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Washington State's Drug Offender Sentencing Alternative: *2022 Outcome Evaluation*

In Washington State, some individuals convicted of a criminal offense may be eligible to receive a Drug Offender Sentencing Alternative (DOSA) in lieu of the standard incarceration sentence. To date, DOSA is the most widely used sentencing alternative in Washington State Superior Courts and has expanded to encompass both prison-based and community-based options.

In 2020, the Washington State Legislature further expanded DOSA and directed the Washington State Institute for Public Policy (WSIPP) to analyze its effectiveness in reducing recidivism compared to standard sentencing. The directive requires WSIPP to update its evaluation in 2028 and every five years thereafter.

This report includes the first evaluation of the new ongoing DOSA report series. The current study examines whether the prison-based DOSA and residential-based DOSA programs effectively reduced recidivism for individuals sentenced to DOSA between 2010 and 2016.

Section I provides a brief overview of DOSA. Sections II describes the data and methods used for the current study. Section III presents the findings from our examination of DOSA participants in Washington State. Section IV provides a summary of our findings and questions for future research.

Summary

In Washington State, some individuals convicted of a criminal offense may be eligible to receive a Drug Offender Sentencing Alternative (DOSA) in lieu of the standard incarceration sentence.

Using administrative data from the Department of Corrections and WSIPP's Criminal History Database, this study examined whether individuals participating in prison or residential DOSA were less likely to recidivate compared to similar individuals who received a non-DOSA sentence.

Our findings indicate the prison DOSA reduces the likelihood of recidivism by 6.9 percentage points. These reductions in recidivism were consistent across subgroups by sex, race, and ethnicity.

Our findings for residential DOSA were less conclusive. In general, residential DOSA had no effect on the likelihood of recidivism compared to a standard sentence.

While we provide several potential explanations for the differences in the effectiveness of prison and residential DOSA, future research is needed to fully understand the mechanisms by which the two DOSA programs impact individuals' outcomes, including recidivism.

Suggested citation: Knoth-Peterson, L., Kelley, K.M., & Mack, C. (2022). *Washington State's Drug Offender Sentencing Alternative: 2022 outcome evaluation* (Document Number 22-11-1903). Olympia: Washington State Institute for Public Policy.

I. DOSA Overview

Initially established in 1995, the Drug Offender Sentencing Alternative (DOSA) provides judges with an alternative to the standard incarceration sentence for eligible individuals convicted of nonviolent offenses. The goal of DOSA was to reduce the costs of incarceration for those convicted of non-violent offenses while providing necessary treatment options to reduce the likelihood of recidivism. For a full discussion of the legislative history and evolution of DOSA over time, see WSIPP's publication introducing this report series.[1]

Today, Washington State has two DOSA options: prison DOSA and residential DOSA. Those receiving a prison DOSA serve a reduced term of incarceration followed by a period of community supervision. Those receiving a residential DOSA must meet the American Society for Addiction Medicine criteria for residential inpatient treatment. Under a residential DOSA, individuals are not required to serve any of the standard incarceration sentence, but they must complete inpatient treatment in a community facility before transitioning to a period of community supervision.

As a part of these sentencing alternatives, individuals must participate in and complete the appropriate substance use disorder (SUD) treatment and comply with all behavioral conditions while incarcerated and/or during the subsequent term of community supervision. Individuals who violate the terms of a DOSA sentence may have the sentencing alternative revoked and must return to incarceration to serve the remainder of the standard sentence.

While individuals serving a standard incarceration sentence may also access substance use disorder treatment in prison, the Department of Corrections (DOC) policy prioritizes SUD treatment slots first for those incarcerated on a DOSA sentence. As a result, the main differences between a DOSA sentence and a standard incarceration sentence are the amount of time served in total confinement (i.e., prison) and prioritized access to SUD treatment.

Prior research on prison DOSA found that individuals sentenced to DOSA were less likely to recidivate than similar individuals who received a standard incarceration sentence.[2] Similarly, prior research on residential DOSA found that those who were sentenced with a residential DOSA were less likely to recidivate than similar individuals who were sentenced with a prison DOSA. However, in the latter study, no comparisons were made between those who received a residential DOSA and those who served a non-DOSA sentence.[3]

[1] For more details, see Knoth-Peterson, L., & Kelley, K.M. (2022). *Washington State's Drug Offender Sentencing Alternative: Introduction to the series* (Doc. No. 22-11-1902). Olympia: Washington State Institute for Public Policy.

[2] Aos, S., Phipps, P., & Barnoski, R. (2005). *Washington's Drug Offender Sentencing Alternative: An evaluation of benefits and costs* (Doc. No. 05-01-1907). Olympia: Washington State Institute for Public Policy and Drake, E.K. (2006). *Washington's Drug Offender Sentencing Alternative: An update on recidivism findings* (Doc. No. 06-12-1901). Olympia: Washington State Institute for Public Policy.

[3] Drake, E.K., Fumia, D. & He, L. (2014). *Washington's residential Drug Offender Sentencing Alternative: Recidivism & benefit-cost analysis.* (Doc. No. 14-12-1901). Olympia: Washington State Institute for Public Policy.

Current Study

In 2020, the Washington State Legislature directed WSIPP to update its analysis of prison and residential DOSAs' effectiveness at reducing recidivism. The current study assesses the effectiveness of different DOSA options for individuals sentenced between 2008 and 2015.

In addition to the current report, the legislature directed WSIPP to update the evaluation again in 2028 and every five years thereafter. The continued review of DOSA will ensure that changes in the effectiveness of DOSA over time may be more quickly identified.

II. Data and Methods

The current study primarily uses data from the Department of Corrections Offender Management Network Information (OMNI) database[4] and WSIPP's Criminal History Database. Our study examines individuals who were convicted of and sentenced for a felony offense in Washington State Superior Courts between 2008 and 2015. This section briefly describes how we identified the samples for our study and the general methods used to assess DOSA's effectiveness. Additional technical details are available in Appendix I.

Study Groups

This study includes individuals who were sentenced to DOSA between 2008 and 2015 and similar individuals who received a non-DOSA sentence during the same time period. The total samples for prison and residential DOSA are presented in Exhibit 1.

To make causal inferences about the findings of DOSA, an ideal experiment would randomly assign an individual to DOSA or a standard prison sentence.

Exhibit 1

Treatment and Comparison Group Sample Sizes

Type of DOSA	Participants (treatment group)	Non-participants (comparison group)
Prison	4,393	23,859
Residential	5,103	20,491

Exhibit 2

DOSA Eligibility Requirements as of 2016

Prison DOSA (RCW 9.94A.662)

- No current or prior conviction for a violent offense* in past ten years.
- No prior convictions for robbery in the second degree that did not involve the use of a firearm and was not reduced from robbery in the first degree in the past seven years.
- No current or prior conviction for a sex offense.
- No conviction for felony DUI or felony physical control of a vehicle while under the influence of drugs or alcohol.
- Current conviction does not include a sentencing enhancement.
- If current conviction includes a violation of the Uniform Controlled Substances Act or solicitation to commit such an offense, the offense must involve only a small quantity of the controlled substance.
- Not subject to a deportation order.
- Not more than one previous DOSA sentence in past ten years.
- High end of standard sentence range for current offense must be greater than one year.

Residential DOSA (RCW 9.94A.664)

- All prison DOSA eligibility criteria and—
- Midpoint of standard sentence range must be 24 months or less.
- Assessed as needing residential treatment.

*Violent offenses are defined in RCW 9.94A.030.

[4] This material utilizes confidential data from the Washington State Department of Corrections (DOC). The views expressed here are those of the authors and do not necessarily represent those of DOC or other data contributors. Any errors are attributable to the authors.

Successful implementation of random assignment would allow us to determine that any observed differences in recidivism between the DOSA and the non-DOSA sentence groups could be attributed to the effect of DOSA. Since a random assignment study design is not feasible, we use a quasi-experimental study design and observational data to form retrospective DOSA and comparison groups.

Our prison and residential DOSA treatment samples include individuals who were sentenced to prison or residential DOSA from 2008 – 2015.[5] In the absence of randomization, we sought to identify a comparison group of individuals who were as similar as possible to those in the treatment groups. Using the eligibility criteria outlined in Exhibit 2, we identified individuals who were likely eligible for but who were not sentenced to prison or residential DOSA from 2008 – 2015.[6]

Our ability to perfectly identify eligibility is limited by the lack of comprehensive SUD assessments for the full prison and jail populations. For example, in 2017, DOC reported 2,399 individuals screened as needing a SUD assessment, but only 1,120 received an assessment.[7] Additionally, there is no unified database for SUD assessments conducted at local jail facilities.

