of violation hearings increased the probability of being readmitted for a new offense by 0.0674 compared to people with no violation hearings.

Table 13. Parameter estimates and significance tests for model of readmissions due to new offenses.

Analysis of Maximum Likelihood Estimates						
Parameter		DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
Intercept		1	-2.9596	0.4651	40.4917	<.0001*
Tx Group - New	2	1	-1.3487	0.5476	6.0655	0.0138*
Tx Group - Transition	1	1	-0.6535	0.3792	2.9697	0.0848
Risk Score		1	0.3557	0.1271	7.8296	0.0051*
Community Tx		1	-1.1781	0.3862	9.3064	0.0023*
Admission Type		1	0.9625	0.2936	10.7478	0.0010*
Months Released		1	-0.0355	0.0110	10.3481	0.0013*
Nbr Violation Hearings		1	0.0674	0.0358	3.5390	0.0599*

*p < .05 Level of Significance

Parameter	Estimate	Standard Error	z Value	Pr > |z|
Original Tx Group	2.0021	0.7129	2.81	0.0050*

The odds ratio estimates in the next table are obtained by exponentiating the coefficients in the first column, that is, calculating exp(β). They are very important in the interpretation of logistic regression coefficients. These might be better described as adjusted odds ratio estimates because they control for other variables in the model. According to this table, for example, the estimated odds of being readmitted for a new offense increases, on average, by 1.427 (43%) for each unit increase in Risk Score level, controlling for other variables in the model. The 95 percent confidence intervals around the original β coefficients are obtained by adding and subtracting 1.96 standard errors. To get confidence intervals around the odds ratio estimates, we exponentiate those upper and lower confidence limits.

The odds ratio estimates show that if there are two people with similar risk scores, community SOTAP treatment status, prison admission type, time (months) in the community, and number of violation hearings, but the main difference between them is that one person belongs to the Original Treatment group while the other person belongs to the New Treatment group, the person pertaining to the New Treatment group has an estimated odds of being readmitted for a new offense are about one quarter (26%) of the odds associated with the person from the Original Treatment group of being readmitted for committing a new offense.

Table 14. Odds Ratio Estimates and Profile-Likelihood Confidence Intervals.

Odds Ratio Estimates and Profile-Likelihood Confidence Intervals				
Effect	**Unit**	**Estimate**	**95% Confidence Limits**	
Tx Group 2 vs 0 (New v Original)	**1.0**	0.260	0.075	0.681
Tx Group 1 vs 0 (Trans v Original)	**1.0**	0.520	0.235	1.055
Risk Score	**1.0**	1.427	1.116	1.839
Community Tx	**1.0**	0.308	0.136	0.629
Admission Type	**1.0**	2.618	1.480	4.702
Months Released	**1.0**	0.965	0.942	0.985
Nbr Violation Hearings	**1.0**	1.070	0.998	1.150

Additional output tables for the logistic regression analysis can be found in the Appendix.

> ➢ **Regression Analysis Findings for Readmissions Due to Revocations**

For the second model, we repeated the same steps of the previous analysis. The dependent variable, or outcome of interest, was changed from new offenses to revocations. As there were nearly three times as many revocations (n=169) as new offenses, we wanted to create a more robust model. However, the unexpectedly large proportion of revocations in the New Treatment group confounded our efforts and resulted in some surprising model effects.

The fact that different variables predict readmissions due to revocations than the variables which predict readmissions for new offenses was an interesting finding. The variables that overlap between the two models are risk scores, community treatment completion, and months in the community. However, completion year of prison treatment replaced treatment program groups. Having served time in prison previously replaced admission type. The type of sex offense for which the person was serving became significant for predicting revocations. Some offenses may require more strict supervision rules in the community. Finally, two types of program categories, Cognitive Behavioral Therapy and Evidence-based Therapies (CBT/EBT) and Wellness programs, were also included in the model for revocations. Wellness programs contain a variety of activities and non-evidence based treatments which provide enrichment, enhance well-being, and offer improvement in physical, spiritual, or social aspects of their lives. Tables 15 and 16 show the model resulting from this stepwise logistic regression analysis.

The estimate values in Table 15 show us that the probability of being readmitted for a revocation declines for people depending on what year they completed treatment, if they had served a previous incarceration sentence, if they completed community SOTAP treatment, and the length of time (months) spent in the community after being released. On the other hand, the probability of being readmitted for a revocation increases, on average, for people with higher risk scores, offenses against children, and having completed more programming in the areas of cognitive & evidence-based therapies (excluding SOTAP) and wellness programs.

Table 15. Parameter estimates and significance tests for model of readmissions due to revocations.

Analysis of Maximum Likelihood Estimates					
Parameter	**DF**	**Estimate**	**Standard Error**	**Wald Chi-Square**	**Pr > ChiSq**
Intercept	1	378.2	141.9	7.0975	0.0077*
Tx_Complete_YR	1	-0.1884	0.0704	7.1694	0.0074*
Prior Prison	1	-0.9870	0.2542	15.0815	0.0001*
Risk Score	1	0.1667	0.0829	4.0459	0.0443*
Community Tx	1	-0.6793	0.2066	10.8088	0.0010*
Offense Type	1	0.1331	0.0409	10.6108	0.0011*
Nbr_CBT_EBP	1	0.1098	0.0400	7.5463	0.0060*
Nbr_Wellness	1	0.2219	0.0777	8.1583	0.0043*
Months Released	1	-0.0550	0.00731	56.5877	<.0001*

*p < .05 Level of Significance

Table 16. Odds Ratio Estimates and Profile-Likelihood Confidence Intervals.

Odds Ratio Estimates and Profile-Likelihood Confidence Intervals				
Effect	**Unit**	**Estimate**	**95% Confidence Limits**	
Tx_Complete_YR	**1.0**	0.828	0.720	0.950
Prior Prison	**1.0**	0.373	0.221	0.602
Risk Score	**1.0**	1.181	1.005	1.391
Field Tx	**1.0**	0.507	0.336	0.757
Offense Type	**1.0**	1.142	1.057	1.240
Nbr_CBT_EBP	**1.0**	1.116	1.031	1.206
Nbr_Wellness	**1.0**	1.248	1.072	1.455
Months Released	**1.0**	0.946	0.932	0.959

Additional output tables for the logistic regression analysis for revocations can be found in the Appendix.

The significance of completing community based SOTAP treatment was indicative of lower readmission rates for both revocations and new offenses. Although the proportions were nearly equivalent between completers of prison-based treatment and completers of both prison and community-based treatment, the latter group had fewer readmissions than the former group. Of those people who were readmitted to prison, 75 percent of

people with readmissions due to revocations and new offenses had completed only the prison-based treatment. The remaining 25 percent of people with readmissions had completed both the prison-based and community-based treatment.

Outcome #2 – Length of Time to Return to Prison

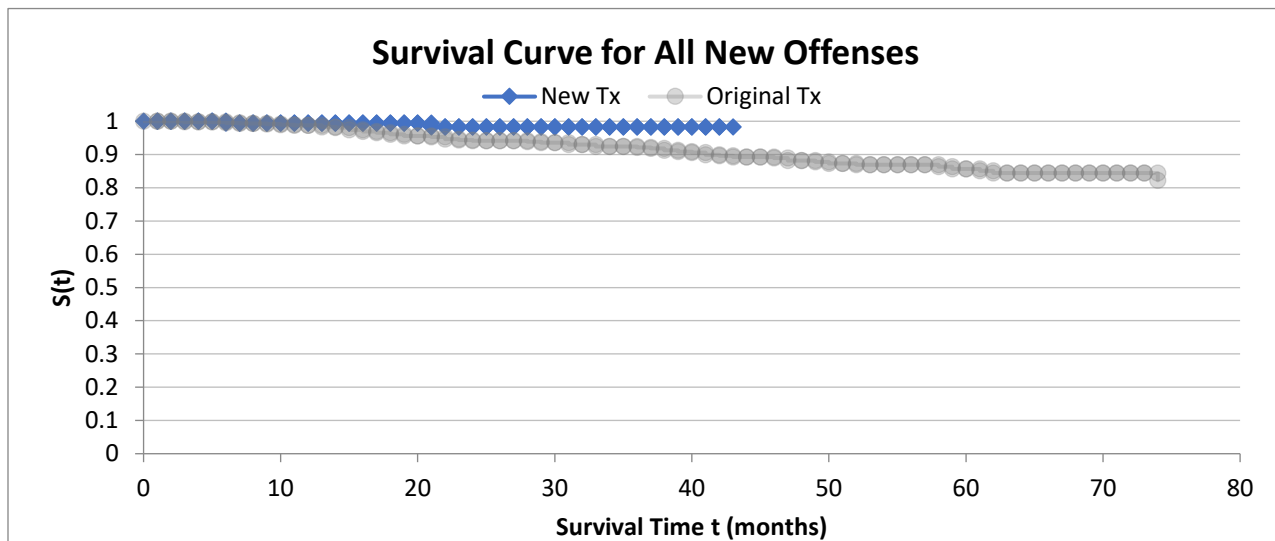> **Length of time to readmission for a new offense**

Being readmitted to prison for a new offense was a rare occurrence for all groups in the study population and the least common reason for a readmission to prison. There are some circumstances to keep in mind regarding this finding. First, the COVID-19 pandemic affected both criminal opportunities to offend and law enforcement's ability to detect crimes for nearly two years, beginning in March 2020. Second, the backlog in the courts due to pandemic-related shutdowns means that prosecutions have been delayed and convictions for new offenses that have already been committed may take two to three years to appear. Hence, it is possible that some people in the sample have committed new offenses, but the official convictions for those offenses have not yet been adjudicated.

An analysis of the time to readmission for any new offense was performed using survival curves. A Kaplan-Meier survival curve analysis was performed to examine differences between treatment groups for a readmission for a new offense. The Kaplan-Meier curve shows the change in the cumulative probability of surviving a given time. For example, when looking at the new offenses committed by the people in the study groups, at month 35, there is a 98 percent probability that a person who has completed the New SOTAP program will not have committed a new offense. However, for a person who completed the Original SOTAP program, the survival probability has dropped to 92 percent that they will not have committed a new offense.

