

*Outcome Study: An Evaluation of*

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# TREATMENT READINESS DORM

Programming in a Local Jail

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*Multnomah County Department of Community Justice*

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**Research  
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# EXECUTIVE SUMMARY

## *Program Background*

The Multnomah County Justice Reinvestment Program (MCJRP) was developed by Multnomah County public safety partners as a local strategy to meet the state-wide goal of reducing prison usage set forth in Oregon’s House Bill 3194 (2013), the Justice Reinvestment Act. MCJRP affords individuals who would otherwise receive a prison sentence an opportunity to stay in their local community with enhanced community supervision and access to services designed to reduce recidivism, increase offender accountability, and enhance public safety. One of the several services provided to individuals eligible for MCJRP is participation in the Treatment Readiness Dorm (TRD) program at Inverness Jail. The TRD program was designed to prepare and motivate individuals to engage in and complete community-based substance abuse treatment upon release from jail, and to actively engage with the enhanced probation supervision process. The ultimate goal of the TRD program is for participants to be less likely to reoffend in the future.

With funding from the Oregon Criminal Justice Commission, the Research and Planning Unit of Multnomah County’s Department of Community Justice completed a rigorous evaluation of the TRD programming. The outcome evaluation was completed for two reasons. First, the evaluation was designed to substantiate whether the program is effective, thereby helping Multnomah County in efforts to meet the goals of HB3194. Second, findings from the evaluation would make an important contribution to the body of knowledge on the impact of an in-jail treatment readiness programming approach on various criminal justice and treatment-based outcomes.

## *Evaluation Methodology*

The outcome evaluation was conducted on a sample of 529 unique individuals who participated in TRD programming during an 18-month sample enrollment period extending from January 1, 2017 through June 30, 2018. Data for the outcome evaluation were obtained from multiple sources including (1) client data provided by program clinicians; (2) administrative records from the community corrections agency (Department of Community Justice), arrest records from the Oregon State Police, jail information from the electronic Sheriff’s Warrants and Information System (eSWIS), and a county-wide public safety and criminal justice data repository system called Decision Support System – Justice (DSS-J); and (3) community-based treatment provider records and invoicing rosters.

The evaluation employed various multivariate modeling strategies with appropriate statistical controls to estimate the relationship between participation in TRD programming at Inverness Jail and various attitudinal and behavioral outcomes upon release into the community. Outcomes of interest included change in attitudes surrounding addiction and recovery, engagement and retention in community-based substance abuse treatment, future rearrest and jail utilization, and administrative indicators of non-compliant behavior while under probation supervision.

## *Overview of Main Findings*

### Participant Characteristics

Reflecting the general MCJRP population, TRD participants were largely White (63%), non-Hispanic (83%), and averaged 36.1 years of age at program entry. Clients averaged 1.99 jail bookings and 32 bed days in Multnomah County local jails in the year prior to their TRD participation, indicating rather extensive justice system contact pre-TRD programming exposure. The most common primary charges at booking were those related to unauthorized use of a motor vehicle (26%) and property offenses (25%), with slightly less alcohol and drug offenses (22%), behavioral offenses (19%), and

person-based offenses (8%). As would be expected given MCJRP eligibility criteria, 75% of program participants were assessed as either High or Very High risk on the Length of Service/Case Management Inventory (LS/CMI) assessment instrument. The majority of participants identified their drug of choice as methamphetamine/other amphetamine (35%) or heroin/opioids (25%), with the remainder identifying alcohol (19%), marijuana (15%), and cocaine/crack (6%).

## Characteristics of Dorm Stay and Jail Release

Length of time spent in the TRD, and therefore extent of engagement with the evidence-based treatment readiness programming ranged widely among sample members. Ranging from 0 days (representing TRD program intake and exit on the same day) to over 400 days, the average length of stay in the TRD was 49.3 days (standard deviation=57.9 days). In total 19.5% of participants spent a week or less in the TRD (0-7 days), 29.7% spent between a week and a month (8-30 days), and 50.4% were in the Dorm for a month or longer (31+ days).

While participating in the TRD programming, the 529 individuals in the study sample received 20,501 treatment sessions (60-90 minutes) during the 18-month observation period. This calculates out to approximately 29,600 hours of evidence-based readiness for change and substance abuse treatment services received by the outcome study sample.

Since the TRD is embedded within Multnomah County's Inverness Jail (MCIJ), the TRD program must operate within policies developed by the Multnomah County Sheriff's Office (MCSO). According to MCSO policy, once justice involved individuals go through the sentencing process and are sentenced to additional time in jail custody, they are automatically and immediately transferred to one of the internal or external work dorms to help fulfill MCSO inmate work contracts. This means individuals who had been successfully engaging with TRD programming pre-adjudication are no longer able to participate in the treatment readiness programming.

Regarding the destination following release from MCIJ itself (not necessarily the same as release from the TRD), 61% of program participants were released directly to the community in Multnomah County, 26% went directly to the custody of Oregon Department of Corrections to serve a prison sentence, and 13% were released to the custody of another jurisdiction (i.e., another Oregon county, another state, or a federal agency).

## Change in Attitudes toward Addiction and Treatment Readiness

The impact of TRD participation on attitudes related to addiction and treatment readiness was measured by pre- to post-TRD differences in Stages of Change Readiness and Treatment Eagerness Scales (SOCRATES) scores. Participation in TRD programming for 30 days or more was associated with increased Recognition of an alcohol problem and increased acknowledgement of the need for Taking Steps to address an alcohol problem. Similarly, participation in 30 days or more of TRD programming was associated with increased Recognition of a drug problem, although that relationship was only marginally significant.

## Program Impact on Treatment Outcomes

Trends in the data suggest that increased length of stay in the TRD was marginally associated with a greater likelihood of engagement with community-based substance abuse treatment services. Importantly, though, once engaged, clients who spend more time in the TRD also spent a significantly longer time engaged in those community-based substance abuse treatment programs.

## Program Impact on Future Jail Utilization

Findings of the outcome evaluation indicate that participants who spent more time participating in TRD programming were less likely to experience at least one jail booking and, if booked, used significantly less jail bed days in the 365 days after MCIJ release. Additionally, for clients who experienced a jail booking, the time between MCIJ release and the first

subsequent jail booking was marginally longer when they spent more time participating in TRD programming, but this difference was not statistically significant.

## Program Impact on Felony Rearrest

Consistent with much of the empirical research on recidivism within the area of criminal justice policy and intervention, the current research did not find a significant relationship between TRD participation and either receipt of or time-to a felony rearrest.

## Program Impact on Negative Probation Events

Individuals with a longer length of TRD programming were significantly less likely to abscond from their probation supervision, to receive a formal probation sanction, and to experience a revocation of their probation supervision. For those clients who did experience a probation revocation, individuals who spent a longer time in the TRD remained successful for significantly longer (were revoked later) than did those who spent less time participating in TRD programming.

## Ideal Length of Stay for Maximum Impact

Based on analyses estimating the influence of length of TRD participation on various indicators of attitudinal change and behavioral impact, the research findings indicate that participating in TRD programming for:

- 8-14 days was associated with better outcomes than 0-7 days;
- 15-30 days was associated with better outcomes than 8-14 days; and
- 31 + days showed continued gradual, but less marked improvement.

## Data-Informed Recommendations

The research findings highlighted above can be translated into the following concrete policy implications and data-informed recommendations.

First, results of the outcome analysis suggest that it is critical for clients to receive at least 30 days of TRD services to achieve maximum impact. One of the main policy recommendations directly informed by the current research is for program stakeholders to work collaboratively to modify internal MCSO and jail policy to allow post-sentencing clients to remain in the TRD at least until they reach that critical 30-day mark, while also ensuring that labor contracts are met. To clarify, the suggestion is not that individuals should stay in jail longer than they otherwise would, but simply that sentenced individuals should be allowed and encouraged to continue TRD program participation through that critical 30-day point instead of being subject to the automatic transfer to a work dorm.

Second, the data suggest that TRD participation increases community-based substance abuse treatment retention once initially engaged, but does not seem to have a meaningful impact on initial treatment engagement. The period between release from the jail facility and entering a residential or outpatient treatment program can be an especially vulnerable time for former TRD participants, especially in light of the finite amount of available treatment resources, which can lead to long periods on a wait list for services. Noting this gap in service provision, TRD program stakeholders should continue to brainstorm solutions to offer extra support to clients in this vulnerable time period.

Overall, the findings of the outcome evaluation lead to the conclusion that TRD programming is helping support the larger goals of HB3194 and Multnomah County's Justice Reinvestment Program. Based on a statistical analysis of various attitudinal and behavioral outcomes, this research suggests that participation in jail-based TRD programming helps to set individuals up for success upon reentry into the community from a jail facility.

# SECTION I: INTRODUCTION

## *Evaluation Background*

The Multnomah County Justice Reinvestment Program (MCJRP) was collaboratively developed by Multnomah County's public safety partners as a local strategy to meet the statewide prison-reduction goals set forth in Oregon House Bill 3194. Through MCJRP, initially prison-bound individuals are given the opportunity to stay in their local community with enhanced supervision and services designed to reduce recidivism and enhance public safety.

One of several services provided to individuals eligible for MCJRP is the Treatment Readiness Dorm (abbreviated as TRD throughout the report). Opened in May 2016, the TRD is a 55-bed space located within Dorm 10 of the Multnomah County Inverness Jail (MCIJ). Individuals placed in the TRD are booked on MCJRP-eligible charges, meet classification criteria for dorm group housing (e.g., they are not a threat to other inmates), and would benefit from substance abuse treatment.

The Treatment Readiness Dorm was designed to offer preliminary behavioral and motivational treatment to increase receptiveness to treatment out of custody and reduce individuals' required level of care upon release to the community. The goal of the program is that those individuals who participate in TRD programming will be better prepared to complete subsequent community-based substance abuse treatment, will be better situated to engage with the probation supervision process, and may ultimately be less likely to reoffend in the future.

## *Literature Review*

### Success of Similar Programs

There is a dearth of published research on the role of in-jail treatment in improving subsequent treatment outcomes and/or reducing recidivism. Through a systematic review of the empirical literature, five in-prison substance use treatment programs were identified, four of which indicated promising results (Hall, Ward, & Mattick, 2009; Kinlock, Gordon, Schwartz, & O'Grady, 2013; Martin, S.S., Butzin, C.A., Saum, C.A., & Inciardi, J.A., 1999; Prendergast, Hall, Wexler, Melnick, & Cao, 2004; Sacks, Peters, Wexler, Roebuch, & DeLeon, 2001). These evaluations found successful outcomes in terms of reduced reincarceration (e.g., Prendergast et al., 2004), remaining drug free (e.g., Martin et al., 1999), decreased rearrests (e.g., Hall et al., 2008; Kinlock et al., 2013; Martin et al., 1999) and self-reported offending/criminal behavior (e.g., Sacks et al., 2001), and greater treatment retention upon release (e.g., Kinlock et al., 2013).

However, given the host of factors that differentiate typical jail and prison populations and their experiences of incarceration (e.g., length of stay, housing model), conclusions from these studies may not be relevant to the present evaluation. Additionally, there is a substantive difference between providing *substance use treatment* and providing *treatment readiness support and education*, in or out of custody. A review of the literature identified three jail-based programs providing substance use treatment – the START program in DeKalb County Jail (Atlanta, GA), the OUT Program in Utah County Jail (Spanish Fork, UT), and the DCJSAT program in the Delaware County Jail (Delaware, OH)<sup>1</sup>. Outcomes associated with these jail-based programs were mixed. Highlighting the challenges surrounding treatment provision within a local jail setting, a recent unpublished doctoral dissertation that provided an evaluation of the START (Start Treatment and Recovery Today) Program found that the treatment group was no less likely to be rearrested than was the jail's general population (Lutgen, 2018). Evaluations of the OUT (On-Unit Treatment) Program and DCJSAT (Delaware

<sup>1</sup> Information about the programs and outcome evaluations can be found at the references provided below.

## Section I: Introduction

County Jail Substance Abuse Treatment) Program found significant differences between treatment and control group with regard to recidivism, with treatment participation being associated with lowered recidivism risk (Bahr, Harris, Strobell, & Taylor, 2013; Miller et al., 2016), but no significant difference for probation revocations (Miller et al., 2016). To date, however there is no empirical literature specific to the success of in-jail *treatment readiness* programs.

### *Current Focus*

A thorough evaluation of Multnomah County's Treatment Readiness Dorm program will provide an important contribution to the body of knowledge on in-jail treatment readiness approach. This contribution will provide important information on the differences in outcomes for individuals released from jail to treatment programs post-jail incarceration for those receiving differing amount of in-jail treatment readiness programming. Additionally, the current outcome evaluation will help substantiate whether the program is effective and helping Multnomah County to meet the goals of HB3194.