Individuals in our comparison sample were identified as eligible for residential DOSA, prison DOSA, or both. The differences in eligibility were determined by the presumptive sentence for their most serious offense based on Washington State's sentencing guidelines. Washington State uses a presumptive sentencing grid with a defined minimum and maximum sentence based on the seriousness of the offense and the individual's criminal history.[8] We identified the guideline sentence for each case using adult felony sentencing data from the Caseload Forecast Council.

To be eligible for prison DOSA, individuals must have fallen in a guideline range with a minimum sentence greater than 12 months, precluding individuals convicted of the least serious offenses and who have fewer prior convictions. To be eligible for residential DOSA, individuals must have fallen in a guideline range with a midpoint sentence no greater than 24 months.

Individuals with a maximum sentence greater than 12 months but with a midpoint that is 24 months or less were eligible for both prison and residential DOSA. Individuals with a midpoint sentence greater than 26 months are only eligible for prison DOSA. See Exhibit A1 in the Appendix for a visual depiction of the sentencing guideline grid and DOSA eligibility.

[5] Individuals sentenced to prison DOSA must serve some of their sentence confined in a state prison. In order to account for this confinement time while still maintaining a three-year follow-up period, our sample was limited to individuals sentenced to DOSA who were released from the initial period of incarceration prior to 2016. As a result, the latest prison DOSA sentence included in our sample was issued in August 2014.

[6] We used the eligibility criteria applicable at the time when individuals in our sample were sentenced. This excludes modifications to eligibility made in 2020.

[7] WA Department of Corrections. (2018). *Substance Abuse Recovery Unit Fact Sheet.*

[8] For more details, see Knoth, L. (2021). *Examining Washington State's sentencing guidelines: A report for the Criminal Sentencing Task Force* (Doc. No. 21-05-1901). Olympia: Washington State Institute for Public Policy

Residential DOSA is also limited to individuals who meet the criteria for a minimum level of SUD treatment need according to the American Society of Addiction Medicine classification system.[9] We did not have comprehensive SUD assessment data that is necessary to select a comparison group that was assessed at a Level 3 (inpatient) treatment need. As such, it is possible that individuals in the residential DOSA treatment sample had a disproportionately higher assessed level of need than the residential DOSA comparison group on the SUD assessments. If untreated, substance use disorders may increase an individual's risk of recidivism. By nature of these sample constraints, we may be less likely to find reductions in recidivism attributable to the program purely because our treatment sample consists of individuals who are more likely to recidivate.

Finally, we are unable to identify individuals in the comparison group who may have been sentenced through a drug court in lieu of the standard incarceration sentence. In many counties, the offenses, and individuals eligible for residential DOSA are also eligible for drug courts. In addition, individuals who are precluded from residential DOSA because they do not meet an inpatient treatment need may still be eligible for drug court. Because we do not have information about SUD assessments and treatment needs, it is possible that our comparison group for residential DOSA includes many individuals receiving treatment via drug court in lieu of the standard incarceration sentence.

Prior research on residential DOSA attempted to overcome these limitations by comparing individuals sentenced to residential DOSA with individuals who were eligible for residential DOSA but who were instead sentenced to prison DOSA. However, this approach also has limitations.

Specifically, individuals who were in the prison DOSA sentence may have actually been ineligible for residential DOSA if they did not meet the appropriate treatment need threshold. In fact, individuals in the prison DOSA sample may have received a prison DOSA specifically because they did not meet an inpatient treatment need..

Overall, the previous research approach does not allow for an understanding of the effect of residential DOSA compared to a standard sentence, whether in prison or jail. For the current study, we opted to use a comparison sample of non-DOSA participants (excluding prison and residential DOSA participants from both comparison groups), while acknowledging the limitations of our comparison.

[9] For more details, see Knoth-Peterson & Kelley (2022).

Methods

The decision to issue a DOSA sentence may be influenced by characteristics of the defendant, characteristics of the case, or characteristics of the court actors involved in issuing the final sentence (i.e., prosecuting attorneys, defense attorneys, and judges). As a result, the individuals receiving a DOSA and the specific cases in which a DOSA is offered may be systematically different from the individuals or cases for which a DOSA sentence is not imposed.[10] Often, the decision to issue a DOSA is influenced by the presence of a known substance use disorder or suspicion that the individual's offense was likely motivated by substance use (e.g., committing a property crime to obtain money to buy illicit drugs).

We use a statistical method that assesses differences between the treatment and comparison groups based on observable characteristics and makes adjustments to minimize those differences. As a result, we can be more confident that the differences in outcomes observed for the two groups are related to participation in DOSA and not other systematic differences between the two groups. Additional information about this process is available in Appendix II.

After statistically aligning the characteristics of the treatment and comparison groups based on observable characteristics, we examine the relationship between participation in treatment and the likelihood of recidivism. We define recidivism as a conviction for an offense that occurred within the first 36 months following release to the community. We adjust follow-up periods to account for time spent in incarceration as the result of a DOSA sentence revocation.

We present the predicted likelihood of recidivism for those in the treatment group and comparison groups. That is, we present the percentage of individuals in the treatment group who were likely to recidivate after treatment alongside the percentage of individuals in the comparison group who were likely to recidivate after serving their non-DOSA sentence. The difference in these findings may be interpreted as the change in the likelihood of recidivism that may result from participation in DOSA instead of a non-DOSA sentence.

[10] This concern is referred to as "selection bias."

III. Findings

This section starts with a review of our findings for prison DOSA and follows with a review of our findings for residential DOSA. For both types of DOSA, we examined the population served by the alternative, the effects of DOSA on recidivism generally, and the specific effects by sex, race, and ethnicity. Due to limitations in sample size, we only assessed program effects for three racial groups: White, Black, and other people of color. For ethnicity, we separately examined program effects for Hispanic and non-Hispanic individuals.

Prison DOSA

Exhibit 3 shows the demographic characteristics of our prison DOSA treatment sample. Consistent with the general population of incarcerated individuals, our prison DOSA sample primarily included White males of non-Hispanic origin. On average, individuals were 34.5 years old at the time of their prison DOSA sentence and 19.8 years old at the time of their first conviction.[11]

The prison DOSA sample was composed primarily of individuals convicted of a property offense (57.1%) and the majority of individuals had at least one prior felony drug (59.4%) or felony property (77.2%) conviction. On average, individuals in our prison DOSA sample had been convicted of nearly 20 prior offenses as an adult and one-third had at least one prior juvenile felony adjudication.

Exhibit 3

Prison DOSA Sample Characteristics (N = 4,393)

Variable	Mean/%
Recidivism rate	40.1%
Revocation rate	37.1%
Demographics	
Age at current offense	34.5
Age at first conviction	19.8
Sex	
Female	18.9%
Male	81.1%
Race	
White	77.6%
Black	13.8%
AIAN	4.5%
AAPI	2.9%
Other/unknown	1.2%
Ethnicity	
Hispanic	8.2%
Not Hispanic	91.8%
Current and prior convictions	
Most serious type of current conviction	
Drug	19.6%
Property	57.1%
Person	13.7%
Other	9.6%
Criminal history	
Any prior felony drug	59.4%
Any prior felony property	77.2%
Any prior felony person	29.3%
Any prior felony weapon	12.4%
Any prior felony other	27.1%
Any prior misdemeanor drug	45.2%
Any prior misdemeanor property	70.4%
Any prior misdemeanor person	50.8%
Any prior misdemeanor weapon	11.4%
Any prior misdemeanor other	47.0%
Total adult prior convictions	19.8
Any prior juvenile felony adjudication	34.6%

Notes:
AIAN = American Indian/Alaskan Native.
AAPI = Asian American/Pacific Islanders.

[11] In some cases the current conviction may be their first conviction.