There were four participants in the New Treatment group who were readmitted to prison for a new offense. The average time for the four individuals from the New Treatment group to be readmitted for committing a new offense was 14 months. There were 50 participants in the Original Treatment group who were readmitted to prison for a new offense. The average time for individuals from the Original Treatment group to be readmitted to prison for a new offense was 29.5 months. Individuals from the Original Treatment group had up to 79 months post-release time in the community, whereas the people in the New Treatment group had a maximum time in the community of 42 months. It is important to keep this in mind when discussing the average times between the different treatment groups.

The survival curve demonstrates that participants in the Original Treatment group had a higher probability of being readmitted to prison for a new offense than participants in the New Treatment group. However, all tests for significance returned p-values that were just outside of the range of significance. Two constraints that impacted the significance tests were that the Original Treatment group was three times larger than the New Treatment group and that the number of people in the New Treatment group quickly dropped off after the one-year mark. In fact, there were no participants from the New Treatment group after 42 months (the probability drops to zero since there are no people with more than 42 months post-release). As more time passes and participants in the New Treatment group have more time in the community, we expect the trends from these measures to become significant.

*Figure 2. Length of time in days to readmission for New Offenses.*

Survival Curve for All New Offenses

Tests of Significance	stat	p-value
Log-rank 1	0.204358	0.651226
Log-rank 2	0.227588	0.633318
Wilcoxon	0.321939	0.570445
Tarone-Ware	0.285407	0.593179

> ➢ **Length of time to readmission due to revocations.**

For the second analysis, survival curves were generated for readmissions to prison that were due to revocations. The number of people in the analysis for both the New Treatment group (n=30) and the Original Treatment group (n=103) was still not very large. This survival curve showed that participants in the New Treatment group had a higher probability of being revoked than the participants in the Original Treatment group in the first four years. However, after four years, the probability of the participants in the Original Treatment group being revoked in years five and six overtook and surpassed the New Treatment group's final rate at 42 months. All the significance tests returned p-values that were significant.

Overall, the average time for individuals from the Original Treatment group to be readmitted to prison for a revocation was 31 months (N=103). The average time for the thirty individuals from the New Treatment group to be readmitted for a revocation was 12 months. When the context of their time in the community is taken into consideration, these findings regarding revocations coincide with many factors that arose in response to the COVID-19 pandemic. The restrictions on movement out in public spaces and suspensions in treatment programs in the community contributed to this unparalleled situation. Hence, the revocation rates are not a reflection of a change in practice by the ISRB, but rather a change in community environment related to COVID-19 pandemic restrictions on access to services and supervision. Supervision practices were modified by DOC during this time, and with known reduced supervision likely comes more violation behavior, leading to more revocations.

Figure 3. Length of time in days to readmission for Revocations.

Survival Curve for All Revocations
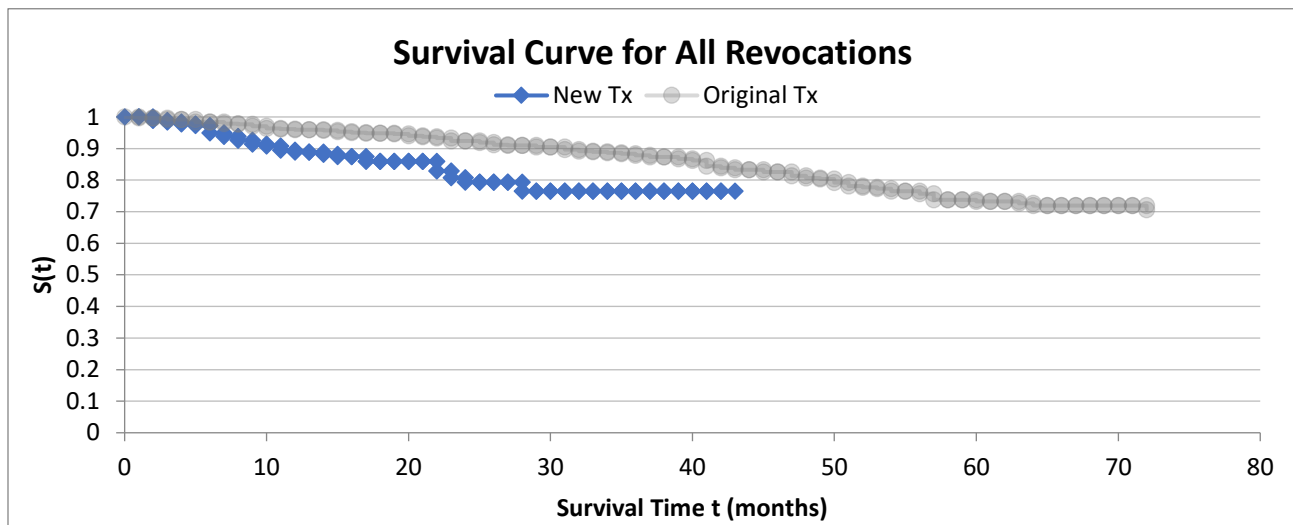
Tests of Significance	stat	p-value
Log-rank 1	7.825441	0.005151
Log-rank 2	8.666749	0.003240
Wilcoxon	5.370059	0.020485
Tarone-Ware	6.683146	0.009732

➤ **Length of time to First Violation Hearing**

Violations are not counted in the measure of readmissions to prison. However, after observing the significant relationship between the frequency of violation hearings and readmissions to prison, it was apparent that we should also include an analysis of survival curves for time to violation hearings. We chose violation hearing dates rather than the dates of the violations since the dates of violations can transpire for several days and they are often estimates rather than exact dates. A violation hearing date is exact and is easier to use for purposes of determining length of time to events. Violation hearings occur rather quickly after violations are reported.

For a violation hearing to occur, a person on community supervision must be charged with one or more violations and is brought to a hearing whereby culpability is established. Often, a person is charged with multiple violations when they have a violation hearing. If found guilty of any violation(s), a person can either be released with new amendments to the community supervision contract (like a sentence of time served), or the person may be sentenced to serve a few days or weeks in jail and then resumes supervision. Overall, the average time for an individual in the Original Treatment group from release to the first violation hearing is 19.4 months (n=117). For individuals in the New Treatment group, the average time is 14.4 months (n=40).

Compared to the survival curves for revocations and new offenses, the survival curve that measures time to the first violation hearing where the person was found guilty of at least one violation shows the steepest decline over time. Within the first year following release, the probability of not having a violation hearing where the person was found guilty of a violation drops below 80 percent. After four years, the probability has dropped below 50 percent. There was a smaller probability for people in the New Treatment group to have a violation

hearing during the first three years of supervision, but the difference between the Original and New Treatment groups was not statistically significant. More time is needed to allow greater numbers of people in the New Treatment group to have sufficient time in the community to accurately measure this difference.

Figure 4. Length of time in days to first violation hearing with a guilty finding on one or more violations.
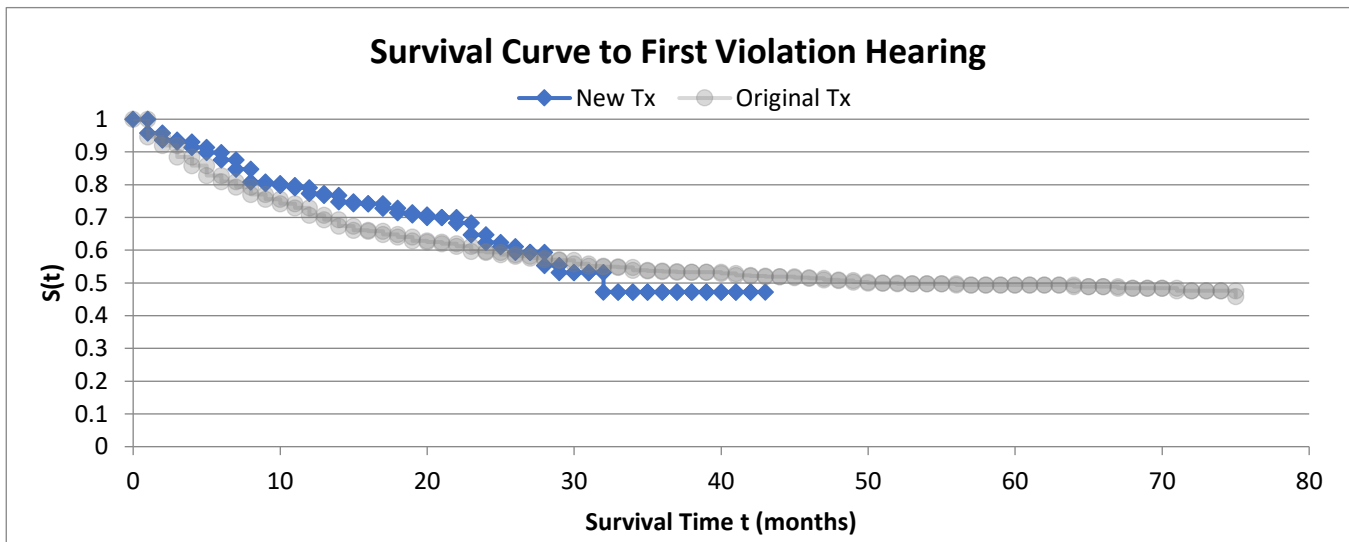
Tests of Significance	stat	p-value
Log-rank 1	0.72100	0.395815
Log-rank 2	0.763449	0.382251
Wilcoxon	1.944944	0.163132
Tarone-Ware	1.365398	0.242604

Although the survival curve above did not find significant differences from month to month, a chi-square statistic was performed to look at the overall treatment groups for all time. The chi-square test was significant. This finding indicates that the overall differences between the proportions of people in the Original and New Treatment groups who had a violation hearing was significantly different when excluding the measure of time to the hearing. The following table shows the results of the chi-square tests.

Table 17. Treatment Program Group and First Violation Hearing – All Time Follow-up (excludes Transition Treatment Group participants).

Treatment Group	No Violation Hearing	Violation Hearing	Total
New Treatment Group	124 (n) 64.92% (row)	67 35.08%	191 22.08%
Original Treatment Group	355 52.67%	319 47.33%	674 77.92%
Total	**732** **55.38%**	**133** **44.62%**	**865** **100%**

$X^2=9.039$, df=1, p=0.0026

As a final analysis of the violation hearings, we examined the relationship with sex offender risk assessment scores taken from the Static-99R and Stable2007 assessments for both the Original and New Treatment Groups. We found highly significant relationships between risk scores and violation hearings for both treatment groups. The higher the risk score category, the more likely the person would be to have had a violation hearing.