## SECTION II: METHODOLOGY

### *Research Questions*

The current study was designed to be an evaluation of individual-level outcomes associated with participation in Treatment Readiness Dorm programming at Multnomah County’s Inverness Jail. The outcome evaluation was guided by eight specific research questions. The analytic approach and findings are discussed by research question in Section III of this report.

1. Who is being served by the Treatment Readiness Dorm?
2. Does participants’ readiness for change and treatment eagerness increase during the Treatment Readiness Dorm stay?
3. Does participation in the Treatment Readiness Dorm impact community-based treatment outcomes upon release from jail?
4. Who engages with community-based outpatient treatment?
5. Who engages with inpatient/residential treatment?
6. Does participation in the Treatment Readiness Dorm reduce future criminal justice involvement?
7. Is there an ideal length of stay in the Treatment Readiness Dorm?
8. How does length of stay in the Treatment Readiness Dorm impact future criminal justice involvement?

### *Sample Enrollment and Outcome Observation Windows*

The outcome evaluation was conducted on a sample of 529 unique individuals who participated in TRD programming at MCIJ during the 18-month sample enrollment period extending from January 1, 2017 through June 30, 2018.

The observation window for outcome data varies based on the data source. The criminal justice outcomes (i.e., jail utilization, felony rearrest, and negative probation events) were tracked from day of exit from MCIJ through July 31, 2019. Due to the labor intensive nature of data collection and cleaning, the observation window for community-based treatment outcomes spanned only from time of release from MCIJ through December 31, 2018.

Due to clients entering and exiting the TRD at staggered times over the 18-month sample enrollment period, their “time at risk” (i.e., exposure time) in the community also varies. As a result, clients released from MCIJ at the beginning of the enrollment period have a substantially longer observation period for the community-based treatment and criminal justice outcome events than clients whose release from MCIJ was near the end of the 18-month period. This variation in “time at risk” was statistically controlled in the analytic models using an exposure variable to control for time in the community post-MCIJ release.

### *Overview of Study Data Sources*

Data for the outcome evaluation were obtained from multiple sources summarized below. Additional information on the data sources themselves, as well as which data elements and specific variables were from each source, can be found in Appendix C.

#### **Treatment Readiness Program Client Data**

Clinicians and other service providers that work on the TRD entered client data into a secure Multnomah County-owned electronic data collection system called REDCap. The client data captured in the REDCap system was collected as part of the TRD intake and exit process. In addition to general client identification information, data collected at intake to TRD programming included program entry date and legal supervision status, client demographics, information on drug(s) of choice, American Society of Addiction Medicine (ASAM) criteria, and Stages of Change Readiness and Treatment Eagerness Scale (SOCRATES) scores. Data collected at program exit included exit date, information on the type of discharge from TRD programming, and reassessment scores for the ASAM and SOCRATES.

#### **Agency Administrative Data**

Administrative data were obtained from the data systems of multiple local and state criminal justice agencies. The electronic data information system used by DCJ is called the Corrections Information System (CIS), commonly referred to as DOC400. CIS/DOC400 was the source for all information regarding the probation-based criminal justice outcomes. Multiple pieces of information were obtained for each of the three negative probation events (i.e., probation absconds, sanctions received, and revocation of probation supervision), including whether or not the event occurred and the event date.

Oregon State Police (OSP) provided access to arrest records captured in their Law Enforcement Data System (LEDS). The LEDS data included information regarding all felony arrests that occurred within Oregon after each individual's date of release from MCIJ. Both offenses associated with each arrest and arrest date were provided.

Officials from MCSO provided data from their electronic Sheriffs' Warrants and Information System (eSWIS). Data elements obtained from eSWIS included the date of jail booking and exit associated with the TRD stay, charge(s) at booking, type of exit from MCIJ, and jail utilization in the 365 days before and after the TRD stay. Additionally, TRD-specific program data were provided from the Group Event Scheduler (GES) module of eSWIS. The GES data provided client-level information on attendance at each TRD program (including group treatment, education, and other event sessions), which was subsequently aggregated to calculate the total amount of services received by the study sample during the 18-month sample observation period.

Multnomah County's Decision Support System – Justice (DSS-J) is a county-wide data repository and warehouse, to which various local criminal justice agencies contribute data. Since each agency has their own unique person-level identifier that is used within their electronic data system, the DSS-J system has a built-in capacity to provide person-level linkage across the contributing data systems. As such, DSS-J was utilized for the current outcome evaluation to facilitate merging of client data across different agency data sources with varying unique client-level identifiers.

# Community-Based Treatment Provider Records

DCJ has access to multiple types of information related to client treatment and service utilization. These include provider intake and exit forms, invoicing rosters, and the Treatment Module of CIS/DOC400. Each of these systems were thoroughly reviewed in order to identify and then extract data for the 529 members of the study sample. Unfortunately, due to limitations in the community-based treatment data sources, we cannot be sure whether absence of data is due to the client not having engaged in treatment or simply no data being available through the sources identified below. As such, it is possible that data used for the current evaluation actually under-captures the true extent of post-TRD community-based treatment utilization.

## Program Intake and Exit Data

DCJ fully or partially supports the cost of treatment services and rehabilitative programs for clients they serve who cannot afford to pay for services on their own. As part of the contract between DCJ and the community-based service providers, DCJ requires that treatment providers submit program intake and exit information for clients under DCJ supervision. The DCJ Research and Planning unit (RAP) developed and maintains the data submission systems, and therefore has access to client treatment records. Providers submit client intake and exit data through one of two secure electronic data submission systems owned and maintained by Multnomah County: the Integrated Client Services Database (decommissioned during the course of the study observation period) and the REDCap system.

## Invoicing Rosters

Service providers submit rosters of active clients to DCJ as part of their regular monthly invoicing process. Client rosters for contracted service providers that work in the alcohol and drug use service area were reviewed by hand to identify any sample members in receipt of community-based treatment services who were not captured in the program intake and exit data discussed above.

## Treatment Module of CIS/DOC400

DCJ staff enter treatment referral, intake, and exit information, as well as period progress notes, into the Treatment Module of CIS/DOC400. According to various sources within DCJ, inconsistency and incompleteness exists in the community-based treatment data that is entered into the Treatment Module. Even with these limitations, sample members for whom no data was found in the other community-based treatment data sources were searched individually in the DOC400 system to determine if there was any information about them in the Treatment Module associated with their CIS record.

Once obtained from the various systems, data were cleaned, missing and/or out-of-range data verified with the source agency, and relevant data elements were recoded into an analyzable form (e.g., string data was recoded into numeric categories). After preparation for analysis, data elements from the separate data sources were merged together using various unique person-level identifiers. Once compiled, this single, working data set incorporated all relevant data elements across all of the data sources for the full sample of 529 program participants. This merged data file was then used to answer the eight research questions developed for the current outcome evaluation.

## *Primary Data Elements*

This section outlines the individual data elements, or variables, used to conduct the outcome analysis. Information on original data source, data transformations, and limitations of each data element and source are discussed.

## Length of Stay in Treatment Readiness Dorm

Length of stay in the treatment readiness dorm was captured as both a continuous variable (length of stay in days) and a categorical variable (length of stay groupings). The continuous indicator for length of stay was calculated by enumerating the number of days between intake to and exit from the treatment readiness dorm. As is indicated in Figure 1 and Table 1, length of stay varied widely from 0 (intake and exit of the same day) to 408 days, with a mean of 49.29 days, standard deviation of 57.87 days, and median of 26 days. In order to normalize the highly skewed distribution, the continuous variable was transformed by taking the natural log (plus one)<sup>2</sup>. The skewness and kurtosis statistics in Table 2 indicate that the transformed variable is more normalized than the original length of stay variable, so the **natural log (plus one) of length of stay** in the treatment readiness dorm is used in all models that incorporate length of stay as a continuous variable.

Figure 1: Frequency of Length of Stay (in Days) in TRD (n=517)

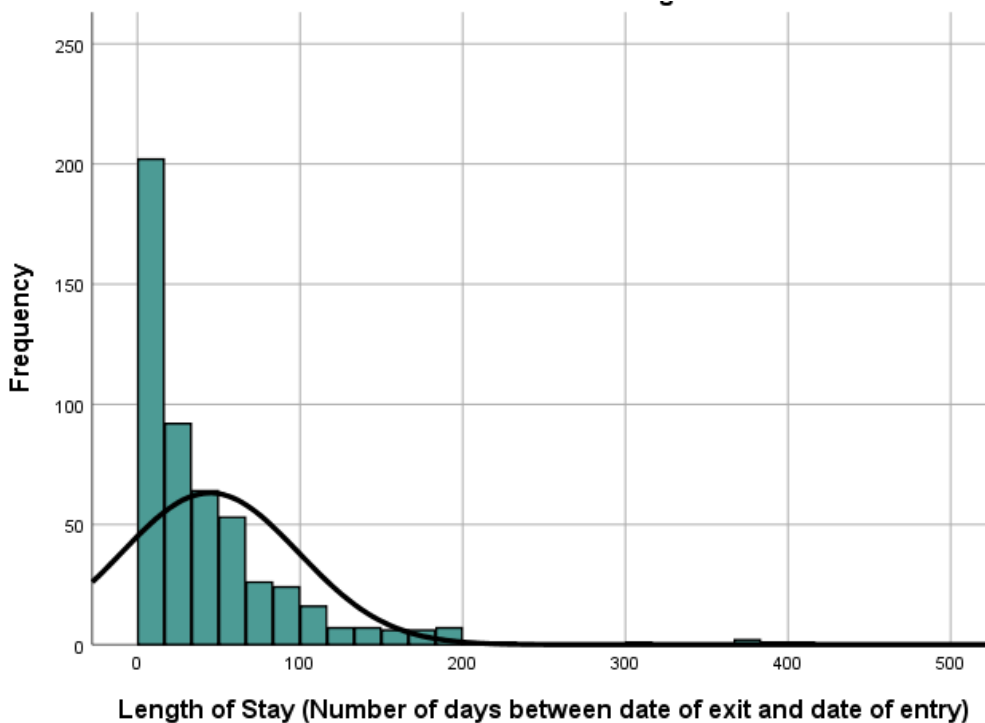


Table 1: Descriptive Statistics for Length of Stay (in Days) in TRD (n=517)

Statistic (in days)	Calculated	Calculated + 1	Natural Log – Calculated + 1
Range	0 – 408	1 – 409	0 – 6.01
Mean	49.29	50.29	3.24
Standard Deviation	57.871	57.871	1.131
<b>Quartiles</b>			
25%	8.00	9.00	2.20
50% (Median)	26.00	27.00	3.30
75%	61.00	62.00	4.13
Skewness	2.957	2.957	-.059
Kurtosis	12.964	12.964	-.742

<sup>2</sup> A value of one (1) was added to the calculated length of stay so as to allow for the natural log transformation (which cannot be conducted on a value of zero [0]).

Length of stay is also operationalized in a categorical manner in some analyses. Groupings for length of stay were developed to reflect dorm stays of various lengths. See Table 2 and Figure 2 for breakdown of frequency of **length of stay groupings**.

Table 2: Length of Stay in Treatment Readiness Dorm Groupings (n=529)

Length of Stay	Count	Percent
Less than 7 days	103	19.5%
8 – 14 days	66	12.5%
15 – 30 days	88	16.6%
31 – 60 days	115	21.7%
61 – 90 days	69	13.0%
Greater than 91 days	76	14.7%
Missing	12	2.0%

## Attitudinal Orientation to Recovery

The Stages of Change Readiness and Treatment Eagerness Scale (SOCRATES) assessment was used to provide a measure of client attitudinal orientation to addiction and recovery. The SOCRATES is an assessment instrument (Miller & Tonigan, 1996) that is commonly used with criminal justice and behavioral health populations. The SOCRATES is given as part of the TRD intake and exit process, allowing for measurement of change in indicators of readiness for change and treatment eagerness over the course of participation in TRD programming. Due to the unpredictable nature of the timing of client exits from the TRD, however, many of the SOCRATES at exit scores are missing.

The SOCRATES assessment has two domains<sup>3</sup> – **Recognition** and **Taking Steps** - that are each measured on an **Alcohol** and **Drug** subscale. According to the authors of the instrument, individuals who score high on the recognition domain “directly acknowledge that they are having problems related to their drinking, tending to express a desire for change and to perceive that harm will continue if they do not change” (Miller & Tonigan, 1996, p. 81). Similarly, individuals who score high on the taking steps domain recognize that attitudinal and emotional change is necessary and underway. See Section III: Research Question 2 for a full discussion of the SOCRATES measures and descriptive statistics of SOCRATES scores in the evaluation sample.