The characteristics depicted in Exhibit 3 were the same characteristics used to establish a comparable comparison group of non-DOSA participants. Importantly, these characteristics account for all factors included in the DOC's static risk assessment that was used during our study period.[12]

Recidivism

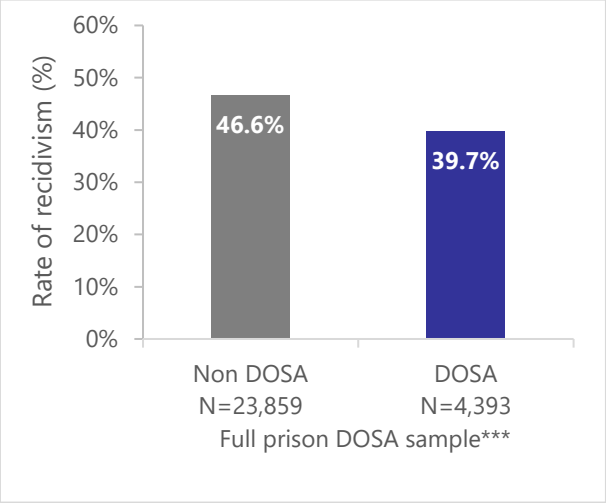
Overall, there was a statistically significant, therapeutic reduction in recidivism between those who participated in DOSA and those who did not. Individuals who participated in DOSA were 6.9 percentage points less likely to recidivate than those in the comparison group. These findings were replicated for nearly all subgroups.

This statistically significant therapeutic effect of prison DOSA also appeared when examining men and women separately. Although men had a higher base rate of recidivism, both populations were less likely to recidivate by around 6-7 percentage points for prison DOSA participants.

We also estimated differences in recidivism across all racial and ethnic categories for prison DOSA and non-DOSA sentences, but the findings were not significant in several of these categories. This lack of significance may be explained by sample size limitations in the non-White and Hispanic groups. In all cases, lack of significance does not necessarily mean that there was no effect for these other groups. It could simply indicate that larger sample sizes would be necessary to detect a statistically significant result.

Exhibit 4

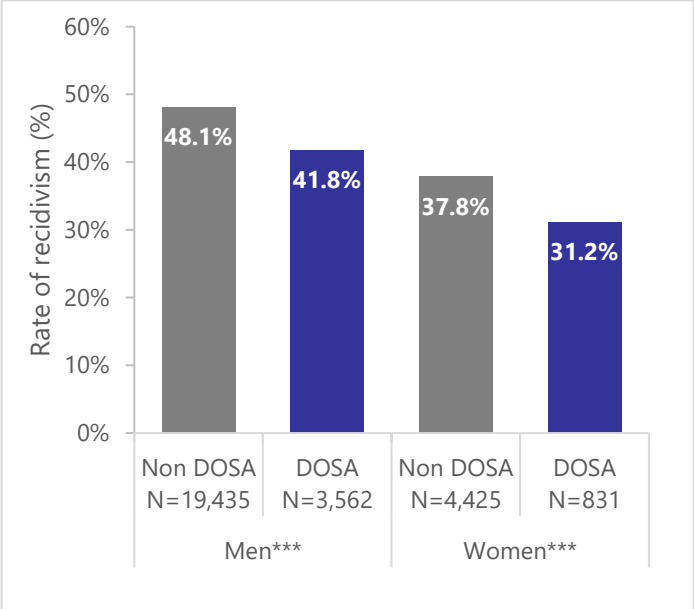
Rate of Recidivism for Prison DOSA and non-DOSA Comparison Group



Note:
*** Significant at the 0.01 level.

Exhibit 5

Rate of Recidivism for Prison DOSA and non-DOSA Comparison Group, by Sex

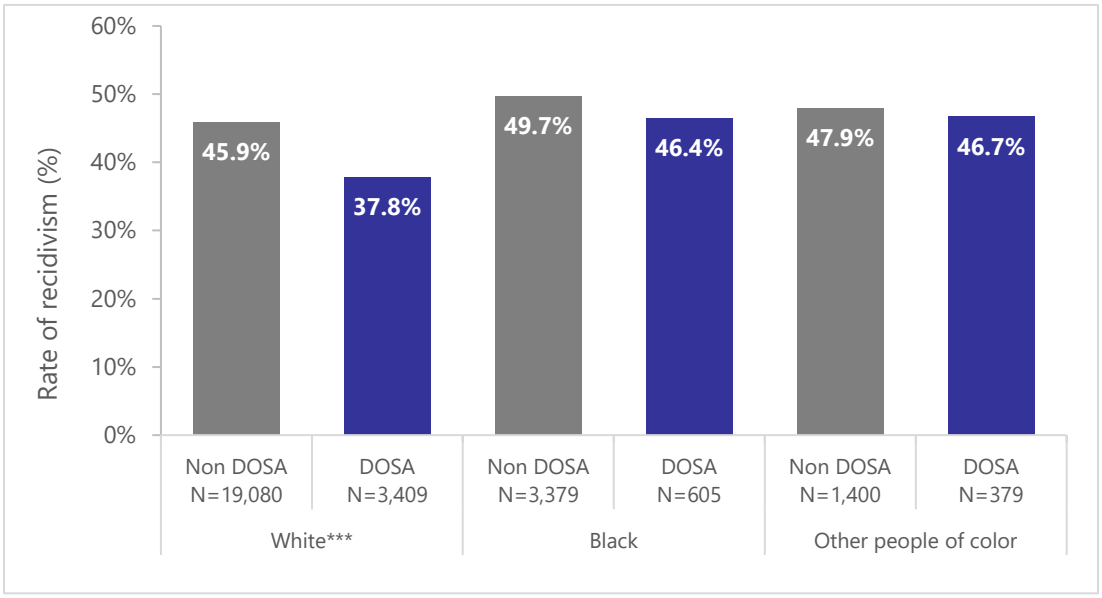


Note:
*** Significant at the 0.01 level.

[12] Rather than using the risk level classification to create comparable groups, we used the individual factors that compose the static risk assessment to maximize the similarity between the two groups.

Exhibit 6

Rate of Recidivism for Prison DOSA and non-DOSA Comparison Group, by Race



Note:
*** Significant at the 0.01 level.

For example, we found that White individuals who participated in prison DOSA were significantly less likely to recidivate than White individuals serving a non-DOSA sentence. For Black individuals, there was lower likelihood of recidivism for DOSA sentences, but the results were not statistically significant.

However, this lack of significance for Black individuals may be explained by the fact that there were only 379 Black individuals in our prison DOSA sample, while there were 3,409 White individuals.

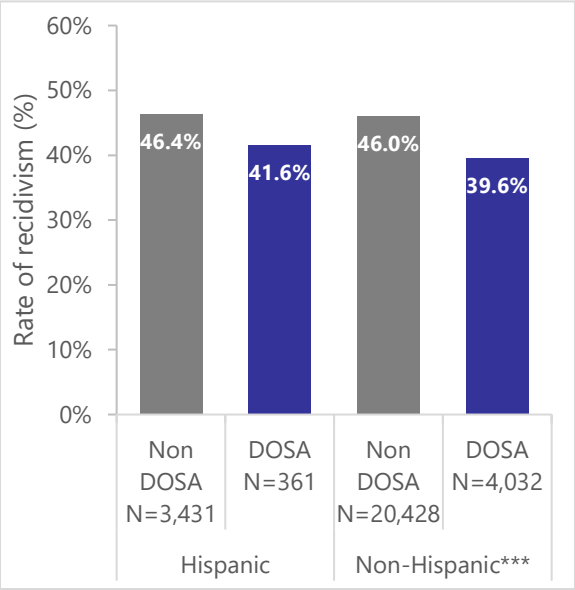
Similarly, our findings indicated that other people of color who participated in prison DOSA may be less likely to recidivate than similar non-participants, but our sample size was limited, and the findings were not statistically significant.

There were statistically significant differences in recidivism for non-Hispanic individuals in prison DOSA compared to non-Hispanic individuals with a standard incarceration sentence, but the results for Hispanic defendants were not statistically significant.

Overall, we found significant differences in recidivism for men, women, White, and non-Hispanic individuals in prison DOSA compared to other individuals who were not in prison DOSA. For other racial and ethnic groups, there is suggestive evidence that there may be reductions in recidivism due to the program, but small sample sizes preclude us from saying more.

Exhibit 7

Rate of Recidivism for Prison DOSA and non-DOSA Comparison Group, by Ethnicity



Note:
*** Significant at the 0.01 level.