Table 18. Sex Offense Assessment Risk Scores and First Violation Hearing for the Original Treatment Group.

Assessment Risk Score	No Violation Hearing	Violation Hearing	Total
Low Risk	95(n) 74.80% (row)	32 25.20%	127 19.27%
Low Moderate Risk	89 60.14%	59 39.86%	148 22.46%
Moderate High Risk	79 47.31%	88 52.69%	167 25.34%
High Risk	69 42.86%	92 57.14%	161 24.43%
Very High Risk	17 30.36%	39 69.64%	56 8.50%
Total	**349** **52.96%**	**310** **47.04%**	**659*** **100%**

X^2=47.6053, df=1, p<0.0001   (*15 people in this group had no risk score.)

Table 19. Sex Offense Assessment Risk Scores and First Violation Hearing for the New Treatment Group.

Assessment Risk Score	No Violation Hearing	Violation Hearing	Total
Low Risk	38 (n) 86.36% (row)	6 13.64%	44 23.04%
Low Moderate Risk	43 78.18%	12 21.82%	55 28.80%
Moderate High Risk	22 61.11%	14 38.89%	36 18.85%
High Risk	17 36.96%	29 63.04%	46 24.08%
Very High Risk	4 40.0%	6 60.0%	10 5.24%
Total	**124** **64.92%**	**67** **35.08%**	**191** **100%**

X^2=31.8827, df=4, p<0.0001

Outcome #3 – Risk Scores and Recidivism

Chi-square statistics were calculated to measure the significance of sex offense assessment risk scores (combined measure of Static-99R and Stable-07) on readmissions to prison due to revocations or new offenses. We further subdivided these tests by treatment group to examine differences. The first table shows the results of analyzing the relationship between risk assessment scores and revocations for the Original Treatment Group. The relationship was slightly outside of the range of significance, indicating that risk scores do not predict revocations very well for the Original Treatment group.

Table 20. Sex Offense Assessment Risk Scores and Revocations Among the Original Treatment Group.

Assessment Risk Score	No Revocation	Revocation	Total
Low Risk	117 (n) 92.13% (row)	10 7.87%	127 19.27%
Low Moderate Risk	128 86.49%	20 13.51%	148 22.46%
Moderate High Risk	137 82.04%	30 17.96%	167 25.34%
High Risk	132 81.99%	29 18.01%	161 24.43%
Very High Risk	44 78.57%	12 21.43%	56 8.50%
Total	**558** **84.67%**	**101** **15.33%**	**659*** **100%**

X^2=9.2072, df=4, p=0.0561   (*15 people in this group had no risk score.)

The loss of significance in the chi-square testing for the Original Treatment group appears to be the result of the proportions of revocations in the Low, Low-Moderate, and Moderate-High risk categories. Perhaps there were people assessed to lower risk categories who would have been more appropriately assessed into higher risk categories. It is possible that the lack of significance indicates either that the risk scores for people in the Original Treatment group were not necessarily representative of their actual risk or that the risk assessments were not administered very well.

Next, we examined the relationship between risk scores and revocations for the New Treatment Group. The chi-square test was significant, indicating a strong relationship. These results in the following table suggest that the risk assessment scores of the people in the New Treatment Group are categorizing people's risk appropriately.

Table 21. Sex Offense Assessment Risk Scores and Revocations Among the <u>New Treatment</u> Group.

Assessment Risk Score	No Revocation	Revocation	Total
Low Risk	42 (n) 95.45% (row)	2 4.55%	44 23.04%
Low Moderate Risk	51 92.73%	4 7.27%	55 28.80%
Moderate High Risk	33 91.67%	3 8.33%	36 18.85%
High Risk	28 60.87%	18 39.13%	46 24.08%
Very High Risk	7 70.0%	3 30.0%	10 5.24%
Total	**161** **84.29%**	**30** **15.71%**	**191** **100%**

$X^2=29.1792$, df=4, $p<0.0001$

Our analysis then turned to the relationship between risk assessment scores and readmissions for new offenses. We were unable to obtain a valid chi-square value for the New Treatment group, owing to the fact there were only four people readmitted to prison for new offenses. The test could not perform correctly with one-half of the cells in the table with counts lower than five. However, we were able to successfully run the test for the Original Treatment group. The chi-square test was significant, indicating a strong relationship between risk assessment scores and readmissions for new offenses. These results suggest that the risk scores of the people in the Original Treatment Group are categorizing people's risk appropriately.

Table 22. Sex Offense Assessment Risk Scores and New Offenses Among the <u>Original Treatment</u> Group.

Assessment Risk Score	No New Offense	New Offense	Total
Low Risk	125 (n) 98.43% (row)	2 1.57%	127 19.27%
Low Moderate Risk	147 99.32%	1 0.68%	148 22.46%
Moderate High Risk	151 90.42%	16 9.58%	167 25.34%
High Risk	142 88.20%	19 11.80%	161 24.43%
Very High Risk	48 85.71%	8 14.29%	56 8.50%
Total	**613** **93.02%**	**46** **6.98%**	**659*** **100%**

$X^2=26.8804$, df=4, $p<0.0001$ (*15 people in this group had no risk score.)

For the final set of analyses of risk scores, we combined readmissions for either revocations or new offenses into one readmission event. Using this new "all readmissions" variable, we performed chi-square analyses and found significant relationships for both the Original and New Treatment groups. The chi-square value obtained for risk scores and all readmissions for the Original Treatment group was X^2=31.2554 (df=4, p<0.0001). The chi-square value obtained for risk scores and all readmissions for the New Treatment group was X^2=33.8309 (df=4, p<0.0001). See full tables 8 and 9 in the Appendix.

Outcome #4 – Types of Violations with Guilty Findings

For all study participants who had a violation hearing, the average time from release to the violation hearing was 12.6 months. For those participants who did not complete community treatment programs (n=299), the average time to the first violation hearing was 9.4 months. Among those who completed treatment programs in the community (n=181), the average time to the first violation hearing was 19.6 months.

The most common reason for a first-time violation hearing was for using controlled substances, and consuming alcohol was the fourth most common reason. Alcohol and substance use disorder treatment should not be overlooked for this population (O'Connor et al., 2022). The following table provides a list of the top ten violations that resulted in violation hearings.

Table 23. Top Ten Violations that led to the First Violation Hearing.

	Top 10 Reasons for First-time Violations
1	Using Controlled Substances
2	Contact with Minors/prohibited Persons
3	Possessing Pornography
4	Consuming Alcohol
5	Unapproved Employ/Reside Change
6	Absconding from Supervision
7	Failure to Complete Community SOTAP
8	UA/BA Failure
9	Failure to Report/Abide Directives
10	Travel outside Geographic Boundary

By examining all violations for which the study population was found guilty at violation hearings, a similar pattern of violation behavior emerges, suggesting that these violations are occurring throughout the period of community supervision, not just at the beginning of supervision. The top ten reasons for violating the conditions of community supervision are all overlapping with the previous list, albeit in a slightly different order.

Table 24. Top Ten Reasons for All Violations that resulted in a Violation Hearing.

	Top 10 Reasons for All Violation Hearings
1	Using Controlled Substances
2	Absconding from Supervision
3	UA/BA Failure
4	Unapproved Employ/Reside Change
5	Failure to Report/Abide Directives
6	Failure to Complete Community SOTAP
7	Possessing Pornography
8	Travel outside Geographic Boundary
9	Consuming Alcohol
10	Contact with Minors/prohibited Persons

Keeping in mind that accumulating violation hearings with guilty findings is associated with subsequent readmissions to prison, the importance of proactively addressing violation behaviors may mitigate potential escalation whereby communities may be placed in harm's way. In overcoming any addictive behavior, one should expect failures while working toward success. Being charged with violations should not be viewed as either failing or succeeding on community supervision. Rather, it demonstrates that change is a long-term process. For this reason, the DOC prioritizes frequent contact with these people while they are in the community. It is better to correct minor misbehavior such as possessing sexually explicit material or patronizing a location which has been prohibited for them rather than wait until the behaviors escalate into more serious conduct that could jeopardize public safety.

Outcome #5 – New Offenses
> **How many, by whom, and which were of a sexual nature?**

New criminal offenses were perpetrated by just 5.2 percent of the people in our total study population. Among the people who were readmitted to prison, people who committed new offenses account for just 10.3 percent. Notwithstanding the fact that this phenomenon constitutes the smallest proportion of people who fail in their community supervision, people who commit new crimes appear to garner the most attention. There were nearly 160 new offenses committed by 64 unique people in the study population who were readmitted to prison for having committed a new offense. We analyzed the offenses by placing them into three categories. An individual may have committed several offenses within a single criminal episode and may be represented in one, two, or all three categories of offense types.

New "Failure to Register" Offenses

There were 13 new offenses for Failure to Register as a Sex Offender (FRSO) for 12 individuals. Eleven of these people were participants in the Original Treatment group and one person was a participant in the Transition Treatment group. There were no participants in the New Treatment group who were readmitted to prison for committing a new felony offense of Failing to Register as a Sex Offender as required by state law.

Two of the twelve people who committed a new FRSO offense did so within the first year following their release. There were five more people readmitting for committing this new offense within two years of being released. There was one person who committed this new offense within the third year of being released. Of interest, this individual who was readmitted for FRSO in the third year was also admitted for committing a new sex offense. None of the other eleven people have committed a new sex offense, although ten of them were also readmitted for committing new general offenses. Finally, three people were readmitted in the fourth year for an FRSO offense and one person in their fifth year following release from prison.

Only one individual who was readmitted for a new FRSO offense had also completed the community portion of SOTAP, and that person was one of those who were readmitted in the fourth year. The other eleven people had completed the prison-based portion of SOTAP but had not yet completed the community-based treatment. This one individual who completed both prison and community treatment was also readmitted for committing a new general offense. The next table shows the risk assessment scores for these twelve people.

Table 25. Distribution of Sex Offender Risk Scores with New Failure to Register Offense (N=12).