## Community-Based Treatment Outcomes

Two outcomes associated with community-based treatment involvement are captured in the data. **Treatment engagement** is a dichotomous variable that represents whether or not each individual engaged in community-based substance abuse treatment upon release from MCIJ into Multnomah County. **Treatment retention** is a continuous variable that indicates the number of days an individual spent in community-based treatment. Treatment retention was calculated based on the days between intake into and discharge from community-based substance abuse treatment. Treatment discharge type and having a currently active and successful status in treatment (when verified by client rosters or another secondary source) as of the end of the observation window was recorded when available, but it is missing for many clients. As such, discharge type is not a community-based treatment outcome that is observed in the current study.

<sup>3</sup> The SOCRATES does include a third domain, *Ambivalence*. Due to challenges in interpretation and recommendation by authors to consider ambivalence in reference to the other domain scores (Miller & Tonigan, 1996), however, this domain is not included in the current analyses.



# Criminal Justice Outcomes

The relationships between participation in treatment dorm programming and three categories of criminal justice outcomes were explored in the outcome evaluation.

## Jail Utilization

Two indicators of post-MCIJ release jail utilization were included in the analyses. The first is a dichotomous variable indicating **at least one jail booking** in the 365 days following MCIJ exit for the booking that included participation in the TRD programming.<sup>4</sup> The second is jail utilization, which was operationalized as a continuous variable representing the cumulative total **number of jail bed days** used in the 365 days following MCIJ exit.

## Felony Rearrest

Due to limitations in the data sharing infrastructure, the only measure of official police contact or arrest that was available for the current outcome evaluation comes from the statewide LEDS data source maintained by the Oregon State Police. As discussed in the previous section, LEDS data is inherently limited in that it only includes information on felony arrests and arrests for some misdemeanor-level drug distribution and sexual offenses. Two indicators of rearrest are included in the models: a dichotomous indicator of **at least one arrest** captured in LEDS data following the date of release from MCIJ into the community and a continuous variable indicating **time to arrest** as the number of days between MCIJ release date and date of first post-MCIJ arrest.

## Negative Probation Events

Three negative probation events were included as dependent variables in the current outcome analysis: **absconding** from probation supervision, receiving a **sanction** while under probation supervision, and **revocation** of probation supervision. Similar to the felony rearrest measures, for each of the three negative probation events there is a dichotomous variable indicating whether or not the specific event occurred and a continuous variable indicating time (in days) to the event (i.e., time to first abscond, sanction, or revocation).

## Control Variables

An additional series of variables were included in the models as statistical controls. Descriptive statistics for all control variables are shown in Table 3. The statistical controls largely fell into two groups: participant demographic factors and indicators of criminal history and offense information for the current MCIJ booking.

<sup>4</sup> This includes standard jail bookings, with bookings where the individual “turned self in” removed. The “turn self in” code is used in cases where an individual is sentenced to jail but allowed to self-surrender at a predetermined date and time.

## Section II – Methodology

Table 3: Control Variables

Demographic Factors	Count	Percent
<b>Race</b>		
White	334	63.1%
Black/African American	90	17.0%
American Indian/Alaska Native	21	4.0%
Other Race	13	2.5%
Unknown	42	7.9%
<i>Missing</i>	29	5.5%
<b>Ethnicity</b>		
Not of Hispanic, Latino, or Spanish origin	437	82.6%
Hispanic, Latino, or Spanish origin	88	16.6%
<i>Missing</i>	4	0.8%
<b>Age</b>		
Mean	36.10 years	
Standard Deviation	10.49 years	
Range	18.32 to 72.47 years	
<i>Missing</i>	31	5.9
<b>Criminogenic Factors</b>		
<b>LS/CM-I Total Score</b>		
Mean	27.48	
Standard Deviation	7.52	
Range	6 – 40	
<i>Missing</i>	67	12.7%
<b>Drug of Choice</b>		
Alcohol	98	18.5%
Cocaine/Crack	29	5.5%
Heroin/Opioids	134	25.3%
Methamphetamine/Other Amphetamines	183	34.6%
Marijuana	81	15.3%
Other	1	0.2%
<i>Missing</i>	3	0.6%
<b>Primary Charge of Booking – eSWIS Categories</b>		
Person	33	6.2%
Behavioral	98	18.5%
Property	82	15.5%
Vehicle Theft/UUMV	54	10.2%
Alcohol & Drugs	69	13.0%
Supervision Violation	96	18.1%
Holds	97	18.3%
<b>Primary Charge of Booking – Recoded into Offense Categories Only<sup>a</sup></b>		
Person	41	7.8%
Behavioral	102	19.3%
Property	130	24.6%
Vehicle Theft/UUMV	139	26.3%
Alcohol & Drugs	117	22.1%

**NOTES:**

<sup>a</sup> Supervision violations and holds are removed – figures vary from original Primary Charge of Booking

### Demographic Factors

Demographic controls include **race** (white, black/African American, American Indian/Alaska native, Other Race, Unknown), **ethnicity** (Hispanic/Latino/Spanish origin, Not of Hispanic/Latino/Spanish origin), and **age at entrance** (in years, continuous variable) to the TRD.

### Criminogenic Factors

Three additional variables were included in multivariate models to account for aspects of criminogenic risk. First, **LS/CM-I total score** is a continuous variable that represents overall criminogenic risk level at the time most temporally proximate to the MCIJ booking associated with the TRD stay. Second, a nominal level variable indicating self-reported first **drug of choice** at time of entrance to the TRD, with categories including alcohol, cocaine/crack, heroin/opioids, methamphetamine/other amphetamines, marijuana, and other. Third, **primary charge of booking** for MCIJ booking associated with the TRD stay is captured as a nominal level variable with categories including person, behavioral, property, vehicle theft/UUMV, and alcohol/drug<sup>5</sup>.

<sup>5</sup> eSWIS includes two additional categories for primary charge of booking, including Supervision Violations and various types of Holds. In order to better understand the nature of the offense that lead to the jail booking, cases with an original primary charge of Supervision Violations and Holds were recorded to reflect a primary charge consistent with one of the five larger offense categories.

# SECTION III: RESEARCH QUESTION 1

## Research Question and Analytic Strategy

*Who is being served by the Treatment Readiness Dorm?* The outcome evaluation of Treatment Readiness Dorm (TRD) programming was conducted on 529 individuals who engaged with dorm programming over the 18-month period of January 1, 2017 through June 30, 2018. In order to fully understand the impact of participation in TRD programming it is important to fully understand the program participants. Univariate, descriptive statistics of program participants are presented below. Summary statistics are also calculated to provide aggregate information on treatment readiness dorm services received by the 529 individuals in the study sample.

## Individual-Level Findings

### Participant Demographic Characteristics

Nearly two thirds of program participants were white (63.1%), with the remainder Black or African American (17.0%), American Indian or Alaska Native (4.0%), or another race (2.5%). Other racial backgrounds include Asian and Hawaiian or Pacific Islander. The majority of program participants were not of Hispanic, Latino or Spanish origin (82.6%). Average client age is just over 36 years old, ranging from 18 to 72 years old.

Table 4: Participant Demographic Characteristics

Demographic Characteristic	Count	Percent
<b>Race</b>		
White	334	63.1%
Black or African American	90	17.0%
American Indian or Alaska Native	12	4.0%
Other Race	13	2.5%
<i>Unknown/Missing</i>	71	13.4%
<b>Ethnicity</b>		
Not of Hispanic, Latino, or Spanish Origin	437	82.6%
Mexican, Mexican American, or Chicano	53	10.0%
Other Hispanic, Latino, or Spanish Origin	35	6.6%
<i>Unknown/Missing</i>	4	0.8%
<b>Age at Dorm Entry</b>		
Mean	36.10 years	
Standard Deviation	10.49 years	
Range	18.32 to 72.47 years	
<i>Unknown/Missing</i>	31	5.9%

## Criminogenic Factors and Assessment Scores

As part of the TRD intake process, participants were asked to rank their first through third drug of choice, which is contained in Table 5. Consistent with trends in Multnomah County, the majority of participants indicated their first drug of choice was methamphetamine or another form of amphetamine (34.6%) or heroin/opioids (25.3%).

Table 5. Drugs of Choice Descriptive Statistics (n=529)

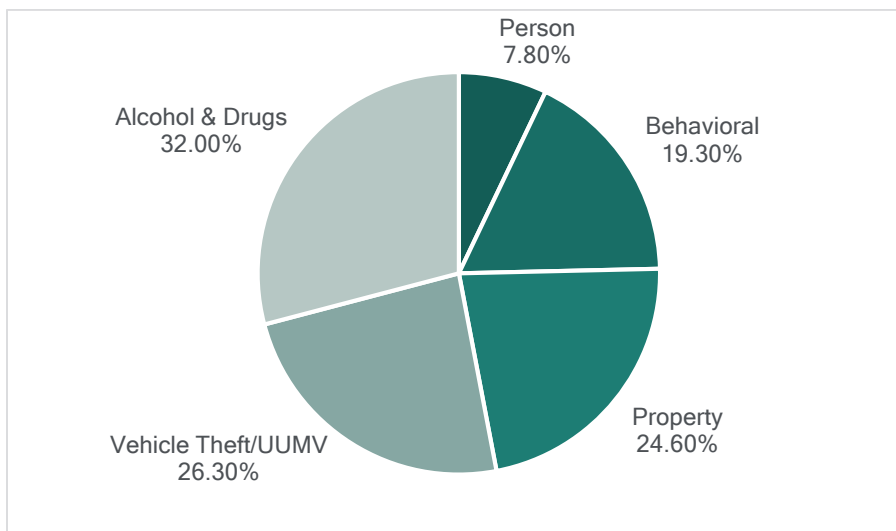
Drug of Choice	First	Second	Third
<b>Methamphetamine or Other Amphetamine</b>	183 (34.6%)	161 (30.4%)	47 (8.9%)
<b>Heroin/Opioids</b>	134 (25.3%)	63 (11.9%)	25 (4.7%)
<b>Alcohol</b>	98 (18.5%)	80 (15.1%)	81 (15.3%)
<b>Marijuana</b>	81 (15.3%)	95 (18.0%)	104 (19.7%)
<b>Cocaine/crack</b>	29 (5.5%)	33 (6.2%)	40 (7.6%)
<b>Other</b>	1 (0.2%)	5 (0.9%)	2 (0.4%)
<i>Missing</i>	3 (0.6%)	92 (17.4%)	230 (43.5%)

NOTES:

Statistics include frequency, with percentage in parentheses

Due to MCSO policy, when charge information is captured for each booking in the jail intake process, different forms of violations (bench warrants and supervision violations as a result of the formal sanction process) and holds (both within the County and external to the County) are considered the primary charge of booking. However, in order to fully understand the offense that lead to police contact and then the subsequent jail booking during which the individual engaged in TRD programming, the current research removed the Violation (18.1% of primary charges) and Hold (18.3% of primary charges) codes and then grouped primary charge of booking into five categories. These data, presented on Figure 3, indicate that roughly one-fifth to one-quarter of clients have the primary charge of vehicle theft/UUMV<sup>6</sup> (26.3%), property offense (24.6%), alcohol or drug offense (22.1%), and behavioral offense (19.3%), with relatively fewer committing a person offense (7.8%). Examples of offenses included within the larger category of behavioral offense include criminal mischief, rioting, attempting to elude a police vehicle, criminal mistreatment, and felon in possession of a firearm charges.

Figure 2. Primary Charge of Booking (n=529)



<sup>6</sup> UUMV is an abbreviation for Unauthorized Use of a Motor Vehicle.



## Section III: Research Question 1

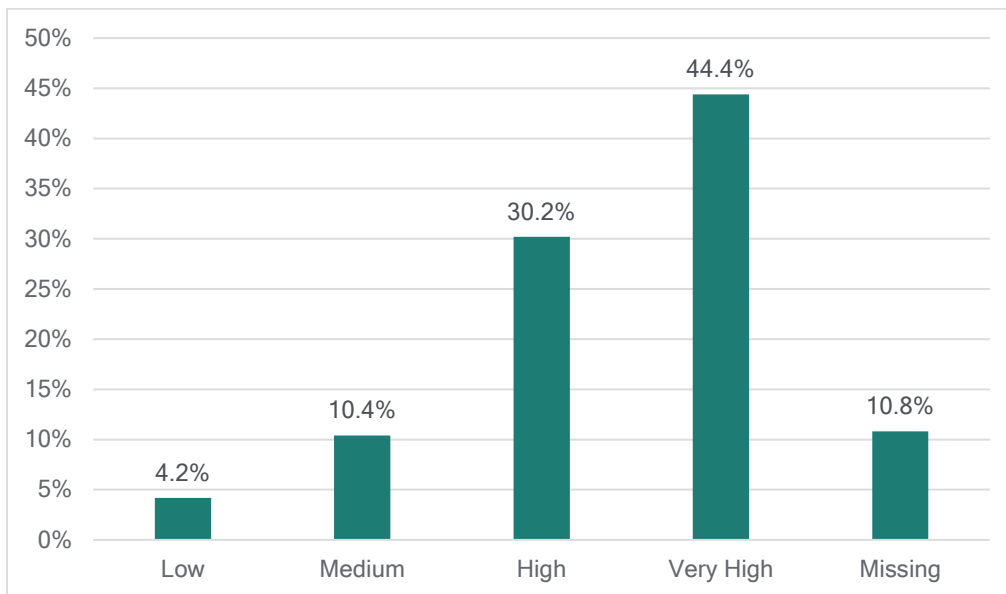
Table 6 illustrates that the participants who engaged in TRD programming during their stay at MCIJ were a high jail utilization group<sup>7</sup>. Looking at jail bookings in year prior to the TRD stay, clients averaged just under two jail stays in the year prior to engagement with TRD programming, and spent an average of 32 days in jail over that 365 day period.