Residential DOSA

The residential DOSA population differed from the prison DOSA population in several ways. Although the differences in eligibility discussed in Section II appear minimal, the additional restrictions on residential DOSA eligibility lead to significantly different populations served by each alternative.

The two unique aspects of eligibility for residential DOSA are that the midpoint of the standard range sentence must be 24 months or less and that the individuals must assess at a minimum level of inpatient treatment need. These restrictions lead to differences in the types of offenses eligible for each DOSA sentence and the types of criminal history likely to be present for participants in each DOSA group.

Exhibit 8

Residential DOSA Sample Characteristics (N = 5,103)

Variable	Mean/%
Recidivism rate	48.3%
Revocation rate	63.3%
Demographics	
Age at current offense	33.6
Age at first conviction	20.5
Sex	
Female	24.1%
Male	75.9%
Race	
White	80.6%
Black	10.5%
AIAN	4.8%
AAPI	2.2%
Other/unknown	1.9%
Ethnicity	
Hispanic	8.2%
Not Hispanic	91.8%
Current and prior convictions	
Most serious type of current conviction	
Drug	44.3%
Property	39.6%
Person	11.0%
Other	5.0%
Criminal history	
Any prior felony drug	50.1%
Any prior felony property	60.4%
Any prior felony person	23.7%
Any prior felony weapon	6.6%
Any prior felony other	16.9%
Any prior misdemeanor drug	41.3%
Any prior misdemeanor property	66.7%
Any prior misdemeanor person	47.7%
Any prior misdemeanor weapon	8.8%
Any prior misdemeanor other	42.3%
Total adult prior convictions	15.4
Any prior juvenile felony adjudication	28.2%

Notes:
AIAN = American Indian/Alaskan Native.
AAPI = Asian American/Pacific Islanders.

Both samples were primarily White. Black defendants accounted for a greater proportion of the prison DOSA population (13.8% compared to 10.5% for residential DOSA). Both samples primarily included non-Hispanic defendants. Women accounted for a greater percentage of residential DOSA participants than prison DOSA.

Individuals convicted of a drug offense accounted for a larger portion of the residential DOSA sample than the prison DOSA sample. Because drug offenses are eligible for DOSA only if they include possession of a small amount of drugs (seriousness level I), all sentences eligible for DOSA on the drug grid are potentially eligible for residential DOSA (if they meet the threshold for inpatient treatment need) and prison DOSA.

On the general felony sentencing grid, far more individuals are eligible for prison DOSA than residential DOSA (see Exhibit A1 in the Appendix). In addition, individuals sentenced to residential DOSA must serve a term of community custody equal to one-half of the midpoint of the standard sentence range or two years, whichever is greater. Most of the sentence ranges on the felony guideline grid that are eligible for a residential DOSA sentence have a midpoint that is less than two years. Consequently, individuals who accept a residential DOSA sentence may serve less time incarcerated but may serve a longer sentence in total (considering incarceration and community supervision time). As a result, fewer individuals on the general felony sentencing guidelines grid may be willing to accept a residential DOSA sentence instead of the standard incarceration sentence.

In contrast, prison DOSA is likely to result in less time served in incarceration compared to a standard sentence for individuals sentenced on the general felony sentencing guideline grid. For some eligible sentence ranges, the reduction in time served in total confinement is significant—often resulting in more than one year reduced from the total confinement sentence. As a result of these differences, the prison DOSA population comprised many more non-drug offenses than the residential DOSA population.

Individuals in the residential DOSA sample were less likely to have a prior conviction for each type of felony and misdemeanor offenses. On average, those sentenced with residential DOSA had four fewer prior convictions as an adult and were less likely to have any prior juvenile adjudications.

Recidivism

Overall, residential DOSA appeared to have no effect on recidivism compared to a non-DOSA sentence. These findings were consistent throughout the subgroup analysis, but, in some instances, there is non-statistically significant evidence that participants in residential DOSA had higher rates of recidivism compared to individuals with a standard sentence.

There were no significant differences in the likelihood of recidivism for men or women who participated in residential DOSA. Consistent with general recidivism patterns, women were less likely to recidivate than men, but there were essentially no differences in the likelihood of recidivism for DOSA and non-DOSA participants of the same sex.

Exhibit 9

Rate of Recidivism for Residential DOSA and non-DOSA Comparison Group

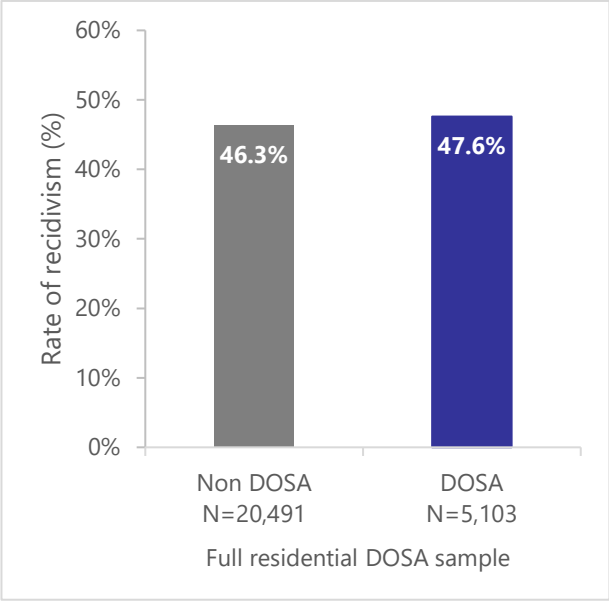
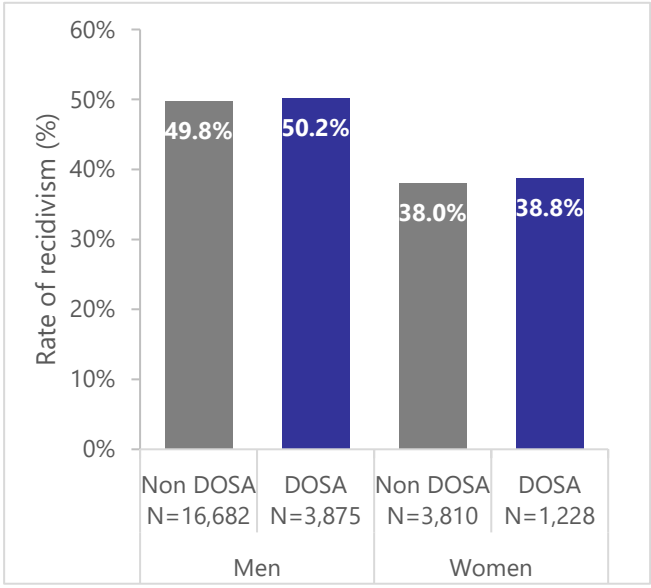


Exhibit 10

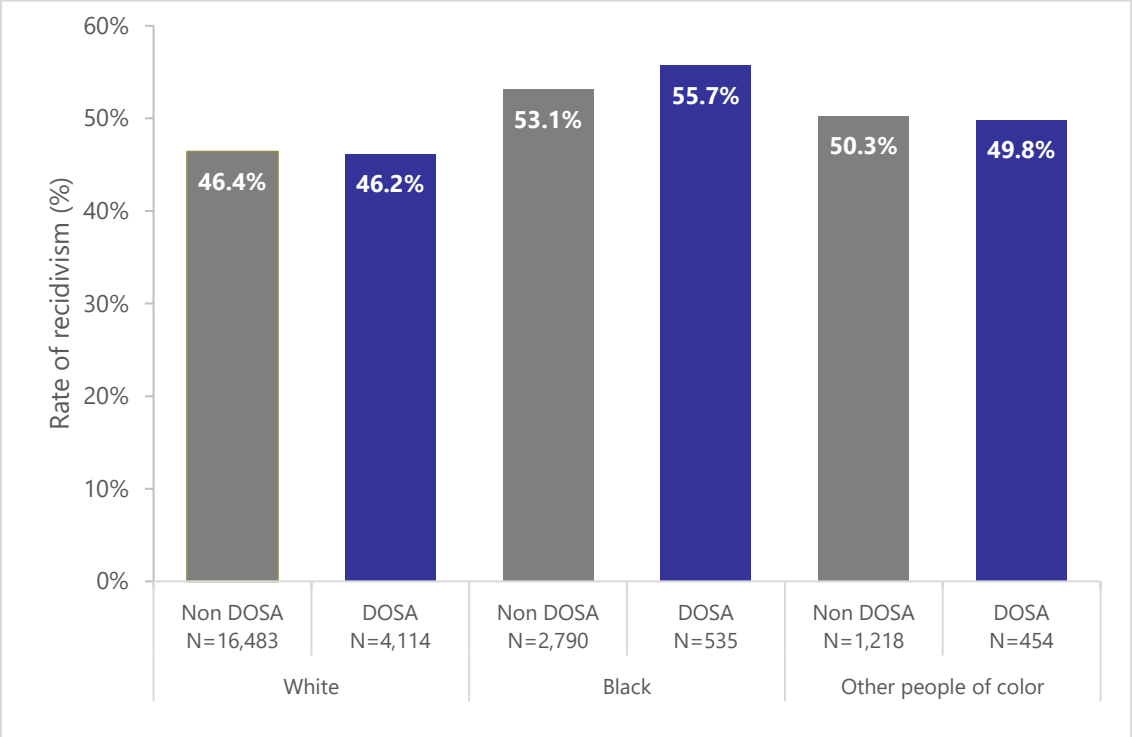
Rate of Recidivism for Residential DOSA and non-DOSA Comparison Group, by Sex