Risk Score	Nbr. People
LOW	1
LOW MODERATE	1
MODERATE HIGH	2
HIGH	5
VERY HIGH	3

New General Non-Sex Offenses

There were 120 new general offenses for crimes such as illicit drugs, property crime, theft, and assault which were linked to 52 people. Three of these 52 people were in the New Treatment group. There were forty people from the Original Treatment group and nine people from the Transition Treatment group who committed new general offenses.

Four people, one each from the New and Transition Treatment groups and two people from the Original Treatment group, were readmitted to prison for committing a new sex offense as well. There were two people, one each in the New and Original Treatment groups who were each readmitted within the second year following release from prison for committing both new general and new sex offenses. The individual from the Transition Treatment group who committed both new general and new sex offenses was readmitted in the third year after release. The other person from the Original Treatment group who committed both new general and new sex offenses was readmitted in the sixth year following release.

Among the three people readmitted for committing new general offenses from the New Treatment group, one was readmitted within the first year and two people in the second year following release from prison. The new general offenses they committed were assault, malicious mischief, protection order violations, and attempting to elude the police. The commonality among these offenses is that they are all related to domestic violence. Among the 40 people readmitted for committing new general offenses from the Original Treatment group, four people were readmitted within the first year after being released from prison, 12 people in the second year

following release, four people in the third year, 12 people in the fourth year, six people in the fifth year, and two people in the sixth year following release.

Among the nine people readmitted for committing new general offenses from the Transition Treatment group, one person was readmitted within the first year, three people were readmitted in the second year, four people in the third year and one person in the fourth year following release from prison. Of note, 39 of the overall total 52 people (75%) had been readmitted within the first year for violating conditions of their community supervision.

Like new FRSO offenses, the number of people readmitted for committing new general offenses, and who had also completed the community-based portion of SOTAP, was quite small. Only seven individuals, six of whom were in the Original Treatment group and one in the Transition Treatment group, had completed both the prison and community-based portions of SOTAP. One of the seven full SOTAP completers from the Original Treatment group was also readmitted on an FRSO offense.

Table 26. Distribution of Sex Offender Risk Scores with New General Offense (N=52).

Risk Score	Nbr. People
LOW	2
LOW MODERATE	2
MODERATE HIGH	18
HIGH	21
VERY HIGH	8
No Score	1

Table 27. General Offenses Ranked by Frequency Committed (n=120).

General Offense	Nbr.
DRUG VIOLATIONS	28
ASSAULT	27
BURGLARY	17
ATT ELUDE POLICE	8
THEFT	7
AUTO THEFT	5
ESCAPE	5
HARASSMENT	4
UNL POSS FIREARM	4
STOLEN PROPERTY	4
BAIL JUMP	3
KIDNAP	2
MALICIOUS MISCHIEF	2
LIQUOR LAW	1
ROBBERY	1
TAMPER W WITNESS	1
FORGERY	1

New Offenses of a Sexual Nature

There were 27 new sex offenses associated with 16 individuals in the study who were readmitted to prison. For five of these 16 individuals, committing a new sex offense was the reason for their first-time readmission to prison. In other words, they had no prior violation readmissions between their release from prison and their return to prison. The remaining 12 people did have readmissions within the first year or two following their release from prison resulting from violations of the conditions of community supervision. As mentioned above, one person was also readmitted for failing to register as a sex offender. Four people also committed new general offenses in addition to the new sex offense.

Two of the 16 individuals were from the New Treatment group, and both were readmitted for the new sex offense in the second year of release from prison. Twelve of the 16 individuals were from the Original Treatment group. Among these 12 people, one was readmitted for a new sex offense in the first year, four people in the second year, four people in the third year, and one each in the fourth, fifth-, and sixth-years following release from prison. There were two individuals of the overall 16 who were in the Transition Treatment group and were readmitted for committing a new sex offense. Among these two people from the Transition Treatment group, one each was readmitted in the first- and third years following release from prison.

Once again, only a small minority of people who were readmitted for new sex offenses had completed the community-based portion of SOTAP. Just three of the 16 people who committed new sex offenses had completed both the prison and the community SOTAP portions of treatment. One of these three individuals who completed the community-based SOTAP was in the New Treatment group and two individuals were from the Original Treatment group.

Table 28. Distribution of Sex Offender Risk Scores with New Sex Offense (N=16).

Risk Score	Nbr. People
LOW	0
LOW MODERATE	0
MODERATE HIGH	5
HIGH	5
VERY HIGH	3
No Score	3

As demonstrated in the previous table, new sex offenses were committed by people who scored either Moderate High, High, or Very High on their Sex Offender Risk Assessment Score. There were no people with risk assessment scores of Low or Low Moderate who were readmitted for committing new sex offenses.

Table 29. Sex Offenses Ranked by Frequency Committed (N=27).

Sex Offense	Nbr.
VIEWING DEPICTIONS OF CHILD SEXUAL EXPLOITATION	12
INDECENT EXPOSURE	6
CHILD MOLESTATION	6
SEX COMMUNICATION MINOR	1
VOYEURISM	1
COMMERCIAL SEX MINOR	1

Although any recidivism among this group of people is concerning, the majority of new offenses were not against an identifiable victim such as in the case of possessing child sexual exploitation materials. For example, there were no new offenses for rape, although eight individuals in this group had prior convictions for rape. This is another strong indication that the SOTAP treatment program works as well as providing evidence indicating that the supervision of these people in the community is working as it should, and that these people can successfully reside in the community and be safely supervised and treated.

Conclusion

People who completed the revised SOTAP program and were in the New Treatment group had fewer readmissions for new crimes within the first and second years following release from prison. They were less likely to be readmitted for any new offense, but especially less likely for offenses of failing to register as a sex offender or new sex offenses. New sex offenses were highly correlated with the Sex Offender Risk Scores. Failing to register as a Sex Offender was found to be associated with committing new general offenses and not with committing new sex offenses.

At the same time, the New Treatment group participants had a higher rate of revocations within the first- and second years following release from prison. This finding might temper the former findings of fewer new offenses. It may be that the action of revoking people to prison had the effect of preventing them from engaging in further escalating behavior that would cross the line into new offenses. This finding will have to be reassessed over time as more participants of the New Treatment group are released into the community.

The two potentially largest contributing factors to increased revocation rates were that county jails were not receiving people for violating conditions of community supervision to reduce jail populations, and secondly, access to vital community services such as SOTAP treatment, mental health services, and treatment for substance use disorder were severely limited after March 2020. Most treatment services in the community moved to virtual platforms. However, it took time to obtain permission for sex offenders on community supervision to receive telehealth services. Overall, people in this population did not respond as positively to virtual treatment methods as to in-person treatment. Until community SOTAP treatment services were again available for in-person treatment, many people experienced difficulties in accessing the treatment that they needed while residing in the community.

Completing both the prison-based portion of SOTAP and the community-based portion of treatment was a very important protective factor for the people in the study, regardless of treatment group assignment. People who were readmitted to prison for new offenses were much less likely to have completed the community-based portion of treatment. At the same time, we found that completing the community based SOTAP treatment took an average of nearly 500 days following release. Providing a sex offense specific continuum of care through regular positive therapeutic interactions in the community significantly decreases the likelihood of reoffending.

People who accrued violations of the conditions of community supervision were most often violating rules prohibiting the use of alcohol or controlled substances. It is hypothesized that by providing comprehensive drug and alcohol substance use disorder treatment services, this could result in a significant reduction in the number of violations among this population. The other service needed desperately for this population is family relationship services. A large portion of the new offenses involved incidents of domestic violence with these people and other members of their households. Providing counseling to increase communication skills and interpersonal relationship skills would also likely have a positive impact on general recidivism.

The present study provides an early picture of outcomes for participants of the new SOTAP treatment program. A thorough picture will require additional passage of time to permit more participants of the new SOTAP program to be released from incarceration and to have at least five years in the community. A follow-up study conducted at the 5-year mark and again at the 10-year mark will provide enough outcome data to draw more definitive conclusions. Recent research indicates that comprehensive information on sex offender recidivism requires follow-up studies of 15 to 20 years (Alper & Durose, 2019). In a similar vein, future research should examine whether prison term lengths and misconduct while in custody are associated with revocations and sexual recidivism. This positive association has been noted in an evaluation of another state's program (Hsieh et al., 2016).

The efforts of all DOC staff and treatment providers should be applauded for their efforts to assist these individuals in their efforts to positively change their lives and be rehabilitated. Although this population are often viewed by society as the worst kind of criminals, most of these people, however, will eventually be released from prison. Their successful reintegration into society can benefit all communities.

Recommendations

(1) We recommend that the new SOTAP treatment be expanded to serve a greater number of people to reduce the number of people on waitlists. The results of this evaluation demonstrate great promise for the new method of administering the SOTAP treatment program. From the evidence available to us at the present time, we can conclude that this new treatment program is working. The effectiveness of SOTAP treatment can be increased even more by treating a larger number of people who have been shown to be high risk and high needs before leaving DOC custody.

(2) We recommend that the SOTAP program continue to reduce the number of people on the waitlist by providing more resources to increase the capacity of the SOTAP treatment program and continue prioritizing treatment for those people with required treatment completion conditions. Certain sex offenders are required to complete SOTAP treatment before the first review date with either the Community Custody Board (CCB) or the Indeterminate Sentencing Review Board (ISRB). No incarcerated individual should have their release date delayed solely because they have not yet been offered treatment or have not yet completed treatment. SOTAP program expansion will likely alleviate much of this problem.

(3) We recommend that the circumstances are examined when people take longer than 500 days to complete the community portion of SOTAP treatment to better understand the causes behind these delays. The SOTAP program is designed for a duration of approximately one year following release. By investigating the reasons that some people take far longer to complete the treatment program may help to identify inefficiencies, poor data entry, or other obstacles that may need to be addressed. This effort may result in preventing people from falling through unintentional cracks in the program and in raising the completion rate as well as providing more information about when people might need additional follow-up treatment. The importance of completing the community portion of SOTAP treatment cannot be understated. In this study, we found that the comparison of those who completed only the prison-based SOTAP treatment to those people who completed both the prison- and community-based programs provided more statistically clear and significant results than the comparison between the participants of the Original and New Treatment programs.