Table 6: Jail Utilization in 365 Days Prior to TRD Entrance (n=529)

Number of Jail Bookings	
Mean	1.99 bookings
Standard Deviation	2.21 bookings
Range	0 – 12 booking
Number of Bed Days Used	
Mean	32 (41.44) 0 – 285
Standard Deviation	41.44 days
Range	0 – 285days

As part of normal MCJRP pretrial case processing, risk-need level is assessed. Consistent with the general MCJRP population, overall risk level is relatively high for the TRD sample. Nearly three-quarters of TRD participants were assessed as either High (30.2%) or Very High (44.4%) risk (Figure 4). Small proportions of the sample were Low risk (4.2%) and Medium risk (10.4%). The overall mean total LS/CM-I score was 27.48 (standard deviation=7.52; range: 6-40).

Figure 3: LS/CM-I Risk Level Categories (n=529)



This trend of high LS/CM-I total scores among the TRD program participants continued when looking at scores on individual risk and need domains (Figures 4 and 5). When considering risk level as a dichotomy of high and very high risk versus everything below (very low, low, and medium risk), the sample scores in the higher risk group on all but two risk-need domains: antisocial lifestyle and family problems. The eight risk and need domains included on the LS/CM-I are referred to as the “Central 8”, with the most dynamic risk factors that have been empirically linked to greatest reductions in overall criminogenic risk referred to as the “Big 4” (criminal history, antisocial associates, antisocial attitudes, and antisocial lifestyle; Andrews & Bonta, 2010)

<sup>7</sup> This is not surprising given that a main component of TRD eligibility criteria is MCJRP eligibility, of which all MCJRP eligible offenders are, by definition, higher risk charged with a MCJRP-eligible (i.e., carrying a presumptive prison sentence according to the sentencing guidelines for the State of Oregon) offense.

## Section III: Research Question 1

Figure 4: "Big 4" LS/CM-I Risk-Need Domains (n=529)

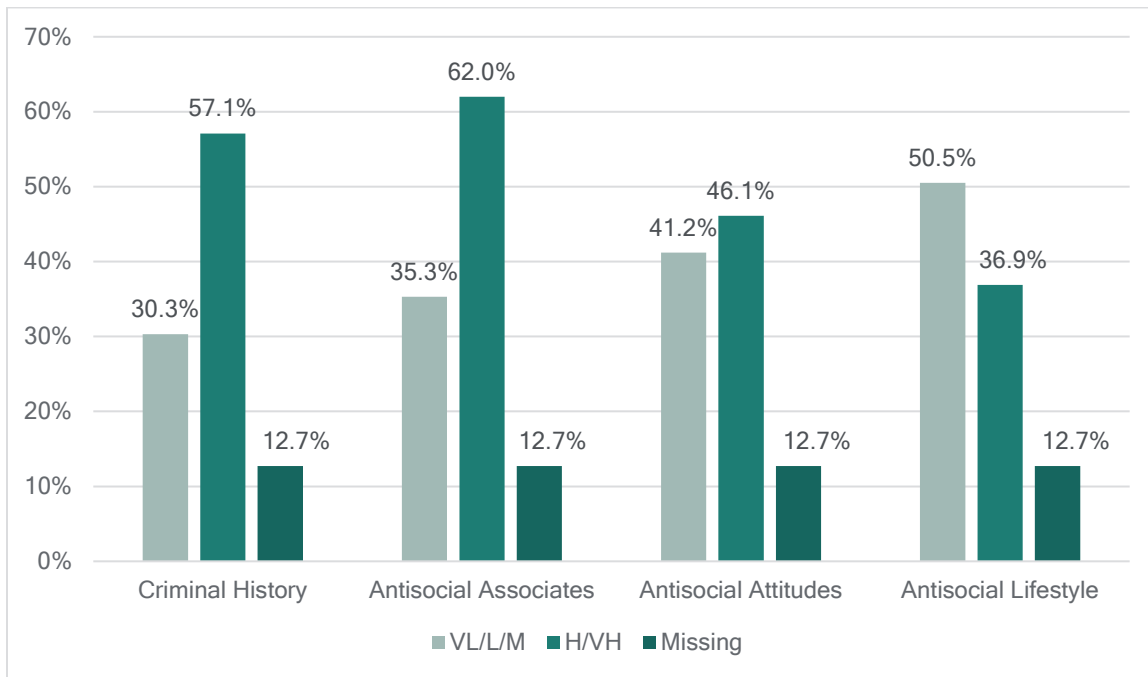
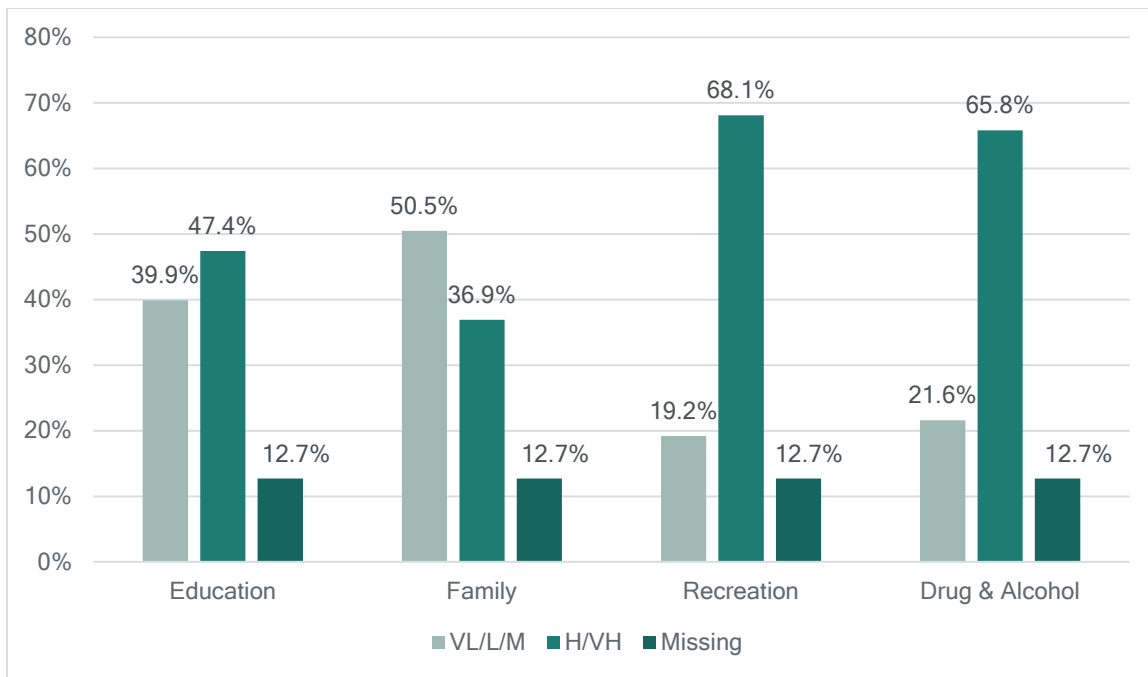


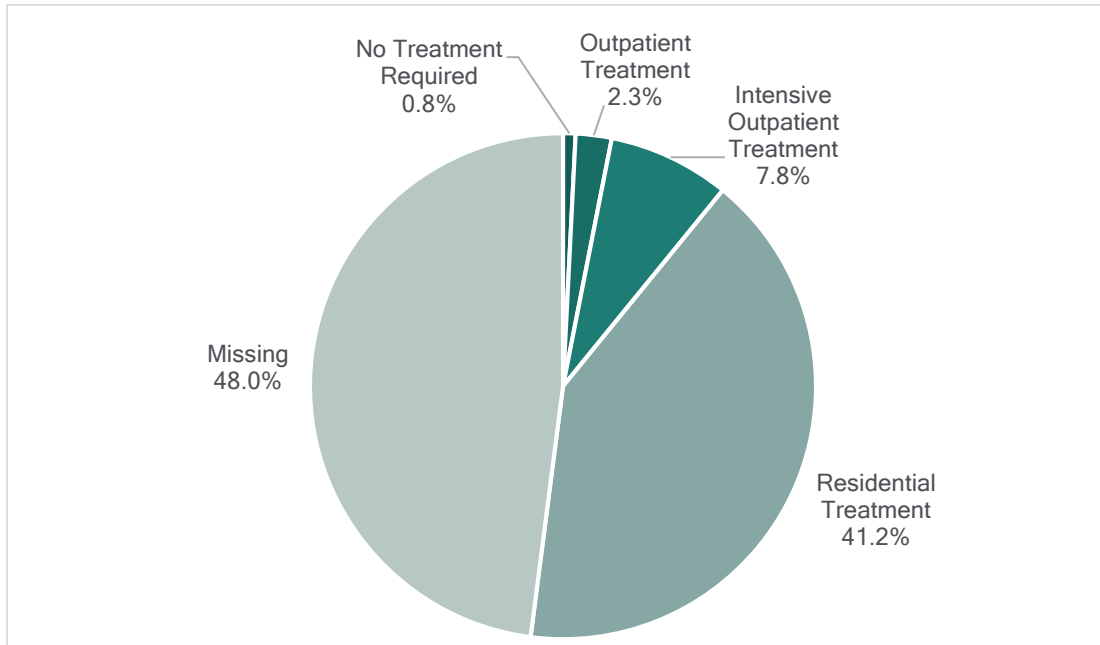
Figure 5: Additional 4 LS/CM-I Risk-Need Domains (n=529)



## Section III: Research Question 1

Part of the standard TRD procedure is that program participants receive an assessment that determines their assessed level of service need upon release from the facility. The specific assessment used is called the ASAM Criteria, which has categories for level of service need based on objective criteria developed by the American Society of Addiction Medicine. TRD clients are assessed with the ASAM as part of the standardized program intake and exit process, but due to the highly unpredictable nature of exit from the TRD, many of the ASAM scores at exit were missing ( $n = 254, 48.0\%$ ). Of the 275 TRD clients who have an ASAM score at exit, the vast majority ( $n = 218, 41.2\%$ ) were assessed as requiring residential substance abuse treatment upon release to the community. Smaller groups were assessed as requiring intensive outpatient treatment ( $n = 41, 7.8\%$ ) and needing general outpatient substance abuse treatment ( $n = 12, 2.3\%$ ).

Figure 6: ASAM Level of Treatment Service Required at Program Exit



## Characteristics of Treatment Readiness Dorm Stay

Univariate, descriptive statistics for TRD length of stay were discussed in Section II above (see Table 1). Average length of stay in the dorm was 45 days (standard deviation=54 days), and the length of stay ranged from 0 days (same day TRD program entry and exit) to 408 days. Length of stay in days was grouped into categories, which are shown on Table 2. The majority of clients spent one week or less in TRD programming at MCIJ.

Of the 529 unique individuals who participated in TRD programming during the 18-month study enrollment period, the majority ( $n=472, 89.2\%$ ) had a single entrance to the treatment dorm. Of those with more than one entrance to the dorm, 50 individuals had two TRD entrances, six had three entrances, and one person entered the dorm four times during the 18-month study enrollment period. A decision rule was developed to inform which dorm stay to use for analytic purposes for the 57 individuals who had more than one dorm stay. The decision rule specified that the most recent dorm stay should be retained for analysis (meaning that closest to the end of the study enrollment period) unless a prior dorm stay was of longer duration.

## Section III: Research Question 1

Table 7: Treatment Readiness Dorm Stay Descriptive Statistics (n=529)

TRD Stay Characteristic	Count	Percent
<b>Number of TRD Entrances During Study Period<sup>a</sup></b>		
1	472	89.2%
2	50	9.5%
3	6	1.1%
4	1	0.2%
<i>Unknown/Missing</i>	0	0.0%
<b>Total Exposure to TRD (in days)</b>		
Mean	49.49 days	
Standard Deviation	56.10 days	
Range	0 – 471 days	
<i>Unknown/Missing</i>	9	1.7%
<b>Type of Discharge from TRD<sup>b</sup></b>		
Successful until exit	415	78.4%
Refused to participate	27	5.1%
Removed for disciplinary action	56	10.6%
Other	13	2.5%
<i>Unknown/Missing</i>	18	3.4%

NOTES:

<sup>a</sup> Decision rule: For clients with multiple TRD stays during the 18-month study enrollment period, the chronologically most recent dorm stay was retained for analysis, unless a prior dorm stay was of longer duration.