The findings were less consistent by race (see Exhibit 11). While the generally null effects were present for White individuals and defendants of color, Black individuals who participated in residential DOSA showed an increased likelihood of recidivism compared to similar individuals who were not sentenced to DOSA. The differences in recidivism among Black individuals were marginally significant, but the strength of our conclusions is limited due to their relatively small sample size (see Appendix II).

Exhibit 11

Rate of Recidivism for Residential DOSA and non-DOSA Comparison Group, by Race

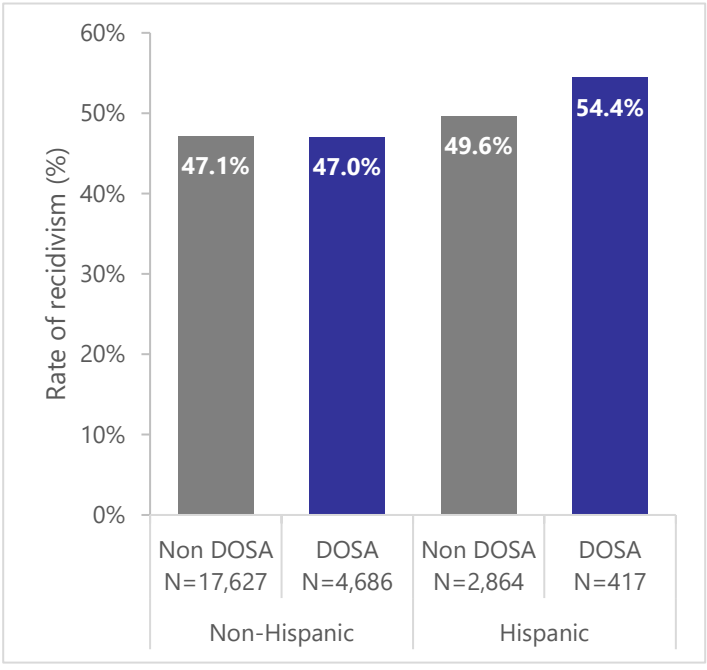


Similarly, there were no statistically significant differences in recidivism for non-Hispanic individuals in residential DOSA compared to non-Hispanic individuals with a non-DOSA sentence. Hispanic individuals sentenced to DOSA had a higher likelihood of recidivism compared to similar individuals receiving a non-DOSA sentence.

Overall, we find no significant changes in recidivism for individuals in residential DOSA compared to other individuals who were not in residential DOSA. For some demographic groups, there is suggestive evidence that there may be increases in recidivism due to the program, but small sample sizes preclude us from saying more.

Exhibit 12

Rate of Recidivism for Residential DOSA and non-DOSA Comparison Group, by Ethnicity



Summary of Findings

Consistent with prior research, participation in prison DOSA appears to have a beneficial effect on recidivism compared to standard sentences. These findings are generally consistent across different sex, race, and ethnic groups.

The findings were less conclusive for residential DOSA. In general, residential DOSA appears to have no effect on recidivism and, in some instances, it appears that individuals who participate in residential DOSA may be more likely to recidivate than individuals who serve a non-DOSA sentence, though our analyses were limited by small samples for some subgroups.

There are multiple potential explanations for the findings with residential DOSA. First, the lack of comprehensive SUD assessments for the prison and jail populations precluded us from using a comparison group that we are certain had a similar level of treatment need. If our comparison group comprises individuals who are less likely to recidivate, then we would fail to find a therapeutic effect of residential DOSA even if one exists. While this limitation may also apply to our analyses of prison DOSA, it is less likely to impact our findings because pre-sentencing SUD assessments are not required for prison DOSA sentences. As such, the level of SUD for an individual may have less of an impact on the decision to sentence someone to prison DOSA, but it has a direct effect on the ability to sentence someone to residential DOSA.

Second, some individuals in residential DOSA are likely to have community supervision that exceeds what would have been required under a standard sentence. In fact, some individuals under a standard sentence may not have any community supervision requirements at all. As a result, individuals in the residential DOSA sample may have faced higher levels of supervision and been more likely to be caught for law-violating behaviors. This is akin to research on intensive supervision practices that suggest individuals may have an equal likelihood of committing law-violating behaviors but be more likely to be arrested and prosecuted if they face higher levels of supervision.

Third, individuals who spend some time incarcerated in state facilities under prison DOSA may have greater access to general rehabilitative programming beyond SUD treatment. While incarcerated, individuals may have access to a range of DOC-facilitated programs including cognitive behavioral therapy, educational opportunities, and job training. Individuals on community supervision may not have the same access to non-SUD treatment programs. It is possible that part of prison DOSA's success is attributable to the combination of SUD and non-SUD programming.

Fourth, individuals participating in residential DOSA may have a delay in accessing an available bed in a residential community treatment facility. Recent legislative changes allow for jails to hold individuals in detention for up to 30 days while they await access to an available treatment bed. However, during the timeframe of our study, individuals may have been released while awaiting access to treatment and could have recidivated prior to even starting their SUD treatment. While our study uses an intent-to-treat approach, future research could examine differences based on whether or not individuals actually start and/or complete the associated SUD treatment.

Fifth, individuals in the comparison group may have been sentenced and received SUD treatment through a county drug court. It is possible that individuals who otherwise met the residential DOSA eligibility requirements but did not reach an inpatient treatment need were sentenced through drug court. Rather than an ineffectiveness of residential DOSA, our findings may represent an effectiveness of treatment received in drug courts.

Finally, the results could simply indicate that residential DOSA is less effective than prison DOSA at reducing recidivism. The fundamental structural differences between prison and residential DOSA could be sufficient to lead to differences in the outcomes for individuals sentenced to the different DOSA options.

IV. Future Research

The current study provides updated estimates of the general effectiveness of prison and residential DOSA from 2009 – 2016. Future research is needed to examine whether the effectiveness has changed following legislative and administrative changes to DOSA. Additional research is also needed to better understand the impact of DOSA on individuals' outcomes beyond just examining recidivism. Finally, additional research is necessary to better examine the possible influence of unobserved characteristics, namely an individual's level of need for SUD treatment.

The findings of this report reflect the effectiveness of DOSA as it operated prior to changes implemented in 2017 and 2020. Three major events may impact the ability to generalize these findings to populations currently sentenced to DOSA. First, we cannot know how the changes made in 2017 and 2020 may affect the findings of the current study. With treatment in the community moving from DOC-operated facilities to Medicaid facilities, it is possible that there is less direct oversight of the success or failure of treatment. In addition, limitations on the availability of treatment locations by jurisdiction may lead to varying effectiveness for individuals sentenced in different jurisdictions. Finally, the legislature expanded the eligibility for residential DOSA by removing the requirement that the standard sentence have a high range greater than 12 months. This may lead to individuals with less criminal history or with less serious offenses now being eligible for a DOSA sentence.

Second, Washington State saw significant changes following the onset of the COVID-19 pandemic. COVID-19 uniquely affected the criminal justice system such that cases were less likely to be filed, dispositions were delayed in many cases, and capacity for treatment declined for several years in order to comply with social distancing, mask mandates, and other public health orders. During this time, fewer individuals were likely sentenced with a DOSA, treatment may have been more difficult to access, and discretionary revocations may have declined as a result of decreased capacity in local jails and state prisons.