(4) We recommend the provision of more wrap-around services for this population of released individuals residing in the community. In the current study, we found that the most frequent reasons for violations of community supervision were violations of prohibitions regarding alcohol and illicit substance use. It is imperative that this phenomenon be examined further to design potential interventions that will reduce the high rates of violations stemming from this problem. This population seems particularly susceptible to alcohol and substance use disorders and the associated health problems that accompany them.

(5) We recommend that another evaluation be conducted in three to five years to gauge changes that have occurred post-pandemic. This would include an additional look at the spike in revocations during calendar years 2020 and 2021. Other benefits would include having a larger number of people in the New Treatment group and allowing more people in this group to have more time in the community. As more time passes for this group, we can continue to measure readmissions due to revocations or new offenses and obtain more solid evidence to support the conclusions we have reached in this report. We can also test new hypotheses that came to light during this study, such as whether risk assessment scores are associated with certain types of offenses, like "failure to register" offenses, and whether the SOTAP treatment has greater impact on reduction of new sex offenses versus non-sex offenses.

Appendix A – Technical Appendix

Table 1. Characteristics of the SOTAP Research Study Population.

Race/Ethnicity Categories *	Original Treatment Program Group			New Treatment Program Group	
	Number	Percent		Number	Percent
White	497	73.7%		139	72.8%
Black/African American	77	11.4%		20	10.5%
Hispanic/Latinx	49	7.3%		15	7.9%
Asian, Hawaiian, Pacific Islander	13	1.9%		4	2.1%
Native Amer./Alaskan Native	31	4.6%		7	3.7%
Not Recorded	7	1.0%		6	3.1%
TOTAL	**674**	**100.0%**		**191**	**100.0%**
**Age at Admission ** **	**Number**	**Percent**		**Number**	**Percent**
24 or Younger	161	23.9%		37	19.4%
25 to 34	226	33.5%		59	30.9%
35 to 44	172	25.5%		47	24.6%
45 to 54	82	12.2%		29	15.2%
55 or older	33	4.9%		19	9.9%
TOTAL	**674**	**100.0%**		**191**	**100.0%**
Sex Offender Risk Score	**Number**	**Percent**		**Number**	**Percent**
Low Risk	127	18.8%		44	23.0%
Low Moderate Risk	148	22.0%		55	28.8%
Moderate High Risk	167	24.8%		36	18.8%
High Risk	161	23.9%		46	24.1%
Very High Risk	56	8.3%		10	5.2%
No Score	15	2.2%			0.0%
TOTAL	**674**	**100.0%**		**191**	**100.0%**
Sex Offense Category	**Number**	**Percent**		**Number**	**Percent**
Rape	83	12.3%		16	8.4%
Non-Violent Child Sex	94	13.9%		37	19.4%
Rape of a Child	162	24.0%		60	31.4%
Other Violation Child Sex	129	19.1%		39	20.4%
Other Sex Crimes	206	30.6%		39	20.4%
TOTAL	**674**	**100.0%**		**191**	**100.0%**

Table 1. Characteristics of the SOTAP Research Study Population (cont.).

	Original Treatment Program Group		New Treatment Program Group	
Admission Type	**Number**	**Percent**	**Number**	**Percent**
First Admission	477	70.8%	141	73.8%
Readmission	197	29.2%	50	26.2%
TOTAL	**674**	**100.0%**	**191**	**100.0%**
Years spent in Prison	**Number**	**Percent**	**Number**	**Percent**
1 - 5 Years	336	49.9%	108	56.5%
6 - 10 Years	201	29.8%	49	25.7%
11 - 15 Years	104	15.4%	24	12.6%
16 - 20 Years	14	2.1%	5	2.6%
21 - 45 Years	19	2.8%	5	2.6%
Total	**674**	**100.0%**	**191**	**100.0%**
Readmissions to Prison	**Number**	**Percent**	**Number**	**Percent**
Revoked	103	67.3%	30	88.2%
New Offense	50	32.7%	4	11.8%
TOTAL	153	100.0%	34	100.0%
Number of SOTAP Treatment Courses Completed in Prison	**Number**	**Percent**	**Number**	**Percent**
1	131	19.4%	14	7.3%
2	121	18.0%	35	18.3%
3	171	25.4%	54	28.3%
4	133	19.7%	42	22.0%
5	82	12.2%	27	14.1%
6	30	4.5%	11	5.8%
7	2	0.3%	6	3.1%
8	3	0.4%		0.0%
9	1	0.1%		0.0%
10		0.0%	1	0.5%
11		0.0%	1	0.5%
TOTAL	**674**	**100.0%**	**191**	**100.0%**

* Note: The percentage of Hispanic/Latino participants dropped significantly post-release as many of these individuals were taken into custody either immediately or within a few months by federal Immigrations and Customs Enforcement officers for deportation proceedings. They were excluded from recidivism metrics.

** Note: These distributions were affected by excluding those people who were civilly committed and by those who died post-release. Three treatment participants died in prison prior to release. Approximately 25 people of various ages died in the community and had to be excluded from the recidivism metrics.

Table 2. Number of SOTAP Treatment Participants by DOC Facility and Year of Completion.

Year of Tx Completion	AHCC			MCC	
	Number	Percent		Number	Percent
2015 (Nov.-Dec.)	27	5.3%		41	6.7%
2016	138	27.2%		153	25.0%
2017	114	22.5%		160	26.1%
2018	102	20.1%		104	17.0%
2019	79	15.6%		118	19.3%
2020 (Jan.-Feb.)	47	9.3%		36	5.9%
TOTAL	507	100.0%		612	100.0%

Table 3. P-Values associated with the F statistic on the ANOVA tables for Linear Regression. Highlighted cells indicate the corresponding p-value was smaller than the Alpha level of 0.05.

Independent Variable	Both Revokes & New Crimes	Revocations Only			New Offenses Only		
		All Tx Groups	New Tx Group	Original Tx Group	All Tx Groups	New Tx Group	Original Tx Group
	N=1,119	N=1,119	N=191	N=674	N=1,119	N=191	N=674
Treatment Group	0.03592	0.99534	---	---	0.00199	---	---
Race/Ethnicity Category	0.06681	0.07150	0.70626	0.13145	0.60486	0.88111	0.49312
Admission Type	0.00000	0.87542	0.06119	0.46557	0.00000	0.02477	0.00000
Sex Offense Type	0.01843	0.49406	0.11946	0.58461	0.00000	0.42381	0.00001
Prior Prison	0.00006	0.00000	0.58103	0.00016	0.65329	0.81948	0.86150
Prior Supervision	0.79932	0.43206	0.33450	0.88708	0.25269	0.57090	0.27174
Months Incarcerated	0.15658	0.54215	0.99820	0.21604	0.00874	0.65636	0.00288
Age at Release	0.00295	0.00755	0.18828	0.11792	0.02125	0.81929	0.01591
Risk Score	0.00000	0.00000	0.00000	0.00950	0.00000	0.05724	0.00000
Community Treatment	0.00000	0.00000	0.00012	0.00099	0.00000	0.41853	0.00000
SOTAP classes completed	0.92417	0.41236	0.35452	0.28660	0.24739	0.95034	0.66361
SOTAP Completion Year	0.05626	0.77554	0.45228	0.89837	0.00376	0.57653	0.83129
Education Programs	0.23984	0.00987	0.65366	0.00259	0.04228	0.47656	0.10038
Vocation Programs	0.37975	0.00804	0.35588	0.03036	0.03303	0.21832	0.01785
CBT&EBT Programs	0.00066	0.00003	0.86331	0.00041	0.86075	0.38112	0.98198
Family Programs	0.36704	0.44687	0.56362	0.68318	0.52583	0.56656	0.52930
Mental Health Programs	0.06105	0.01515	0.05635	0.02334	0.82707	0.97557	0.59064
Substance Abuse Programs	0.03529	0.00871	0.24174	0.07802	0.92930	0.17840	0.89225
Wellness Programs	0.04890	0.00023	0.17795	0.00028	0.08566	0.92030	0.21076
Supervision Section	0.14428	0.11709	0.45853	0.16538	0.58309	0.12416	0.95787
Supervision County	0.17794	0.23395	0.24145	0.87793	0.43280	0.89560	0.38422
Months in Community	0.00000	0.00000	0.00000	0.00000	0.00000	-0.29178	0.00000
Violation Hearings	0.00000	0.00000	0.00008	0.00476	0.00000	0.15232	0.00000
Revocations	---	---	---	---	0.63182	0.60793	0.50339

Table 4. Step-wise Regression for New Offenses

Backward Selection Summary				
Step	Effect Removed	Number Effects In	F Value	Pr > F
0		17		
1	Nbr_Wellness	16	0.02	0.9024
2	Nbr_SUBSTANCE_TREATM	15	0.04	0.8373
3	Nbr_MENTAL_HEALTH_LI	14	0.06	0.8127
4	Age_at_Release	13	0.10	0.7495
5	Nbr_VOCATION	12	0.12	0.7282
6	Nbr_CBT_SOTAP_EBP	11	0.17	0.6825
7	PriorPrison	10	0.75	0.3870
8	OffenseCode	9	0.97	0.3259
9	Nbr_EDUCATION	8	1.42	0.2335
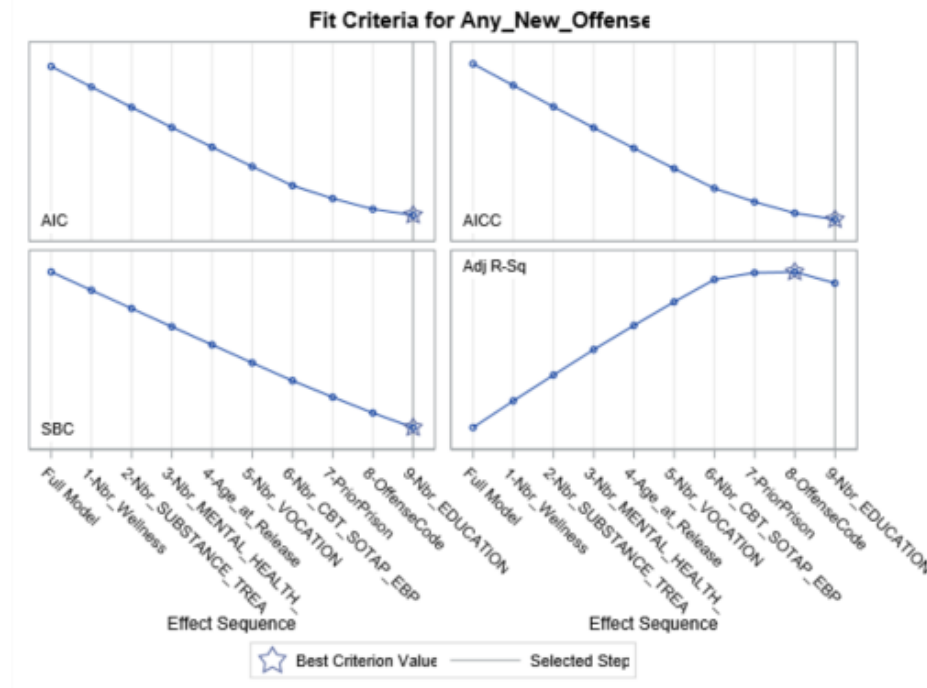
Fit Criteria for Any_New_Offense