<sup>b</sup> See Table 8 for more detail on TRD discharge for a subset of sample.

Volunteers of America (VOA) clinicians categorize client exits from the TRD into a few broad categories. Over three-quarters ( $n=415$ , 78.4%) of clients were considered to have a successful exit from the TRD. A small proportion of clients were removed for disciplinary reasons ( $n=56$ , 10.6%) or refusal to participate in TRD programming ( $n=27$ , 5.1%). See Tables 7 and 8 for more information on type of discharge from TRD programming.

Table 8: Type of Discharge from TRD (n=195)

Discharge Type	Count	Percent
Released from Jail	76	14.4%
Moved to Another Dorm	62	11.7%
Transferred to Prison	18	3.4%
Removed for Disciplinary Action	18	3.4%
Transferred to Another County	15	2.8%
Removed for Lack of Participation	1	0.2%
Other <sup>a</sup>	5	0.9%
<i>Missing</i>	334	63.1%

NOTES:

<sup>a</sup> Other includes removal for medical reasons or requested by individual for safety

## Type of Exit from MCIJ

Part of the eligibility criteria for participation in TRD programming at MCIJ is being MCJRP-eligible and pre-adjudication<sup>8</sup>. As such, individuals are progressing through the MCJRP court process concurrent with their engagement in TRD programming. Due to MCSO policy, once an individual housed at MCIJ is sentenced they are automatically eligible for and transferred to one of the work dorms to help fulfill external or internal work contracts. This results in TRD clients who were successfully engaging with and participating in TRD programming being transferred to a work dorm to serve out the remainder of their jail sentence.

Table 9 includes information on the MCIJ release location for the jail booking that included participation in TRD programming. Over half of the sample (60.1%,  $n = 322$ ) was released from MCIJ to the community in Multnomah County, 57 (10.8% of 529) of which went directly to a residential treatment placement following MCIJ release. Another 25.7% ( $n = 136$ ) of the sample was sentenced to prison and went from MCIJ directly to the custody of the Oregon Department of Corrections (DOC). An additional 13% ( $n = 70$ ) of individuals were released from MCIJ directly to the custody of another jurisdiction within the state of Oregon, another state, or the federal system.

Table 9: MCIJ Release Location (n=529)

MCIJ Release Location	Count	Percent
<b>Released to the Community</b>	322	60.1%
Pretrial Supervision Release	[81]	[15.3%]
Released to Residential Substance Abuse Treatment	[57]	[10.8%]
Time Served on Sentence	[57]	[10.8%]
Court Ordered Release	[53]	[10.0%]
Release on Bail/ROR	[43]	[8.1%]
Matrix Release <sup>a</sup>	[26]	[4.9%]
Other	[5]	[0.9%]
<b>Released to DOC Custody</b>	136	25.7%
<b>Released to Other Jurisdiction</b>	70	13.2%
<b>Missing</b>	1	0.2%

NOTES:

<sup>a</sup> Matrix Release is the term for emergency population release.

In order to fully understand client pathways into and out of participation in TRD programming, as well as determine the subsample to use for the community-based treatment and criminal justice outcome components of the evaluation, information was obtained on the nature of program participants' release from the jail facility. As previously mentioned, approximately 25% of the sample was released from MCIJ via transfer to prison with the Oregon DOC. Roughly 15% of individuals in the sample were released to the community in Multnomah County on some form of pretrial supervision ( $n=81$ , 15.3%), released to the community on court ordered release ( $n=53$ , 10.0%), or released to the community on their own recognizance (ROR) or with a cash bail ( $n=43$ , 8.1%). MCSO release codes indicate that approximately ten percent of the sample ( $n=57$ ) were released from MCIJ directly to a residential substance abuse treatment facility. In times of overcrowding the MCSO jail system initiates a process of actuarially-determined early release to level out the custodial (i.e., inmate) population, and 26 (4.9%) TRD participants exited MCIJ through one of these "Matrix Releases". Finally, roughly 15% of the sample was released from MCIJ and their custody transferred directly to another jurisdiction outside of Multnomah County ( $n=70$ , 13.2%) or to the Federal system ( $n=10$ , 1.9%).

<sup>8</sup> There were 96 clients in the evaluation sample who were actually post-adjudication at the time of TRD participation. These individuals were serving time at MCIJ for a structured sanction received while under DCJ's MCJRP supervision.

## Aggregate Findings

### On-Dorm Services Received

Programming, curriculum and daily activities within the TRD are highly scheduled, as is shown in the weekly calendar in Appendix B. Individuals involved in TRD programming participate in various groups (evidence-based curricula validated for use with justice-system involved populations) that take up the full day Monday through Friday, leaving only nights and weekends unstructured. Data on within-jail program involvement was obtained from the Group Event Scheduler (GES) module of eSWIS, and was aggregated to provide general information on services received, which are presented in Table 10.

Table 10: TRD Services Received (n=529)

Treatment Readiness Dorm Service	Number of Clients Receiving Service	Total Number of Sessions
<b>Orientation/Education</b> – general information about TRD programming and/or education about relevant topics	494	9,022
<b>Process Groups</b> – using Motivational Enhancement Therapy to address barriers to treatment, build trust among participants and staff, and understanding post-release treatment	355	2,288
<b>DBT Groups</b> – Dialectical Behavior Therapy addressing mindfulness, interpersonal effectiveness, emotion regulation, and distress tolerance	430	4,462
<b>Matrix Model Groups</b> – cognitive behavioral therapy and education to address relapse prevention and skill building for justice system-involved clients	364	2,166
<b>Stages of Change Groups</b> – cognitive behavioral treatment curriculum to build skills for acknowledging a problem, deciding to act, and developing and executing a plan to address their substance abuse problem	426	2,563

Overall, the 529 TRD participants received over 20,501 treatment sessions during the 18-month observation period of January 1, 2017 through June 30, 2018. The duration of treatment sessions ranged from 60 to 90 minutes depending on the specific service, resulting in approximately 29,600 hours of client services. During the roughly 29,600 hours of aggregated services, clients received, on average, approximately 55 hours of services specific to TRD participation during the given jail booking.



## SECTION III: RESEARCH QUESTION 2

### *Research Question and Analytic Strategy*

*Does participants' readiness for change and treatment eagerness increase during the Treatment Readiness Dorm stay?* Clients were assessed with the Stages of Change Readiness and Treatment Eagerness Scale (SOCRATES; Miller & Tonigan, 1996) at two time points to evaluate their readiness for change and treatment eagerness over the course of their dorm stay.

The SOCRATES measure is a 19-item scale that assesses continuously distributed motivational processes that may underlie stages of change in the context of drug and alcohol problems. The scale items correspond to three domains or aspects of readiness to change: Recognition, Ambivalence, and Taking Steps. Items were developed with reference to the stages of change outlined in the transtheoretical model of change (Prochaska & DiClemente, 1982; 1986). Recognition averages seven items that describe processes related to the pre-contemplation and determination stages, such as "I have a serious problem with drinking" and "My drinking is causing a lot of harm". Ambivalence averages four items that describe processes related to the contemplation stage, such as "There are times when I wonder if I drink too much". Finally, Taking Steps averages eight items that describe processes related to the action and maintenance stages, such as "I am actively doing things now to cut down or stop drinking" and "I was drinking too much at one time, but I've managed to change my drinking". The internal consistencies of two of the three sub-scales, Recognition ( $\alpha = .85$ ) and Taking Steps ( $\alpha = .83$ ), exceeded the conventional acceptable threshold for this measure of scale reliability ( $\alpha = .70$ ). The remaining scale, Ambivalence ( $\alpha = .60$ ), approached this threshold.

All clients were first assessed at dorm intake and next assessed either at 30 days after intake or at their dorm exit (if they exited before 30 days; abbreviated to post-intake for simplicity). Participants rated their agreement with each item on a 5-point Likert scale ranging from Strongly Disagree to Strongly Agree. Bivariate analyses were conducted to determine whether their SOCRATES scores changed significantly from intake to post-intake in each of the three SOCRATES domains (Recognition, Ambivalence, and Taking Steps) for both alcohol and drug problems. As the data did not meet the assumptions of normality, Wilcoxon rank sum tests were used to test these paired-sample comparisons. All participants who completed the SOCRATES at both intake and post-intake ( $n=236$ ) were included in these analyses.

Finally, multivariate analyses were conducted to examine whether any changes in SOCRATES score domains were conditional based on other known factors about participants. For all domains that changed significantly over time, general linear models were used to predict each SOCRATES post-score, controlling for covariates<sup>9</sup> and factors that have been previously shown to relate to drug/alcohol treatment (e.g., Bahr, Harris, Strobell, & Taylor, 2013; Miller, Miller, & Barnes, 2016). When all covariates and factors were included in the models, a smaller sample of participants ( $n=191$ ) were represented due to the proportion of missing data.

### *Findings*

From dorm intake to post-intake, clients increased their readiness to change in two of the three domains: Recognition and Taking Steps. Increases in these domains of readiness to change were found for both alcohol and drug problems, with larger increases in the Taking Steps domain for both problems. In addition, clients appear to enter the TRD with a higher stage of readiness to address drug problems than alcohol problems. Although most participant characteristics do not significantly predict these changes in post-intake readiness scores, several factors do appear to influence post-dorm readiness scores: length of stay, first drug of choice, and LS/CM-I risk scores.

<sup>9</sup> All covariates were mean-centered to facilitate multivariate analysis interpretations.

## Within-Person Change in SOCRATES Scores

Analyses of participants' SOCRATES scores at intake and post-intake found that Recognition scores increased significantly for addressing both alcohol problems ( $z = -2.48, p < .05$ ) and drug problems ( $z = -4.16, p < .001$ ). These results indicate that clients increased their recognition of having a problem with their drinking and drug use when they exited the TRD/30 days after entering the TRD. Taking Steps scores also increased significantly from intake to post-intake for both alcohol ( $z = -5.87, p < .001$ ) and drug problems ( $z = -8.98, p < .001$ ), meaning clients also experienced increases in making positive changes in their drinking and drug use 30 days after entering the dorm. The average, standard deviation, and paired comparison test results for all SOCRATES sub-scales at dorm entry and 30 days post-entry are presented in Table 11.

Table 11: SOCRATES Scores at TRD Intake and Post-Intake

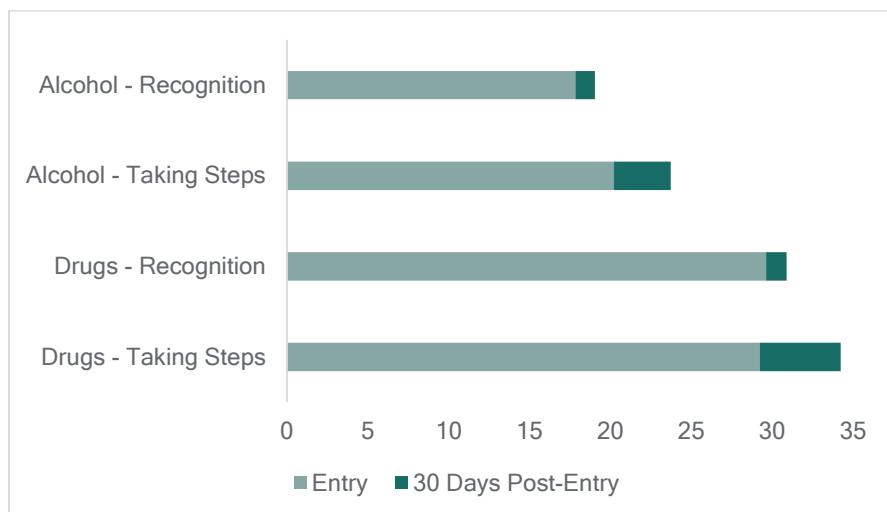
SOCRATES Domain	Dorm Entry Mean (SD)	30 Days Post-Entry Mean (SD)	Wilcoxon Z
<b>Alcohol</b>			
Recognition	17.83 (10.44)	19.04 (11.03)	-2.48*
Ambivalence	9.33 (5.37)	9.44 (5.58)	-0.31
Taking Steps	20.21 (11.32)	23.78 (12.81)	-5.87***
<b>Drugs</b>			
Recognition	29.62 (7.03)	30.89 (6.54)	-4.16***
Ambivalence	14.48 (4.71)	13.99 (5.06)	-1.20
Taking Steps	29.22 (8.30)	34.24 (7.38)	-8.98***

NOTES:

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$

Figure 7 displays the average SOCRATES scores for the two domains that changed significantly from intake to post-intake: Recognition and Taking Steps. The average scores indicate that participants entered the dorm with greater readiness to change in addressing drug problems than alcohol problems, as can be seen for both Recognition and Taking Steps, and remained higher in readiness for these areas at post-intake. In addition, there were larger increases (displayed in dark teal) in Taking Steps than in Recognition for both alcohol and drug problems. The largest increase at post-intake for participants was in Taking Steps for drug problems.