Third, the Washington State Supreme Court issued a monumental decision in the case of *Blake v. Washington*, essentially legalizing the possession of controlled substances for several months in 2021. Following the ruling in *Blake*, the Washington State Legislature passed a temporary order once again criminalizing possession of a controlled substance but reducing the seriousness of the charge from a felony to a misdemeanor.

As a result, a significant portion of the state's drug cases were subsequently processed in district courts rather than superior courts. Given that DOSA is a sentencing alternative used only in felony superior court cases, it is likely that the use of DOSA substantially declined following the Blake ruling. In addition to the impact on the sheer number of DOSA sentences issued, the average characteristics of those sentenced to a DOSA were likely to change since only more serious drug offenses were now eligible for the alternative.

In addition to the direct impacts of COVID-19 and the Blake ruling on Washington's criminal justice system, these events also likely impacted patterns of offending, rates of arrest, and the likelihood of recidivism. Initial data suggests these events had a heterogenous impact on different types of offending behaviors.

In order to avoid bias that may be introduced from the legislative changes in 2017, the socioeconomic impacts of COVID-19, and the direct and indirect effects of the Blake decision, this study assesses populations sentenced and released at least three years prior to 2020.

In addition, future research should consider examining other outcomes such as the impact of DOSA on substance use disorders in addition to recidivism. While we did not identify significant reductions in recidivism following participation in residential DOSA, it is possible that participants may still see positive outcomes such as a reduction in the use of illicit substances.

Finally, broader use of SUD assessments and better access to comprehensive SUD assessment data is necessary to fully understand the impact of DOSA. Despite higher rates of substance use disorders among justice-involved populations compared to the general population, not everyone entering a jail or prison receives a full SUD assessment. In the absence of these data, it is difficult to identify a truly appropriate comparison group, especially for residential DOSA (for which the standard sentence is often a jail sentence).

Appendices

Washington State's Drug Offender Sentencing Alternative: *2022 Outcome Evaluation*

Appendices

I. Sentence Length Eligibility and DOSA

Eligibility for Drug Offender Sentencing Alternatives (DOSA) are in part determined by the standard sentence length based on the Washington State Felony Sentencing Guideline grids. To be eligible for prison DOSA, individuals must fall in a guideline range with a minimum sentence greater than 12 months, precluding individuals convicted of the least serious offenses and who have fewer prior convictions. To be eligible for residential DOSA, individuals must fall in a guideline range with a midpoint sentence no greater than 26 months. As such, individuals with a minimum sentence of less than 12 months may be eligible for residential DOSA, and individuals with a minimum sentence greater than 12 months but with a midpoint that is 26 months or less are eligible for both prison and residential DOSA. Individuals with a midpoint sentence greater than 26 months are only eligible for prison DOSA.

Exhibit A1 provides a visual depiction of the felony guideline sentences eligible for residential and prison DOSA. Exhibit A2 provides a visual depiction of the drug offense sentencing guideline grid. All sentences eligible for DOSA on the felony drug sentencing guideline grid are eligible for residential DOSA while only the individuals with the highest offender scores are eligible for prison DOSA.

Exhibit A1

Felony Sentencing Guideline Grid and DOSA Eligibility in 2015 (Minimum and Maximum Sentences in Months)

Seriousness level	Offender score (RCW 9.94A.525)																			
	0		1		2		3		4		5		6		7		8		9+	
XVI	Life sentence without parole/death penalty for defendants at or over the age of 18. For defendants under the age of 18, a term of 25 years to life																			
XV	240	320	250	333	261	347	271	361	281	374	291	388	312	416	338	450	370	493	411	548
XIV	123	220	134	234	144	244	154	254	165	265	175	275	195	295	216	316	257	357	298	397
XIII	123	164	134	178	144	192	154	205	165	219	175	233	195	260	216	288	257	342	298	397
XII	93	123	102	136	111	147	120	160	129	171	138	184	162	216	178	236	209	277	240	318
XI	78	102	86	114	95	125	102	136	111	147	120	158	146	194	159	211	185	245	210	280
X	51	68	57	75	62	82	67	89	72	96	77	102	98	130	108	144	129	171	149	198
IX	31	41	36	48	41	54	46	61	51	68	57	75	77	102	87	116	108	144	129	171
VIII	21	27	26	34	31	41	36	48	41	54	46	61	67	89	77	102	87	116	108	144
VII	15	20	21	27	26	34	31	41	36	48	41	54	57	75	67	89	77	102	87	116
VI	12.05	14	15	20	21	27	26	34	31	41	36	48	46	61	57	75	67	89	77	102
V	6	12	12.05	14	13	17	15	20	22	29	33	43	41	54	51	68	62	82	72	96
IV	3	9	6	12	12.05	14	13	17	15	20	22	29	33	43	43	57	53	70	63	84
III	1	3	3	8	4	12	9	12	12.05	16	17	22	22	29	33	43	43	57	51	68
II	0	3	2	6	3	9	4	12	12.05	14	14	18	17	22	22	29	33	43	43	57
I	0	2	0	3	2	5	2	6	3	8	4	12	12.05	14	14	18	17	22	22	29

Prison DOSA

Prison or residential DOSA*

Note:

* Residential DOSA is available only if the individual is assessed at a level 3 treatment need (residential inpatient treatment).

Exhibit A2

Felony Drug Sentencing Guideline Grid and DOSA Eligibility in 2015
(Minimum and Maximum Sentences in Months)

Seriousness level	Offender score (RCW 9.94A.517)					
	0-2		3-5		6-9+	
III	51	68	68.05	100	100.05	120
II	12.05	20	20.05	60	60.05	120
I	0	6	6.05	18	12.05	24

Prison or residential DOSA*

Note:

*Residential DOSA is available only if the individual is assessed at a level 3 treatment need (residential inpatient treatment).

II. Outcome Evaluation: Data Processing and Study Group Selection

The 2020 Legislature directed WSIPP to analyze "the effectiveness of the drug offender sentencing alternative in reducing recidivism among various offender populations." The ability to evaluate whether DOSA achieves reductions in recidivism relies on identifying an adequate comparison group of individuals who were not sentenced to DOSA.

In an ideal research design, individuals eligible for DOSA would be randomly assigned to either prison DOSA, residential DOSA, or a comparison group. With a successfully implemented random assignment, any observed differences in recidivism could be reasonably attributed to the effect of either prison or residential DOSA. Unfortunately, as is the case in many criminal justice settings, random assignment was not possible for this retrospective evaluation.

Instead, we use observational data and rely on a quasi-experimental research design. Unlike random assignment, this type of design cannot eliminate the risk that selection bias or unobserved factors may threaten the validity of its findings. For example, judges, aided by the advice of prosecutors and defense attorneys, decide whether to issue a DOSA sentence. These selection factors, which may be related to unobserved factors such as an individual's motivation, can potentially bias the results of the study in favor of the treatment group (individuals sentenced to DOSA).

To confidently make causal inferences about the findings from this quasi-experimental study, we take steps in our analytic design to minimize selection bias. For this study, we also implemented statistical techniques to test the sensitivity of our findings. In this section of the Appendix, we describe the methods we used to process administrative records. In Appendix II, we describe the analytic methods used to account for selection bias, the methods used to establish the results presented in the main report, and the statistical tests deployed to test the sensitivity of our results.

Study Group Selection

The first step in conducting an outcome evaluation is to identify a valid treatment and comparison group. In this study, we used two groups of non-DOSA individuals who served a standard incarceration sentence as the comparison groups for prison and residential DOSA separately.

To select the treatment groups, we received data from the Department of Corrections (DOC) to identify individuals who served prison and residential DOSAs. We linked these data to data from WSIPP's Criminal History Database (CHD) to give us information on individual covariates (demographic and criminogenic information) as well as information on whether the individual was convicted of a subsequent crime/felony.

Prison DOSA Treatment Group Selection

Individuals were eligible for our prison DOSA treatment group if the individual was "at risk" for recidivism in the community by January 2015, which allows enough time to conduct a 36-month recidivism analysis.[13] We excluded 5,032 observations that had prison release dates in 2016 or later.

[13] Due to King County data limitations the latest data we can use is through the end of 2018.