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	7	7.86911	1.12416	23.80	<.0001
Error	1111	52.47048	0.04723		
Corrected Total	1118	60.33959			

Root MSE	0.21732
Dependent Mean	0.05719
R-Square	0.1304
Adj R-Sq	0.1249
AIC	-2287.07281
AICC	-2286.91050
SBC	-3367.91128

Parameter Estimates					
Parameter	DF	Estimate	Standard Error	t Value	Pr > |t|
Intercept	1	0.067096	0.021972	3.05	0.0023
TxProgram	1	-0.025949	0.009169	-2.83	0.0047
RiskScore	1	0.013081	0.005524	2.37	0.0181
FieldTx	1	-0.043382	0.014053	-3.09	0.0021
AdmissionType	1	0.049040	0.014904	3.29	0.0010
Nbr_Viol_Hrngs	1	0.017217	0.002915	5.91	<.0001
MonthsStreet	1	-0.000975	0.000365	-2.67	0.0077
Revok_ANY	1	-0.046931	0.019243	-2.44	0.0149

Model 1
Dependent Variable: New Offense

Observed by Predicted for Any_New_Offense

Fit Diagnostics for Any_New_Offense
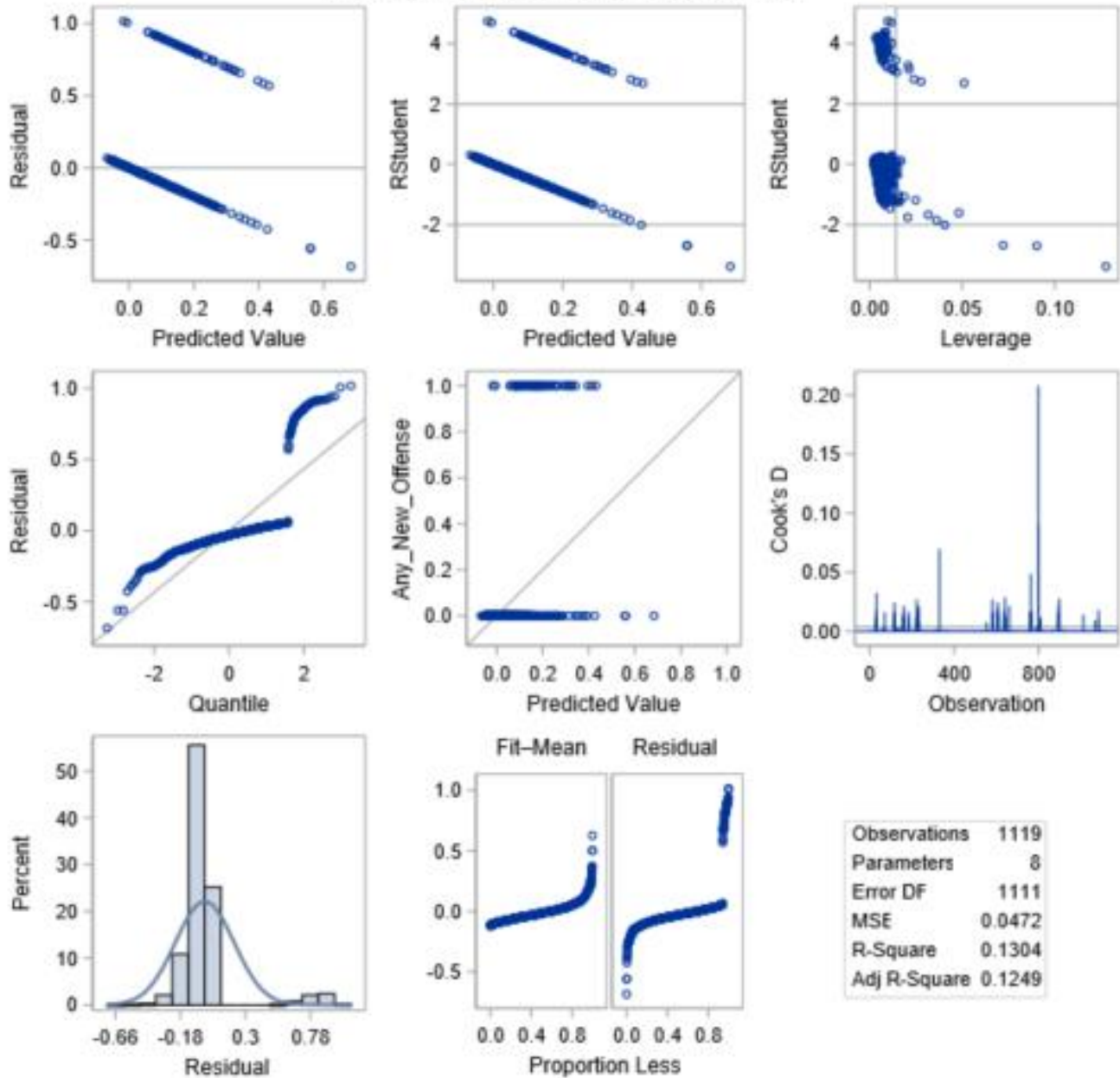
Observations	1119
Parameters	8
Error DF	1111
MSE	0.0472
R-Square	0.1304
Adj R-Square	0.1249

Residual by Regressors for Any_New_Offense
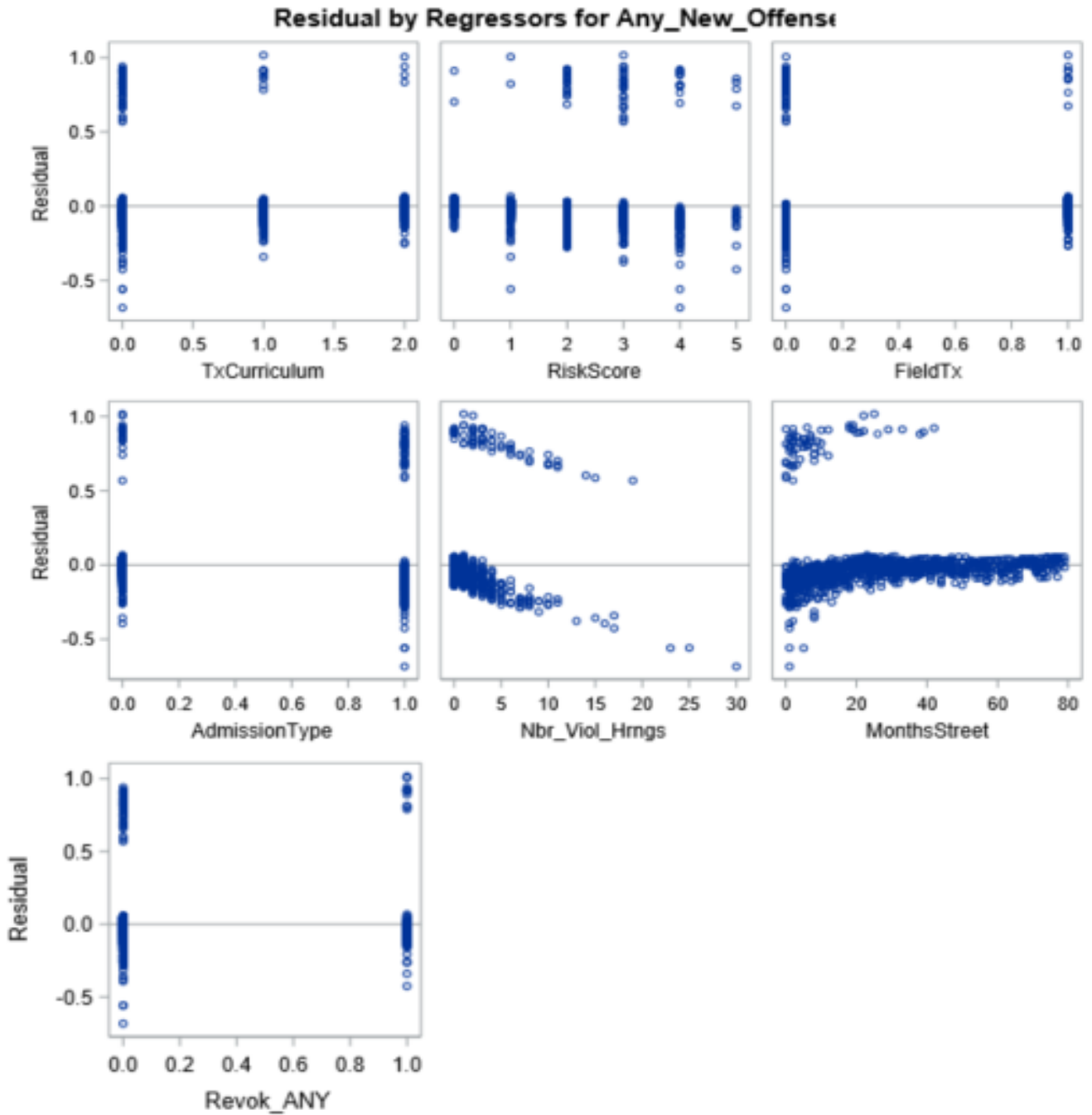
Table 5. Step-wise Regression for Revocations