Figure 7. SOCRATES scores at Dorm Intake and Post-Intake



## Conditions of Change in SOCRATES Scores

Multivariate analyses using general linear models further examined significant changes in SOCRATES scores to determine whether the changes were conditional on other participant characteristics. Specifically, these tests predicted each SOCRATES post-score, controlling for participants' SOCRATES score at TRD entry and additional participant factors. Control variables incorporated into the current analyses included SOCRATES score at intake, client demographic characteristics, characteristics of TRD program participation, criminogenic and current offense characteristics, and length of stay in the TRD.

All models were significant<sup>10</sup>, although they predicted more variance in participants' ( $n = 191$ ) SOCRATES scores for alcohol problems than drug problems. Each model is presented in Tables 13-16 below. Overall, most of these factors do not significantly predict participants' readiness to change at post-intake. This suggests that for the most part, participants all tend to increase in their readiness to change at post-intake, in terms of Recognition and Taking Steps for both alcohol and drug problems, regardless of their additional personal characteristics (e.g., whether they engage in single drug use or polydrug use).

However, several characteristics do significantly contribute to post-intake readiness to change scores in either positive or negative directions. The characteristics that positively predicted alcohol or drug SOCRATES scores across both domains (Recognition and Taking Steps) are summarized in Table 12. Length of stay was a positive predictor for most domain scores, suggesting that participants who stayed longer in the dorms tended to experience greater increases in multiple aspects of their readiness to change. LS/CM-I risk score categories were also positive predictors, suggesting that clients who were high or very high risk experienced larger increases in certain domains of readiness to change than clients who were assessed as low or medium risk. On the other hand, the most serious primary charge at booking being alcohol and drugs crime negatively predicted SOCRATES scores, meaning that clients with this type of criminal history tended to have lower readiness to change scores than clients with other primary charges at booking. Client's primary identification in race/origin being other than White or Black (i.e., American Indian/Alaska Native, Asian Indian, Chinese, Filipino, Japanese, Korean, Vietnamese, Other Asian, Native Hawaiian, Guamanian or Chamorro, Samoan, Other Pacific Islander, or Unknown) was also a negative predictor, meaning these clients also tended to have lower readiness to change scores than clients whose race was White or Black. Several of these findings were only marginally significant, however, and should be interpreted with caution.

Table 12: Summary of Multivariate Models – Change in Alcohol/Drug Recognition and Taking Steps

SOCRATES Domain	Positive Predictor(s)	Negative Predictor(s)
<b>Alcohol – Recognition</b>	<ul style="list-style-type: none"> <li>• First drug of choice = alcohol</li> <li>• Length of stay = 30+ days</li> <li>• LS/CM-I category = high risk</li> </ul>	<ul style="list-style-type: none"> <li>• Race = Other than Black/White (<i>marginal</i>)</li> </ul>
<b>Alcohol – Taking Steps</b>	<ul style="list-style-type: none"> <li>• Length of stay = 30+ days</li> <li>• LS/CM-I category = high risk (<i>marginal</i>); very high risk (<i>marginal</i>)</li> </ul>	<ul style="list-style-type: none"> <li>• Most serious primary charge = alcohol &amp; drugs (<i>marginal</i>)</li> <li>• Number of bookings in year prior to dorm entry (<i>marginal</i>)</li> <li>• Race = Other than Black/White (<i>marginal</i>)</li> </ul>
<b>Drugs – Recognition</b>	<ul style="list-style-type: none"> <li>• Length of stay = 8-29 days (<i>marginal</i>)</li> <li>• Length of stay = 30+ days (<i>marginal</i>)</li> </ul>	<ul style="list-style-type: none"> <li>• Most serious primary charge = alcohol &amp; drugs</li> <li>• Race = Other than Black/White</li> <li>• First drug of choice = marijuana, cocaine/crack, other non-amphetamine drug (<i>marginal</i>)</li> </ul>
<b>Drugs – Taking Steps</b>	<i>No positive predictors</i>	<ul style="list-style-type: none"> <li>• Race = Other than Black/White</li> </ul>

<sup>10</sup> The homogeneity of variance assumption was not violated for Alcohol – Recognition ( $F(65, 125) = 1.29, p = .127$ ) or for Drugs – Taking Steps ( $F(65, 125) = 1.37, p = .079$ ), but was violated for Alcohol – Taking Steps ( $F(65, 125) = 1.61, p = .018$ ) and Drugs – Recognition ( $F(65, 125) = 1.54, p = .027$ ).

## Alcohol Subscales

### Recognition

Several factors significantly predicted Alcohol – Recognition scores at post-intake, above and beyond their score at TRD entry (Table 13). Multiple factors positively predicted alcohol recognition scores. Clients whose first drug of choice was alcohol had higher scores than those whose first drug of choice was methamphetamine or other amphetamines ( $B = 4.33$ ,  $t(20) = 2.08$ ,  $p = .039$ ). Clients who stayed in the dorm 30 days or more also had higher scores than those who stayed 0-7 days in the TRD ( $B = 5.57$ ,  $t(20) = 2.32$ ,  $p = .022$ ). Clients who were deemed high risk, based on their LS/CM-I score, had higher scores than those who were deemed low or medium risk ( $B = 3.97$ ,  $t(20) = 2.14$ ,  $p = .034$ ). Only one factor negatively predicted clients' alcohol recognition scores. Clients' whose race was other than White or Black had lower scores than White clients ( $B = -4.27$ ,  $t(20) = -1.75$ ,  $p = .081$ ), but this difference was only marginally significant.

Table 13: General Linear Model Predicting SOCRATES-Alcohol Recognition at Post-Intake (n = 191)

	B	SE(B)	t	p	$\eta_p^2$
<b>SOCRATES-Alcohol Recognition at Entry</b>	.62	.07	9.47***	.000	.346
<b>Age (at Dorm Entry)</b>	.06	.05	1.20	.232	.008
<b>Criminal History</b>					
Number of bookings in year prior to entry	-.42	.31	-1.36	.175	.011
Number of jail days in year prior to entry	.00	.02	.16	.871	.000
<b>Number of Dorm Entrances after First Entry</b>	1.54	1.42	1.08	.281	.007
<b>Polydrug Use</b>	.24	1.83	.13	.897	.000
<b>Race</b>					
Black	-.57	1.77	-.32	.747	.001
Other than Black or White	-4.27	2.43	-1.75‡	.081	.018
<b>Hispanic Origin</b>	3.06	2.48	1.23	.219	.009
<b>First Drug of Choice</b>					
Heroin/opioids	-.68	1.63	-.42	.676	.001
Cocaine/crack, marijuana, or other non-amphetamine drug	-1.49	2.04	-.73	.466	.003
Alcohol	4.33	2.08	2.08*	.039	.025
<b>Most Serious Primary Charge at Booking</b>					
Alcohol & drugs crime	-3.22	1.98	-1.63	.105	.015
Property crime	-.66	1.86	-.35	.724	.001
Behavioral crime	-.94	1.88	-.50	.617	.001
Person crime	-.75	2.71	-.28	.782	.000
<b>LS/CM-I Risk Category</b>					
High	3.97	1.85	2.14*	.034	.026
Very high	1.97	1.82	1.08	.281	.007
<b>Length of Stay in Dorm</b>					
8 to 29 days	3.51	2.71	1.30	.197	.010
30+ days	5.57	2.41	2.32*	.022	.031
<b>R<sup>2</sup></b>			.433		

NOTES:

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ , ‡  $p < .10$

Reference groups: White (race), Single drug use, Non-Hispanic origin, Methamphetamine/other amphetamines (first drug of choice), Vehicle/UUMV (most serious primary charge at booking), 0 to 7 days (length of stay in dorm), Low or medium risk (LSCMI risk category).

## Taking Steps

Several covariates and factors significantly predicted Alcohol – Taking Steps scores at post-intake, above and beyond their score at TRD entry (see Table 14). Two factors positively predicted alcohol taking steps scores: length of stay in the TRD and LS/CM-I score. Clients who stayed 30 days or more had higher scores than those who stayed 0-7 days in the TRD ( $B = 6.73$ ,  $t(20) = 2.41$ ,  $p = .017$ ). Clients who were deemed high risk, based on their LS/CM-I score, also had higher scores than those who were deemed low or medium risk ( $B = 4.60$ ,  $t(20) = 2.14$ ,  $p = .034$ ). Similarly, very high risk clients had higher scores than low or medium risk clients ( $B = 3.51$ ,  $t(20) = 1.66$ ,  $p = .098$ ), although this difference was only marginally significant. In addition, there were several negative predictors of alcohol taking steps scores. Clients booked on alcohol and drugs crimes had lower scores than those booked with vehicle/UUMV crimes ( $B = -5.57$ ,  $t(20) = -2.42$ ,  $p = .017$ ). The number of jail bookings clients had in the year prior to TRD entry also negatively predicted their alcohol taking steps scores ( $B = -0.72$ ,  $t(20) = -2.02$ ,  $p = .045$ ). Finally, clients' whose race was other than White or Black had lower scores than White clients ( $B = -4.92$ ,  $t(20) = -1.72$ ,  $p = .088$ ), although this was only marginally significant.

Table 14: General Linear Model Predicting SOCRATES-Alcohol Taking Steps at Post-Intake (n = 191)

	B	SE(B)	t	p	$\eta_p^2$
<b>SOCRATES-Alcohol Taking Steps at Entry</b>	.70	.07	9.99***	.000	.370
<b>Age (at Dorm Entry)</b>	.07	.06	1.14	.257	.008
<b>Criminal History</b>					
Number of bookings in year prior to entry	-.72	.36	-2.02*	.045	.023
Number of jail days in year prior to entry	.00	.02	.20	.841	.000
<b>Number of Dorm Entrances after First Entry</b>	.67	1.65	.41	.685	.001
<b>Polydrug Use</b>	-1.25	2.16	-.58	.562	.002
<b>Race</b>					
Black	-.61	2.05	-.30	.765	.001
Other than Black or White	-4.92	2.86	-1.72‡	.088	.017
<b>Hispanic Origin</b>	3.36	2.88	1.17	.245	.008
<b>First Drug of Choice</b>					
Heroin/opioids	.10	1.92	.05	.959	.000
Cocaine/crack, marijuana, or other non-amphetamine drug	-1.89	2.38	-.79	.429	.004
Alcohol	3.59	2.38	1.51	.134	.013
<b>Most Serious Primary Charge at Booking</b>					
Alcohol & drugs crime	-5.57	2.30	-2.42*	.017	.033
Property crime	-1.23	2.16	-.57	.568	.002
Behavioral crime	-.48	2.19	-.22	.827	.000
Person crime	-1.65	3.15	-.52	.601	.002
<b>LS/CM-I Risk Category</b>					
High	4.60	2.15	2.14*	.034	.026
Very high	3.51	2.11	1.66‡	.098	.016
<b>Length of Stay in Dorm</b>					
8 to 29 days	4.40	3.15	1.40	.164	.011
30+ days	6.73	2.79	2.41*	.017	.033
<b>R<sup>2</sup></b>			.432		

### NOTES:

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ , ‡  $p < .10$

Reference groups: White (race), Single drug use, Non-Hispanic origin, Methamphetamine/other amphetamines (first drug of choice), Vehicle/UUMV (most serious primary charge at booking), 0 to 7 days (length of stay in dorm), Low or medium risk (LSCMI risk category).

## Drugs Subscales

### Recognition

As shown on Table 15, several factors significantly predicted Drugs – Recognition scores at post-intake, above and beyond their score at TRD entry. The only positive predictor of drugs recognition scores was length of stay in the TRD. Clients who stayed 8-29 days ( $B = 2.66$ ,  $t(20) = 1.65$ ,  $p = .100$ ) or 30 days or more ( $B = 2.77$ ,  $t(20) = 1.95$ ,  $p = .053$ ) had higher scores than those who stayed 0-7 days in the TRD, although these differences were only approaching conventional levels of statistical significance. In addition, several factors negatively predicted drugs recognition scores. Clients booked on alcohol and drugs crimes had lower scores than those booked with vehicle/UUMV crimes ( $B = -0.25$ ,  $t(20) = -2.09$ ,  $p = .038$ ). In addition, clients' whose race was other than White or Black had lower scores than White clients ( $B = -3.69$ ,  $t(20) = -2.58$ ,  $p = .011$ ). Finally, clients whose first drug of choice was cocaine/crack, marijuana, or another non-amphetamine drug had lower scores than those whose first drug of choice was methamphetamine or other amphetamines ( $B = -2.05$ ,  $t(20) = -1.69$ ,  $p = .093$ ), although this difference was only marginally significant.