We excluded individuals from the sample who were missing an end date to their DOSA sentence (N = 622). The DOSA end date variable is defined as an individual's prison release date or the first occurrence of a movement reason date, a revocation date, or a jurisdiction end date. A person could be missing a DOSA end date if they have not yet been released from prison, if they escaped from prison, or if they failed to report while on community supervision.

We excluded individuals who were returned to prison within the same DOSA trip but who were not marked as a revocation (N = 35). We also excluded individuals missing county court data (N = 4). The last cull of the prison DOSA treatment group came from excluding individuals who either had insufficient data available regarding their follow-up period (N = 1,960) or died before the end of their follow-up period (N=144).

After implementing the study selection criteria, 36% of all prison DOSA sentences between 2008 and 2021 were included in our outcome evaluation (N = 4,476).

Residential DOSA Treatment Group Selection

Individuals were eligible for our residential DOSA treatment group if the individual was "at-risk" for recidivism in the community by January 2015, which allows enough time to conduct a 36-month recidivism analysis. We excluded 3,296 observations that had a DOSA start date in 2016 or later.

We excluded individuals from the sample who were missing an end date to their DOSA sentence (N = 1,106). The DOSA end date variable is defined as an individual's jurisdiction end date or the first occurrence of a movement reason date, or a revocation date. A person could be missing a DOSA end date if they are still under DOC jurisdiction or if they failed to report while on community supervision.

We also excluded individuals who were returned to prison within the same DOSA trip but who were not marked as a revocation (N = 24). The last cull of the residential DOSA treatment group came from excluding individuals who either had insufficient data available regarding their follow-up period (N = 15) or died before the end of their follow-up period (N = 44).

After implementing the study selection criteria, 54% of all residential DOSA sentences between 2008 and 2021 were included in our outcome evaluation (N = 5,296).

Multiple Cases During the Study Period

Individuals may have multiple, distinct criminal cases for which they were potentially eligible for a prison or residential DOSA sentence. Given the length of our study period (eight years), there were many instances where the same person had a case for which they were sentenced to DOSA and a second or subsequent case for which they did not receive a DOSA sentence. In other instances, individuals had multiple cases where they were potentially eligible for a DOSA sentence, but they never received one. As a result, we had overlap between the individuals in the treatment and comparison groups as well as overlap of the individuals associated with different cases within the treatment and comparison groups.

To address the dependence of cases within our sample, we first removed cases from the comparison group if they ever appeared in our treatment group (N = 8,861 cases for prison DOSA and N = 3,258 for residential DOSA). This eliminates the dependence between treatment and comparison groups and ensures that our comparison group is limited to those who never had a DOSA during the sample time period.

To address dependence within the treatment or comparison groups, we randomly selected one record for each individual who had multiple eligible records. Exhibit A3 presents the number of records for individuals in the treatment and comparison groups for both prison and residential DOSA. For prison DOSA, this randomization reduced our samples by 9,963 records and for residential DOSA, the randomization reduced our samples by 6,530.

Exhibit A3

Number of Eligible Cases Per Person

Number of eligible records	Prison		Residential	
	Treatment	Comparison	Treatment	Comparison
1	4,019	17,196	4,765	15,770
2	442	8,956	515	6,945
3	6	4,345	16	2,754
4	-	1,793	-	905
5	-	810	-	329
6	-	341	-	78
7	-	139	-	21
8	-	80	-	16
9	-	45	-	10
10	-	10	-	-
11	-	33	-	-

III. Outcome Evaluation: Analytic Method

Ideally, we would be able to use an experimental design whereby individuals who were eligible for DOSA would be randomly assigned to participate or not participate. With randomization, we could be certain that differences in the outcomes were attributable to DOSA and not due to systematic differences between participants and non-participants.

There are several reasons why individuals would have been selected to participate in DOSA during the timeframe of our analysis. Sentencing decisions are made through the coordination of judges, prosecuting attorneys, and defense attorneys. These decisions may be informed by the individual characteristics of the defendant, characteristics of the case for which they are being sentenced, characteristics of an individual's criminal history, availability of local resources, and an individual's level of SUD treatment need. In addition, defendants must be willing to accept the sentencing alternative instead of a standard sentence.

For the current study, we used an empirical approach called entropy balancing to remove as many differences between DOSA and non-DOSA participants as possible. We then use regression to assess differences in the likelihood of recidivism for the two balanced groups.

Entropy Balancing

Entropy balancing is a technique that compares the distribution of characteristics between the treatment and control groups and then creates weights for the comparison group to minimize the differences in covariate distributions between the two groups. When done effectively, the treatment and weighted comparison group should have the same distribution across all the balanced covariates. As a result, the original differences between these characteristics will not bias our final regression results.

Our entropy balancing focused on five sets of characteristics: defendant characteristics, current offense characteristics, criminal history, year of release to the community, and county. Exhibits A4-A7 show the distribution of covariates for the prison and residential treatment groups and control groups before and after weighting. After weighting, our comparison groups were an exact match to the treatment groups on all tested covariates.

Exhibit A4

Pre-weighting Means for Covariates, Prison DOSA Sample

Variable	Treatment Mean	Comparison Pre-weighting Mean
Age at current offense	34.480	34.950
Age at first conviction	19.820	21.980
Sex: Male	1.811	1.815
Race: Black	0.138	0.142
Race: AIAN	0.045	0.029
Race: AAPI	0.029	0.026
Race: Other/unknown	0.012	0.003
Ethnicity: Hispanic	0.082	0.144
Current offense: Property	0.571	0.341
Current offense: Person	0.137	0.179
Current offense: Other	0.096	0.100
Any prior felony drug	0.124	0.085
Any prior felony property	0.772	0.505
Any prior felony person	0.594	0.457
Any prior felony weapon	0.271	0.168
Any prior felony other	0.293	0.247
Any prior misdemeanor drug	0.114	0.084
Any prior misdemeanor property	0.704	0.564
Any prior misdemeanor person	0.452	0.359
Any prior misdemeanor weapon	0.470	0.384
Any prior misdemeanor other	0.508	0.457
Total adult prior convictions	0.346	0.267
Any prior juvenile felony adjudication	19.770	14.500
2009	0.066	0.132
2010	0.097	0.122
2011	0.118	0.120
2012	0.149	0.117
2013	0.166	0.129
2014	0.176	0.119
2015	0.205	0.112

Notes:
AIAN = American Indian/Alaskan Native.
AAPI = Asian American/Pacific Islanders.

Exhibit A5

Pre-weighting Means for County Fixed Effects, Prison DOSA Sample

County	Treatment Mean	Pre-weighting Mean
Asotin	0.009	0.009
Benton	0.028	0.041
Chelan	0.022	0.015
Clallam	0.015	0.007
Clark	0.028	0.090
Columbia	0.000	0.001
Cowlitz	0.020	0.043
Douglas	0.003	0.007
Ferry	0.001	0.001
Franklin	0.007	0.014
Garfield	0.001	0.001
Grant	0.023	0.011
Grays Harbor	0.022	0.014
Island	0.003	0.006
Jefferson	0.005	0.002
King	0.243	0.138
Kitsap	0.015	0.047
Kittitas	0.001	0.007
Klickitat	0.003	0.003
Lewis	0.009	0.026
Lincoln	0.001	0.001
Mason	0.012	0.011
Okanogan	0.007	0.009
Pacific	0.005	0.007
Pend Oreille	0.003	0.001
Pierce	0.143	0.168
San Juan	0.002	0.001
Skagit	0.005	0.031
Skamania	0.002	0.001
Snohomish	0.081	0.069
Spokane	0.103	0.062
Stevens	0.007	0.004
Thurston	0.059	0.050
Wahkiakum	0.001	0.001
Walla Walla	0.018	0.009
Whatcom	0.032	0.038
Whitman	0.001	0.002
Yakima	0.057	0.050

Exhibit A6

Pre-weighting Means for Covariates, Residential DOSA Sample

Variable	Treatment Mean	Comparison Pre-weighting Mean
Age at current offense	33.600	34.290
Age at first conviction	20.500	21.620
Sex: Male	1.759	1.814
Race: Black	0.105	0.136
Race: AIAN	0.048	0.030
Race: AAPI	0.022	0.027
Race: Other/unknown	0.019	0.003
Ethnicity: Hispanic	0.082	0.140
Current offense: Property	0.396	0.357
Current offense: Person	0.110	0.160
Current offense: Other	0.051	0.086
Any prior felony drug	0.066	0.083
Any prior felony property	0.604	0.512
Any prior felony person	0.502	0.448
Any prior felony weapon	0.169	0.169
Any prior felony other	0.238	0.235
Any prior misdemeanor drug	0.088	0.085
Any prior misdemeanor property	0.667	0.573
Any prior misdemeanor person	0.413	0.361
Any prior misdemeanor weapon	0.424	0.385
Any prior misdemeanor other	0.477	0.455
Total adult prior convictions	0.282	0.272
Any prior juvenile felony adjudication	15.390	14.420
2009	0.083	0.135
2010	0.114	0.117
2011	0.124	0.121
2012	0.141	0.119
2013	0.154	0.124
2014	0.149	0.117
2015	0.155	0.105

Notes:
AIAN = American Indian/Alaskan Native.
AAPI = Asian American/Pacific Islanders.