Backward Selection Summary				
Step	Effect Removed	Number Effects In	F Value	Pr > F
0		22		
1	Age_at_Release	21	0.01	0.9263
2	RaceCategory	20	0.02	0.8860
3	PriorSupervision	19	0.02	0.8836
4	Nbr_VOCATION	18	0.49	0.4837
5	Nbr_Viol_Hrngs	17	0.53	0.4652
6	CountyCode	16	0.66	0.4180
7	Nbr_Modules	15	0.74	0.3909
8	Nbr_MENTAL_HEALTH_LI	14	0.86	0.3545
9	Months_Incarcerated	13	1.36	0.2441
10	Nbr_EDUCATION	12	1.41	0.2347
11	Nbr_SUBSTANCE_TREATM	11	1.63	0.2016
12	Section_Suprvsn	10	1.83	0.1769
13	AdmissionType	9	2.44	0.1184

Fit Criteria for Revok_ANY

Selected Model

	DF	Sum of Squares	Mean Square	F Value	Pr > F
Source					
Model	8	20.83086	2.60386	23.57	<.0001
Error	1110	122.64546	0.11049		
Corrected Total	1118	143.47632			

Analysis of Variance

Root MSE	0.33240
Dependent Mean	0.15103
R-Square	0.1452
Adj R-Sq	0.1390
AIC	-1334.98921
AICC	-1334.79066
SBC	-2410.80750

Parameter Estimates					
Parameter	**DF**	**Estimate**	**Standard Error**	**t Value**	**Pr > |t|**
Intercept	1	0.175201	0.045995	3.81	0.0001
TxProgram	1	-0.037543	0.013638	-2.75	0.0060
PriorPrison	1	-0.088989	0.022457	-3.96	<.0001
RiskScore	1	0.022378	0.008570	2.61	0.0091
FieldTx	1	-0.083682	0.021219	-3.94	<.0001
OffenseCode	1	0.012663	0.004253	2.98	0.0030
Nbr_CBT_SOTAP_EBP	1	0.014969	0.005155	2.90	0.0038
Nbr_Wellness	1	0.026763	0.009241	2.90	0.0039
MonthsStreet	1	-0.004104	0.000502	-8.18	<.0001
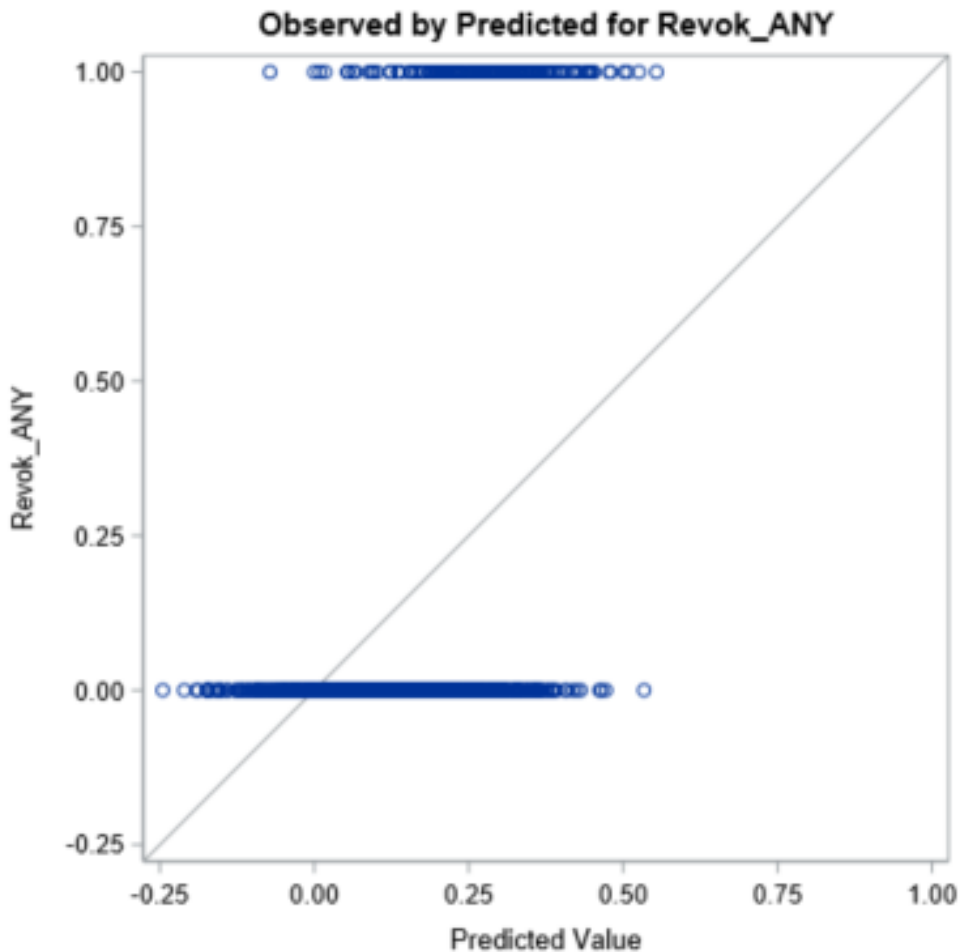
Observed by Predicted for Revok_ANY

Fit Diagnostics for Revok_ANY

Observations	1119
Parameters	9
Error DF	1110
MSE	0.1105
R-Square	0.1452
Adj R-Square	0.139
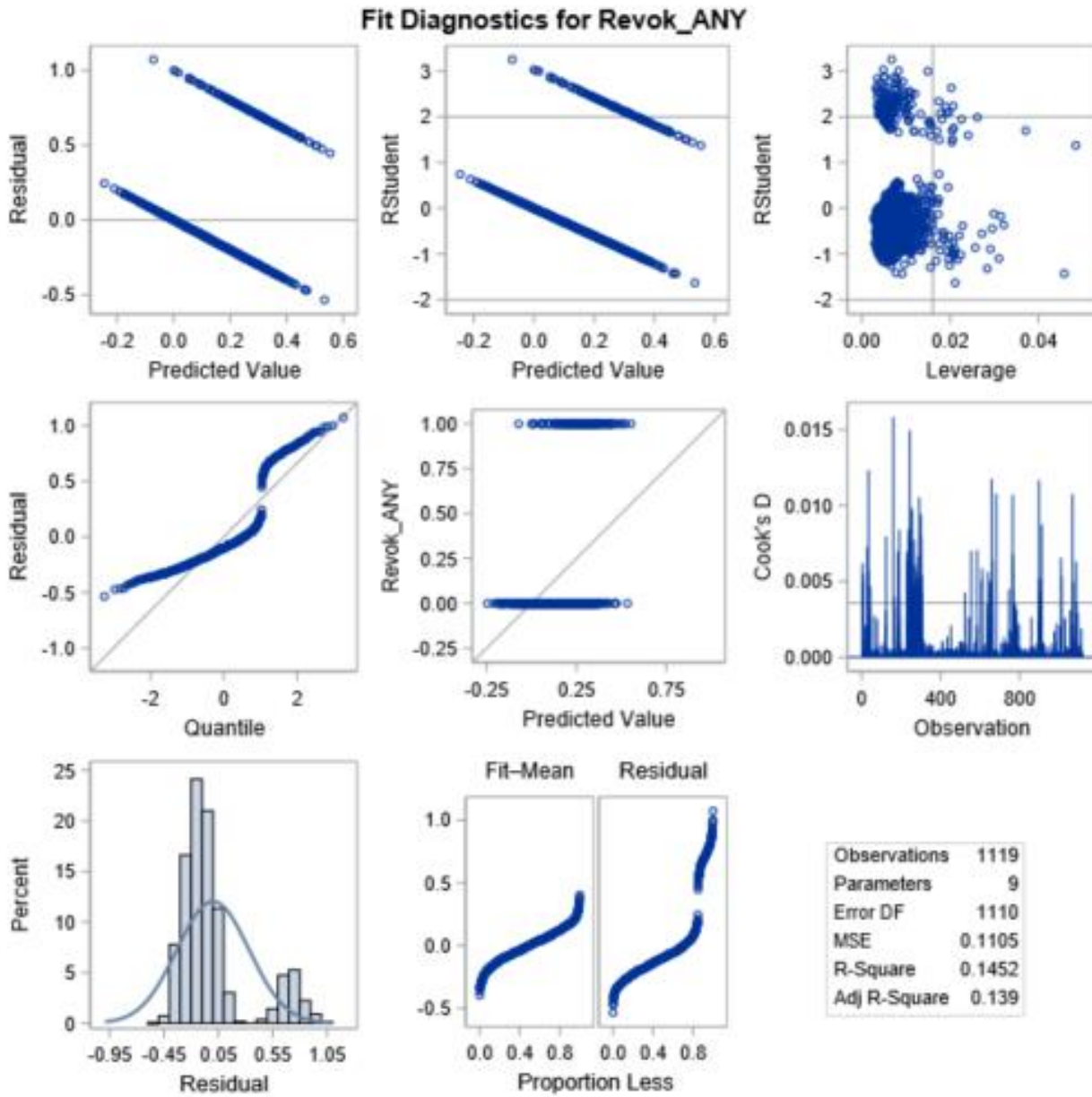
Residual by Regressors for Revok_ANY
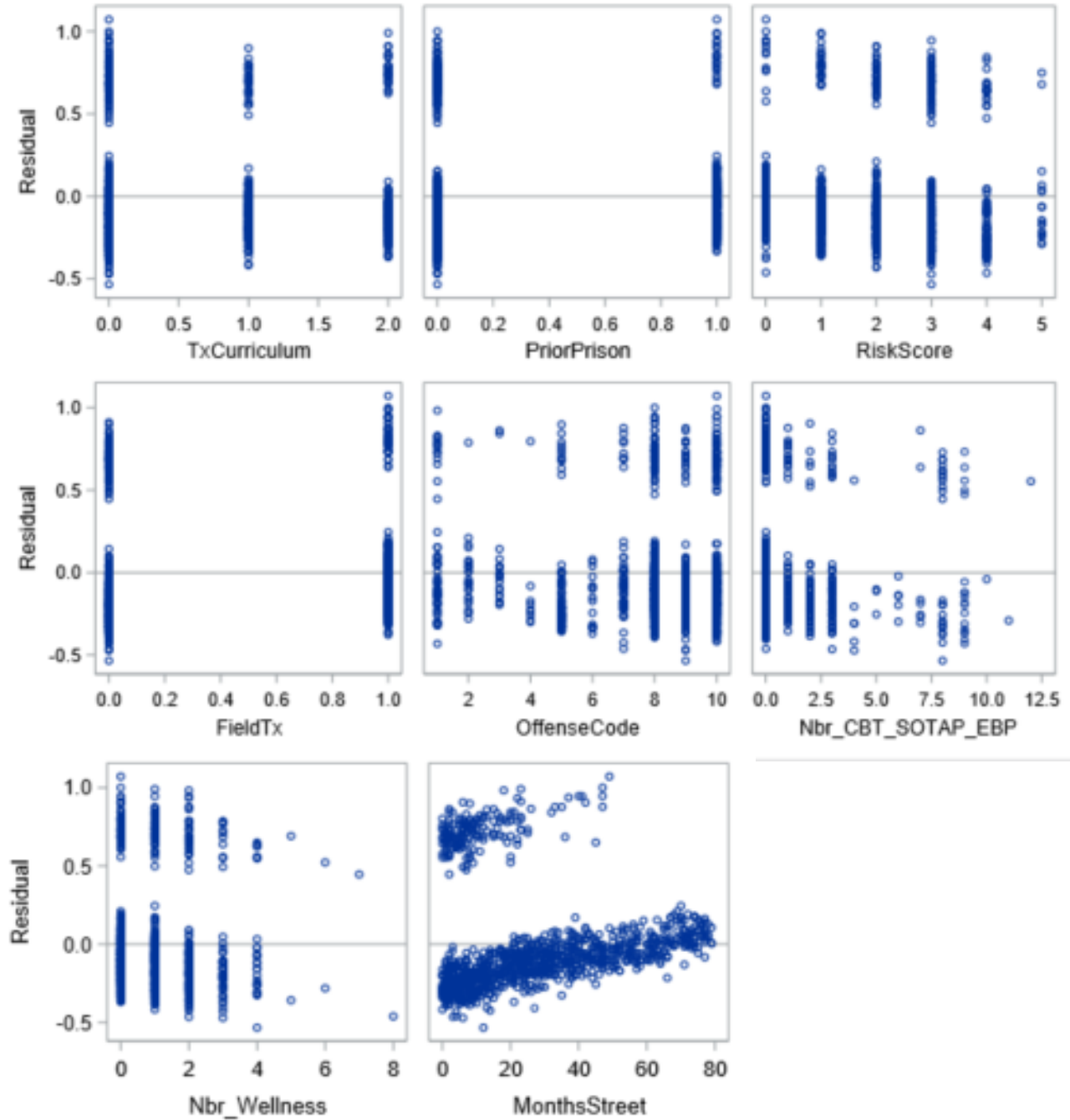
Table 6a. Logistic Regression Model Fit Statistics for New Offenses.