Table 15: General Linear Model Predicting SOCRATES-Drugs Recognition at Post-Intake (n = 191)

	B	SE(B)	t	p	$\eta_p^2$
<b>SOCRATES-Drugs Recognition at Entry</b>	.48	.06	8.18***	.000	.283
<b>Age (at Dorm Entry)</b>	.03	.03	.87	.388	.004
<b>Criminal History</b>					
Number of bookings in year prior to entry	-.14	.18	-.75	.456	.003
Number of jail days in year prior to entry	.01	.01	1.00	.319	.006
<b>Number of Dorm Entrances after First Entry</b>	-.05	.85	-.05	.958	.000
<b>Polydrug Use</b>	.81	1.07	.76	.451	.003
<b>Race</b>					
Black	-.70	1.04	-.68	.501	.003
Other than Black or White	-3.69	1.43	-2.58*	.011	.038
<b>Hispanic Origin</b>	.88	1.47	.60	.549	.002
<b>First Drug of Choice</b>					
Heroin/opioids	-.08	.96	-.08	.934	.000
Cocaine/crack, marijuana, or other non-amphetamine drug	-2.05	1.22	-1.69‡	.093	.016
Alcohol	-1.14	1.22	-.94	.351	.005
<b>Most Serious Primary Charge at Booking</b>					
Alcohol & drugs crime	-.246	1.18	-2.09*	.038	.025
Property crime	.12	1.11	.11	.911	.000
Behavioral crime	-.72	1.12	-.65	.518	.002
Person crime	-.97	1.60	-.61	.543	.002
<b>LS/CM-I Risk Category</b>					
High	1.53	1.10	1.40	.164	.011
Very high	1.46	1.08	1.36	.176	.011
<b>Length of Stay in Dorm</b>					
8 to 29 days	2.66	1.61	1.65‡	.100	.016
30+ days	2.77	1.42	1.95‡	.053	.022
<b>R<sup>2</sup></b>			.404		

NOTES:

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ , ‡  $p < .10$

Reference groups: White (race), Single drug use, Non-Hispanic origin, Methamphetamine/other amphetamines (first drug of choice), Vehicle/UUMV (most serious primary charge at booking), 0 to 7 days (length of stay in dorm), Low or medium risk (LSCMI risk category).



## Taking Steps

Only one factor significantly predicted Drugs – Taking Steps scores 30 days post-entry, above and beyond their score at dorm entry: race (see Table 16). Clients' whose race was other than White or Black had lower than White clients scores ( $B = -4.03$ ,  $t(20) = -2.16$ ,  $p = .032$ ). No other factors or covariates were found to significantly relate to drugs taking steps scores.

Table 16: General Linear Model Predicting SOCRATES-Drugs Taking Steps at Post-Intake (n = 191)

	B	SE(B)	t	p	$\eta_p^2$
<b>SOCRATES-Drugs Taking Steps at Entry</b>	.28	.06	4.61***	.000	.111
<b>Age (at Dorm Entry)</b>	.00	.04	.00	.997	.000
<b>Criminal History</b>					
Number of bookings in year prior to entry	-.09	.24	-.37	.710	.001
Number of jail days in year prior to entry	.00	.01	.28	.783	.000
<b>Number of Dorm Entrances after First Entry</b>	.45	1.09	.41	.683	.001
<b>Polydrug Use</b>	1.12	1.37	.82	.414	.004
<b>Race</b>					
Black	-1.92	1.35	-1.43	.156	.012
Other than Black or White	-4.03	1.87	-2.16*	.032	.027
<b>Hispanic Origin</b>	.97	1.88	.52	.605	.002
<b>First Drug of Choice</b>					
Heroin/opioids	-.65	1.24	-.52	.601	.002
Cocaine/crack, marijuana, or other non-amphetamine drug	-2.52	1.56	-1.62	.107	.015
Alcohol	-.87	1.54	-.56	.574	.002
<b>Most Serious Primary Charge at Booking</b>					
Alcohol & drugs crime	-1.43	1.51	-.95	.343	.005
Property crime	2.04	1.41	1.44	.151	.012
Behavioral crime	.09	1.43	.06	.952	.000
Person crime	.94	2.05	.46	.648	.001
<b>LS/CM-I Risk Category</b>					
High	.75	1.41	.54	.594	.002
Very high	.73	1.37	.54	.593	.002
<b>Length of Stay in Dorm</b>					
8 to 29 days	.23	2.05	.11	.912	.000
30+ days	1.26	1.83	.69	.492	.003
<b>R<sup>2</sup></b>			.107		

NOTES:

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ , †  $p < .10$

Reference groups: White (race), Single drug use, Non-Hispanic origin, Methamphetamine/other amphetamines (first drug of choice), Vehicle/UUMV (most serious primary charge at booking), 0 to 7 days (length of stay in dorm), Low or medium risk (LSCMI risk category).

## SECTION III: RESEARCH QUESTION 3

### *Research Question and Analytic Strategy*

*Does participation in the treatment readiness dorm impact community-based treatment outcomes upon release from jail?* Community-based treatment data was obtained from various sources, including treatment provider records (client information from program intake and exit forms), monthly client program rosters submitted to DCJ, probation officer case management notes, and program referral, entrance, and exit dates from the Treatment Module within the DOC400/CIS system. Of the 529 TRD clients in the outcome evaluation sample, 299 individuals were released from MCIJ to the community in Multnomah County, and are therefore included in the subsample for outcome analyses (Research Questions 3, 4, 5, 6, and 8). After a labor-intensive process of securing, cleaning, and organizing the community-based treatment data, over half (178, 60%) of the 299 individuals released to Multnomah County following their TRD participation were identified in and subsequently matched to the community-based treatment data<sup>11</sup>. Analyses for the current research question were conducted on the subsample of 299 individuals who were released from MCIJ to the community (following their participation in TRD programming) and were under community supervision.

One of the main goals of the TRD programming at MCIJ is to increase receptivity to and engagement in substance abuse treatment upon release from jail into the community. As such, the current research question first presents descriptive statistics on post-TRD participation in community-based treatment, including treatment engagement, retention, and discharge type. The analysis then shifts to look at the bivariate relationship between participation in TRD programming and various community-based treatment outcomes. Finally, multivariate regression models were estimated to isolate the impact of TRD participation on the community-based treatment outcomes while controlling for various participant characteristics. The natural log (plus one) of days spent in the TRD is used as a proxy for extent of engagement in TRD programming for the current models. By way of reminder, findings from this research question must be considered within the context of the inherent limitations of the community-based treatment data mentioned previously.

### *Findings*

Table 17 presents descriptive statistics on community-based treatment utilization for the subsample of 299 TRD participants who were released from MCIJ to the community and subsequently under community supervision within Multnomah County. Overall, 178 individuals from the sample were identified in the community-based treatment data, but only 165 (55% of the subsample of 299) were verified as having actually entered a treatment program based on a program entrance date<sup>12</sup>. As shown on Table 17, the vast majority (96.4%) of the 165 individuals who engaged in some form of community-based treatment entered a program with a substance abuse focus area<sup>13</sup>.

<sup>11</sup> Due to limitations in the community-based treatment data sources, it is not possible to confidently identify clients that were either (1) referred to treatment but chose to not attend/engage or (2) never referred and did not engage in treatment. As a result, we cannot be sure whether absence of data is due to the client not having engaged in treatment or no data being available. It is possible that a subset of those 131 individuals did participate in community-based substance abuse treatment without being captured in the out-of-custody treatment data sources used for this evaluation.

<sup>12</sup> 13 individuals were captured in the treatment data and had a treatment referral date, but no program entrance or exit date. Therefore, program participation could not be verified for this group of 13 individuals.

<sup>13</sup> Various decision rules were put in place at the start of cleaning and coding the community-based treatment data. In situations where a client engaged with multiple types of treatment program(s) at the same time and one of them was in a substance abuse focus area, it was decided to code that treatment episode as substance abuse focused treatment. Additionally, for clients with multiple treatment episodes during the observation window, only the first treatment episode was included in the analysis.

## Section III: Research Question 3

Table 17: Community-based Treatment Participation (n=165)

Service Type	Count	Percent
Substance Abuse Treatment	159	96.4%
Skill Building Services	2	1.2%
Housing Support	2	1.2%
Cognitive Behavioral Therapy	1	0.6%
Sex Offender Treatment	1	0.6%
<b>Total</b>	<b>165</b>	<b>100%</b>

Table 18 contains more detailed descriptive information for the group of 159 individuals who engaged with community-based substance abuse treatment after TRD program participation. For those who participated in substance abuse treatment, the vast majority did so within either a residential program setting ( $n = 72$ , 45%) or an outpatient alcohol and drug program ( $n = 79$ , 52%). While the total length of program participation (i.e., program retention) ranged from 0 days through over a year (0-433 days), the average length was roughly 100 days. Over 40% of TRD clients who participated in community-based substance abuse treatment received a successful discharge (29.7%) or were verified to still be participating treatment at the end of the observation window (10.9%). Smaller proportions of clients received either a neutral (7.9%) or administrative closure (6.1%). One-quarter of clients received an unsuccessful discharge from their community-based treatment program. Finally, an additional one-quarter of the subsample has an unknown discharge type, which could mean that they are either missing the treatment discharge information or they are still in treatment but it was not able to be verified based on active client rosters.

Table 18: Substance Abuse Focused Treatment (n=159)

	Count	Percent
<b>Modality of Substance Abuse Treatment</b>		
Outpatient	79	52.0%
Residential	72	45.3%
Other <sup>a</sup>	8	5.0%
<b>Length of Treatment Engagement (in days) (n=112<sup>b</sup>)</b>		
Mean	100.7 days	
Standard Deviation	88.029 days	
Range	0 – 433 days	
<b>Treatment Discharge Type</b>		
Successful	49	29.7%
Neutral	13	7.9%
Unsuccessful	41	24.8%
Administrative closure	10	6.1%
Expiration of probation sentence while in treatment	2	1.2%
Client received maximum benefit from program	3	1.8%
Still in treatment (verified)	18	10.9%
Unknown discharge type or still in program (Missing)	42	25.5%

**NOTES:**

<sup>a</sup> “Other” substance abuse treatment services includes Alcohol & Drug free peer mentoring without outpatient/residential treatment ( $n=7$ ) and peer-based support groups ( $n=1$ ).

<sup>b</sup>Subsample is further reduced for this variable due to missing exit date data.

The bivariate relationships between length of stay in the TRD and community-based treatment engagement and retention were calculated, and are included on Table 19. The bivariate relationship between treatment engagement, whether an individual starts treatment or not, and length of stay in the TRD is positive and approaching statistical significance. Specifically, clients who engage with community-based treatment spent, on average, more time participating in TRD programming. The average length of stay in TRD for those who do and do not engage with community-based treatment shown in Table 19 are for the natural log of TRD length of stay. However, removing the natural log, we see that clients who engage with community-based treatment spent an average of 33.11 days in the TRD

## Section III: Research Question 3

(SD = 37.36 days) while clients who did not engage in treatment spent an average of 26.22 days (SD = 29.57) in the TRD (descriptive statistics without transformation are not included in Table 20).

Table 19: Length of Stay<sup>a</sup> in TRD and Community-Based Treatment Engagement and Retention (n=299)

	Frequency	Mean (SD)	t (df)	r <sup>b</sup>
<b>Treatment Engagement</b>				
No engagement with treatment	134	2.831 (1.003)	1.226 (297) ‡	
Engaged with treatment	165	2.982 (1.098)		
<b>Treatment Retention</b>				.348*

NOTES:

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ , ‡  $p < .10$

<sup>a</sup> Length of stay in the TRD is a continuous variable operationalized as the natural log of number of days between TRD intake and exit date plus one.

<sup>b</sup> Statistics include Frequency, Mean and (Standard Deviation), t-statistic and (Degrees of Freedom), Pearson's bivariate correlation coefficient.

The results of a logistic regression model with the natural log of TRD participation regressed on treatment engagement shown in Table 20 suggest that this nearly significant relationship between TRD length of stay and treatment engagement remains robust to the inclusion of various control variables ( $B = .193$ ,  $p < .10$ ).

Table 20: Logistic Regression – Length of stay in TRD<sup>a</sup> Regressed on Treatment Engagement

	Model 1: Controls Only			Model 2		
	B <sup>c</sup>	SE	Exp (B)	B	SE	Exp (B)
Hispanic origin	-.845	.796	0.430	-.902	.807	0.406
<b>Race<sup>b</sup></b>						
Black	-.965	.324	0.381**	-.925	.327	0.397**
Other	-.308	.559	0.735	-.348	.565	0.706
LSCMI total score	.004	.019	1.004	.004	.019	1.004
Age at entry	.007	.014	1.007	.007	.014	1.007
<b>Charge of Booking</b>						
Person	.505	.552	1.657	.481	.557	1.618
Behavioral	.462	.409	1.587	.415	.412	1.514
Property	.817	.385	2.264*	.795	.387	2.214*
Alcohol & drug	.932	.420	2.540*	.906	.422	2.474*
Length of stay in TRD	--	--	--	.193	.128	1.213‡
Constant	-.295	.700	0.745*	-.838	.789	0.433*
<b>Nagelkerke R<sup>2</sup></b>		.090		.112		

NOTES:

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ , ‡  $p < .10$

<sup>a</sup> Length of stay in the TRD is a continuous variable operationalized as the natural log of number of days between TRD intake and exit date plus one.