Exhibit A7

Pre-weighting Means for County Fixed Effects, Residential DOSA Sample

Variable	Treatment	Comparison
		Pre-weighting
	Mean	Mean
Asotin	0.010	0.009
Benton	0.048	0.041
Chelan	0.029	0.013
Clallam	0.043	0.006
Clark	0.046	0.089
Columbia	0.000	0.001
Cowlitz	0.061	0.036
Douglas	0.006	0.007
Ferry	0.003	0.001
Franklin	0.007	0.014
Garfield	0.001	0.001
Grant	0.028	0.012
Grays Harbor	0.036	0.014
Island	0.000	0.006
Jefferson	0.006	0.002
King	0.228	0.135
Kitsap	0.023	0.048
Kittitas	0.001	0.007
Klickitat	0.001	0.003
Lewis	0.036	0.024
Lincoln	0.000	0.001
Mason	0.033	0.010
Okanogan	0.002	0.008
Pacific	0.004	0.006
Pend Oreille	0.004	0.001
Pierce	0.010	0.173
San Juan	0.001	0.001
Skagit	0.000	0.027
Skamania	0.002	0.001
Snohomish	0.101	0.072
Spokane	0.118	0.064
Stevens	0.011	0.004
Thurston	0.006	0.056
Wahkiakum	0.001	0.001
Walla Walla	0.011	0.008
Whatcom	0.019	0.042
Whitman	0.003	0.002
Yakima	0.060	0.050

Regression Analysis

After identifying the appropriate weights for the comparison group, we run a regression analysis. We included all of the covariates used in the entropy balancing step for additional robust estimates of the effect of participating in DOSA (i.e., the effect net of other characteristics).

We estimate the following regression equation:

$$Recid_i = \alpha + \beta_1 Treat_i + \boldsymbol{\gamma X_i} + \delta_t + \theta_c + \varepsilon_i$$

where $Recid_i$ is a binary variable that is one if individual i recidivated during the follow-up period, $Treat_i$ is a binary variable that is one if individual i was sentenced to DOSA, $\boldsymbol{X_i}$ is a vector of individual control variables, δ_t are year-fixed effects based on the year an individual was released to the community and θ_c are court-fixed effects. Observations are weighted on the entropy balance weights calculated in the previous step.

We use a linear probability model (LPM) because the outcome of recidivism is a binary variable. We also include robust standard errors to account for heteroskedasticity. The coefficients in an LPM can be interpreted as percentage point changes. For example, a coefficient of -0.05 indicates a 5-percentage point decrease in the probability of recidivism.

To best present the findings from our analysis, we present the marginal probability of recidivism for those in the treatment and the weighted comparison group. That is, we aggregate the value of the coefficients and constant from the regression models assuming that the covariates are held at their mean values for those in each group (which are the same after balancing). Thus, the findings represent the probability of recidivism for the average individual (average age, average number of prior convictions, etc.) in DOSA and not in DOSA. Thus, the differences in the likelihood of recidivism represent the difference associated with DOSA participation.

Subgroup Analysis

We replicated our approach for subsamples by sex, race, and ethnicity. For each subgroup, we used the same entropy balancing and regression approaches. As with the full sample analysis, we achieved perfect balance for each subsample across our set of covariates. The only difference between the full sample analysis and subsample analysis was the coding for the county. As some subgroup samples were small, we were unable to achieve convergence on balanced samples when including fixed effects measures for each county. As a result, we combined counties into four categories: east urban, east rural, west urban, and west rural. Full balance tables are available upon request.

Replication Analysis

To ensure that our findings were robust given the process of randomization used to select a single record for each individual in our sample, we replicated our analyses 1,000 times for each group. Exhibits A8 and A10 present the average coefficient and its significance for DOSA participation across 1,000 models for both prison and residential DOSA analyses. Exhibits A9 and A11 present the overall replication findings for prison and residential DOSA. Each table presents the percent of replications where we identified a positive effect (e.g., DOSA participants had a higher likelihood recidivism) and significant negative effect (i.e., DOSA participants had lower likelihood of recidivism) as well as the percent of times the findings for

DOSA were statistically significant. In some instances, the findings were consistent across replications (e.g., the finding for prison DOSA for Black participants was always negative), but none of the findings were significant. This may indicate a sample size limitation from which we could not identify a significant effect. In other instances, the findings were mixed across replications (e.g., the findings for prison DOSA for other people of color/people of an unknown race were positive 34% of the time and negative 66% of the time), but the findings were consistently not significant. In these instances, we are more confident that there was truly a null effect and no difference in the likelihood of recidivism for DOSA and non-DOSA sentences.

Exhibit A8

Prison DOSA – 1,000 Replications

		Mean	Std. dev	Min	Max
Full sample	b	-0.067	0.002	-0.073	-0.059
	p	0.000	0.000	0.000	0.000
Male	b	-0.062	0.002	-0.070	-0.056
	p	0.000	0.000	0.000	0.000
Female	b	-0.063	0.004	-0.074	-0.052
	p	0.002	0.001	0.000	0.007
White	b	-0.079	0.002	-0.085	-0.072
	p	0.000	0.000	0.000	0.000
Black	b	-0.030	0.005	-0.045	-0.011
	p	0.225	0.072	0.059	0.636
Other/unknown	b	-0.005	0.011	-0.036	0.025
	p	0.789	0.154	0.287	1.000
Hispanic	b	-0.059	0.006	-0.084	-0.038
	p	0.074	0.031	0.009	0.232
Non-Hispanic	b	-0.063	0.002	-0.070	-0.057
	p	0.000	0.000	0.000	0.000

Exhibit A9

Prison DOSA – 1,000 Replications

		Positive	Negative	Significant[†]
Full sample	b	0%	100%	100%
Male	b	0%	100%	100%
Female	b	0%	100%	100%
White	b	0%	100%	100%
Black	b	0%	100%	0%
Other/unknown	b	34%	66%	0%
Hispanic	b	0%	100%	24%
Non-Hispanic	b	0%	100%	100%

Note:

[†] Percent of replications significant at the 0.05 level.

Exhibit A10

Residential DOSA – 1,000 Replications

		Mean	Std. dev	Min	Max
Full sample	b	0.011	0.002	0.006	0.016
	p	0.226	0.066	0.075	0.512
Male	b	0.004	0.002	-0.002	0.009
	p	0.664	0.119	0.355	0.996
Female	b	0.011	0.003	0.003	0.020
	p	0.507	0.104	0.244	0.864
White	b	-0.003	0.001	-0.008	0.002
	p	0.764	0.117	0.393	1.000
Black	b	0.034	0.004	0.022	0.046
	p	0.164	0.050	0.055	0.354
Other/unknown	b	0.004	0.006	-0.013	0.024
	p	0.840	0.113	0.420	1.000
Hispanic	b	0.058	0.004	0.045	0.072
	p	0.042	0.015	0.012	0.113
Non-Hispanic	b	-0.003	0.001	-0.007	0.002
	p	0.758	0.117	0.423	0.999

Exhibit A11

Residential DOSA – 1,000 Replications

		Positive	Negative	Significant[†]
Full sample	b	100%	0%	0%
Male	b	100%	0%	0%
Female	b	100%	0%	0%
White	b	3%	97%	0%
Black	b	100%	0%	0%
Other/unknown	b	78%	22%	0%
Hispanic	b	100%	0%	73%
Non-Hispanic	b	3%	97%	0%

Note:

[†] Percent of replications significant at the 0.05 level.

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