Model Fit Statistics		
Criterion	Intercept Only	Intercept and Covariates
AIC	492.515	384.894
SC	497.535	425.056
-2 Log L	490.515	368.894

Table 6a reports three different "Model Fit Statistics:" AIC, SC, and -2 Log L. Values of these fit statistics are displayed for two different models, a model with an intercept but no covariates (predictors), and a model that includes all the specified predictors (covariates). Usually, we can ignore the "Intercept Only" column. The most fundamental of the fit statistics, -2 Log L, is simply the maximized value of the logarithm of the likelihood function multiplied by −2. Higher values of -2 Log L may mean a worse fit to the data, but the overall magnitude of this statistic is heavily dependent on the number of observations. There is no absolute standard for what's a good fit, so one can only use this statistic to compare different model's fit to the same data set.

Within Table 6b, there are three chi-square statistics with values of 121.6207, 140.8805, and 82.4371. All three statistics are testing the same null hypothesis—that all the explanatory variables have coefficients of 0. The seven degrees of freedom for each statistic correspond to the seven coefficients for the independent variables. In this case, the associated p-values are less than .01, so we can reject the null hypothesis and conclude that at least one of the coefficients is not 0.

Table 6b. Testing Global Null Hypothesis: BETA=0.

Testing Global Null Hypothesis: BETA=0			
Test	**Chi-Square**	**DF**	**Pr > ChiSq**
Likelihood Ratio	121.6207	7	<.0001
Score	140.8805	7	<.0001
Wald	82.4371	7	<.0001

The model provides three different chi-square statistics to populate Table 6b. The first one is the likelihood ratio chi-square obtained by comparing the log-likelihood for the fitted model with the log-likelihood for a model with no explanatory variables (intercept only). It is calculated by taking twice the positive difference in the two log-likelihoods. In fact, LOGISTIC reports −2 Log L for each of those models, and the chi-square is just the difference between those two numbers. The score statistic is a function of the first and second derivatives of the log-likelihood function under the null hypothesis. The Wald statistic is a function of the coefficients and their covariance matrix.

Table 6c is an attempt to measure the explanatory power of the model. Four measures of association are shown in the right-hand column. The left-hand column gives the intermediate calculations on which those four statistics are based. All four measures vary between 0 and 1, with large values corresponding to stronger associations between the predicted and observed values. Of the four statistics, Tau-a tends to be closest to the generalized R2. On the other hand, the c statistic has become very popular because it corresponds to the area under the ROC curve.

Table 6c. Association of Predicted Probabilities and Observed Responses (Ordinal Measures of Association).

Association of Predicted Probabilities and Observed Responses			
Percent Concordant	87.1	**Somers' D**	0.743
Percent Discordant	12.9	**Gamma**	0.743
Percent Tied	0.0	**Tau-a**	0.080
Pairs	67,520	**c**	0.871

Table 6d. Fit Statistics for SCORE Data.

Fit Statistics for SCORE Data										
Total Frequency	**Log Likelihood**	**Error Rate**	**AIC**	**AICC**	**BIC**	**SC**	**R-Square**	**Max-Rescaled R-Square**	**AUC**	**Brier Score**
1119	-184.4	0.0599	384.8944	385.0242	425.0559	425.0559	0.102989	0.29019	0.871408	0.046761

The R-square value in Table 6d indicates the proportion of variability that is explained by the regression model. The max-rescaled R-square value suggests that the independent variables in this regression model explain 29 percent of the proportion of variability in the dependent (outcome) variable. The Area Under the Receiver Operating Characteristic (ROC) Curve (AUC) value of 0.871 indicates that the model has strong predictive accuracy for readmissions due to new offenses. An AUC value can vary between .500 and 1.00. AUCs in the .500s indicate little to no predictive accuracy, .600s weak, .700s moderate, and those above .800 have strong predictive accuracy.

Table 6d contains several measures of the relative quality of the model. The Error Rate is quite small, which indicates a good fit of the model to the data. The Akaike Information Criterion (AIC) measures the difference between a given model and the "true" underlying model, and smaller values indicate a better fit. The Bayesian Information Criterion (BIC), also known as the Schwarz Criterion (SBC) is based on the likelihood function. It is closely related to the AIC, but it gives a larger penalty term for larger models. Like the AIC measure, smaller values indicate a better fit. The scores in this table suggest that the model is good.

Table 7a. Logistic Regression Model Fit Statistics for Revocations.

Model Fit Statistics		
Criterion	**Intercept Only**	**Intercept and Covariates**
AIC	952.003	773.192
SC	957.023	818.373
-2 Log L	950.003	755.192

Table 7b. Testing Global Null Hypothesis: BETA=0.

Testing Global Null Hypothesis: BETA=0			
Test	**Chi-Square**	**DF**	**Pr > ChiSq**
Likelihood Ratio	194.8116	8	<.0001
Score	169.9009	8	<.0001
Wald	128.3683	8	<.0001

Table 7c. Association of Predicted Probabilities and Observed Responses (Ordinal Measures of Association).

Association of Predicted Probabilities and Observed Responses			
Percent Concordant	81.2	**Somers' D**	0.625
Percent Discordant	18.8	**Gamma**	0.625
Percent Tied	0.0	**Tau-a**	0.160
Pairs	160550	**c**	0.812

Table 7d. Fit Statistics for SCORE Data.

Fit Statistics for SCORE Data										
Total Frequency	**Log Likelihood**	**Error Rate**	**AIC**	**AICC**	**BIC**	**SC**	**R-Square**	**Max-Rescaled R-Square**	**AUC**	**Brier Score**
1119	-377.6	0.1403	773.1916	773.3539	818.3734	818.3734	0.159782	0.279268	0.812358	0.104668

The R-square value in Table 7d indicates the proportion of variability that is explained by the regression model. The max-rescaled R-square value suggests that the independent variables in this regression model explains 28 percent of the proportion of variability in the dependent (outcome) variable. The Area Under the Receiver Operating Characteristic (ROC) Curve (AUC) value of 0.812 indicates that the model has strong predictive accuracy for readmissions due to revocations.

Table 8. Sex Offense Assessment Risk Scores and Combined Revocations/New Offenses (All Readmissions) Among the Original Treatment Group.

Assessment Risk Score	No Revoke/New Offenses	Revoke/New Offenses	Total
Low Risk	115 (n) 90.55% (row)	12 9.45%	127 19.27%
Low Moderate Risk	126 85.14%	22 14.86%	148 22.46%
Moderate High Risk	118 70.66%	49 29.34%	167 25.34%
High Risk	117 72.67%	44 27.33%	161 24.43%
Very High Risk	35 62.50%	21 37.50%	56 8.50%
Total	**511** **77.54%**	**148** **22.46%**	**659*** **100%**

X^2=31.2554, df=4, p<0.0001   (*15 people in this group had no risk score.)

Table 9. Sex Offense Assessment Risk Scores and Combined Revocations/New Offenses (All Readmissions) Among the New Treatment Group.

Assessment Risk Score	No Revoke/New Offenses	Revoke/New Offenses	Total
Low Risk	42 (n) 95.45% (row)	2 4.55%	44 23.04%
Low Moderate Risk	51 92.73%	4 7.27%	55 28.80%
Moderate High Risk	33 91.67%	3 8.33%	36 18.85%
High Risk	27 58.70%	19 41.30%	46 24.08%
Very High Risk	6 60.0%	4 40.0%	10 5.24%
Total	**159** **83.25%**	**32** **16.75%**	**191** **100%**

X^2=33.8309, df=4, p<0.0001

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