<sup>b</sup> Reference categories: White (race), Vehicle/UUMV (charge of booking)

<sup>c</sup> Coefficients include Beta, Standard Error, and Log Odds

Similarly, the bivariate analyses in Table 19 and multivariate model presented in Table 21 indicate that there is a positive, statistically significant relationship between length of stay in TRD and community-based treatment retention, such that clients who spend a longer time participating in TRD programming at MCIJ are more likely to stay in community-based treatment longer than are clients who spend less time participating in TRD programming. Treatment retention averaged 94.42 days for clients with 29 days or less of TRD programming and 107.05 days for those with 30 days or more. Similar to the other community-based treatment outcome measure, treatment engagement, the

## Section III: Research Question 3

statistically significant, positive effect of length of stay in the TRD on treatment retention remains robust to the inclusion of various controls in the multivariate regression model ( $b = 5.518, p < .05$ ).

Table 21: OLS Regression – Length of stay in TRD<sup>a</sup> Regressed on Treatment Retention

	Model 1: Controls Only			Model 2		
	b <sup>c</sup>	SE	B	b	SE	B
Hispanic origin	-61.034	59.931	-.125	-52.705	61.454	-.108
<b>Race<sup>b</sup></b>						
Black	-28.426	23.521	-.128	--29.552	23.680	-1.248
Other	55.867	42.223	.159	57.698	42.454	1.359
LSCMI total score	-2.645	1.247	-.230*	-2.655	1.251	-.230*
Age at entry	1.383	.895	1.546	1.365	.898	1.520
<b>Charge of Booking</b>						
Person	-23.452	42.144	-0.67	-23.424	42.282	-.067
Behavioral	-.543	30.030	-.002	.425	30.164	.002
Property	-13.900	26.594	-.074	-15.397	26.779	-.082
Alcohol & drug	-13.869	28.336	-.074	-15.451	28.531	-.08.
Length of stay in TRD	--	--	--	5.518	1.410	0.71*
Constant	131.299	48.170	--**	149.485	55.715	--*
$R^2$		.110			.150	
$R^2$ Change					.04*	

NOTES:

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ , †  $p < .10$

<sup>a</sup> Length of stay in the TRD is operationalized as the natural log of number of days between TRD intake and exit date plus one.

<sup>b</sup> Reference categories: White (race), Vehicle/UUMV (charge of booking)

<sup>c</sup> Coefficients include the unstandardized coefficient, standard error, and standardized coefficient (Beta)

# SECTION III: RESEARCH QUESTIONS 4 & 5

## Research Question and Analytic Strategy

Who engages in outpatient substance abuse treatment following participation in Treatment Readiness Dorm (TRD) programming? Who is released to/engages in residential/inpatient substance abuse treatment following participation in TRD programming? In order to obtain more information about the relationship between TRD programming and participation in community-based treatment services, research questions 4 and 5 present descriptive characteristics of the clients who were identified in the DCJ community-based treatment data sources as engaging in either outpatient or residential community-based substance abuse treatment after participation in TRD programming and subsequent release from MCIJ custody into Multnomah County. Univariate, descriptive statistics were calculated to compare across the groups of individuals identified as participating in outpatient and residential treatment. Summary statistics were also calculated to better understand the time amount of time between MCIJ exit and treatment referral and/or entrance.

## Findings

Table 22 compares background characteristics for the groups of TRD participants who engaged with outpatient treatment (intensive or regular) and residential treatment. Average age at entrance to TRD programming is consistent across both substance abuse treatment modalities with clients averaging just under 40 years old. Client ethnic background is largely non-Hispanic and consistent across treatment types, and is generally reflective of population statistics within Multnomah County. Differences are observed in racial background, however, with more White clients entering residential treatment (76% residential, 61% outpatient) and a greater proportion of Black clients engaging with outpatient treatment (24% outpatient, 12.5% residential).

Table 22: Client Demographics by Treatment Type

	Outpatient Treatment (n=79) Count (Percent)	Residential Treatment (n=72) Count (Percent)
<b>Race</b>		
White	48 (60.8%)	55 (76.4%)
Black or African American	19 (24.1%)	9 (12.5%)
American Indian or Alaska Native	2 (2.7%)	2 (2.8%)
Native Hawaiian	1 (1.3%)	1 (1.4%)
Other	2 (2.5%)	1 (1.4%)
Unknown/Missing	7 (8.9%)	4 (5.6%)
<b>Ethnicity</b>		
Not of Hispanic, Latino, or Spanish origin	71 (89.9%)	65 (90.3%)
Mexican, Mexican American, Chicano	8 (10.1%)	6 (8.3%)
Unknown/Missing	0 (0.0%)	1 (1.4%)
<b>Age</b>		
At entrance to Dorm	Mean=39.09 years (SD <sup>14</sup> =11.50 years)	Mean=38.32 years (SD=11.63 years)



## Section III: Research Questions 4 & 5

Looking at the breakdown of criminogenic factors and assessment scores by treatment modality in Table 23 we observe notable differences in self-reported first drug of choice. A large proportion of individuals who engage with residential treatment after TRD program participation report their drug of choice as Heroin or Other Opioids (44%), while the proportion is just over 20% for outpatient clients. Drug of choice is one of the criteria in the ASAM assessment, with a preference for or dependence on Heroin/Other Opioids increasing the ASAM score and suggesting that the individual requires residential substance abuse treatment for their addiction issues. Conversely, individuals who engaged with outpatient treatment are more likely than their counterparts to indicate a preference for Methamphetamine/Other Amphetamines, Alcohol, Marijuana, or Cocaine/Crack.

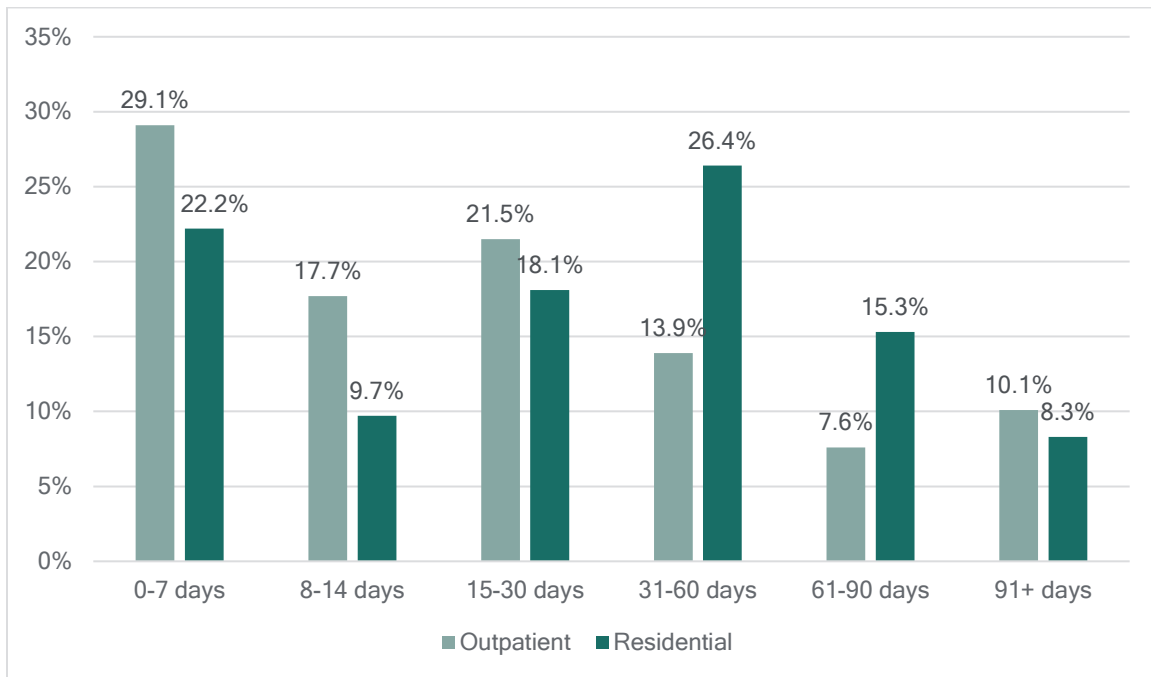
Table 23: Client Criminogenic Factors and Assessment Scores by Treatment Type

	Outpatient Treatment (n=79) Count (Percentage)	Residential Treatment (n=72) Count (Percentage)
<b>First Drug of Choice</b>		
Methamphetamine/Other Amphetamines	25 (31.6%)	20 (27.8%)
Heroin/Opioids	17 (21.5%)	32 (44.4%)
Alcohol	15 (19.0%)	12 (16.7%)
Marijuana	14 (17.7%)	4 (5.6%)
Cocaine/Crack	7 (8.9%)	4 (5.6%)
Other	1 (1.3%)	0 (0.0%)
<b>Primary Charge Level</b>		
Felony	67 (84.8%)	64 (88.9%)
Misdemeanor	3 (3.8%)	3 (4.2%)
Unknown	9 (11.4%)	5 (6.9%)
<b>Primary Charge for Booking</b>		
Alcohol & Drugs	19 (24.1%)	14 (19.4%)
Property	15 (19.0%)	14 (19.4%)
Supervision Violation	15 (19.0%)	13 (18.1%)
Behavioral	12 (15.2%)	12 (16.7%)
Hold	9 (11.4%)	5 (6.9%)
Vehicle/UUMV	6 (7.6%)	11 (15.3%)
Person	3 (3.8%)	3 (4.2%)
<b>LS/CM-I Risk Category</b>		
Low	3 (3.8%)	5 (6.9%)
Medium	11 (13.9%)	6 (8.3%)
High	28 (35.4%)	21 (29.2%)
Very High	34 (43.0%)	35 (48.6%)
Missing	3 (3.8%)	5 (6.9%)
<b>ASAM (Recommended Level of Care)</b>		
Residential Treatment	19 (24.1%)	34 (47.2%)
Intensive Outpatient Treatment	7 (8.9%)	1 (1.4%)
Outpatient Treatment	2 (2.5%)	2 (2.8%)
Missing	51 (64.6%)	35 (48.6%)

It has been previously noted that length of stay in TRD programming (i.e., length of client participation) varies widely across sample members. When looking at the breakdown of TRD length of stay by community-based treatment type shown on Figure 8, there is a clear trend for individuals in residential treatment within the community spending, on average, a longer amount of time in the TRD. The average time participating in TRD programming for clients who went to residential treatment was 34.01 days (SD = 33.17, Range = 1-153 days), while individuals who engage with outpatient treatment after release from MCIJ spent, on average, 27.37 days participating in TRD programming (SD = 23.38, Range = 1-189 days).

## Section III: Research Questions 4 & 5

Figure 8. Categories of Length of Stay in TRD by Community-based Treatment Type



Data on length of community-based treatment engagement (i.e., treatment retention) in Table 24 indicates that the average length is longer for clients participating in outpatient than residential treatment services. This is not surprising given the additional costs of housing, food, and other expenses that are associated with residential treatment. With the substantial amount of unknown/missing discharge data and clients continuing to remain in treatment at the end of the observation window, it is premature to draw any conclusions regarding significant differences in treatment discharge type between the groups. However, it is worth noting that the proportion of unsuccessful discharges for the residential group (33.3%) is double that experienced by the group that engaged with outpatient treatment (16.5%). This could, however, be an artifact of the more serious nature of addiction problem that clients who are in residential treatment experience compared with those individuals whose substance use issues can be met at the less-intensive outpatient level of care.

Table 24: Community-based Treatment Outcomes by Treatment Type

	Outpatient Treatment (n=79) Count (Percentage)	Residential Treatment (n=72) Count (Percentage)
<b>Length of Engagement</b> (Community-based Treatment Retention)	Mean = 105.47 days (SD= 97.25 days) Range = 0-413 days <sup>a</sup>	Mean = 97.10 days (SD=75.49 days) Range = 0-307 days
<b>Type of Discharge from Treatment</b>		
Successful	23 (29.1%)	23 (31.9%)
Neutral <sup>b</sup>	15 (19.0%)	7 (9.7%)
Unsuccessful	13 (16.5%)	24 (33.3%)
Still in treatment	12 (15.2%)	4 (5.6%)
Expiration of sentence while in tx	1 (1.3%)	1 (1.4%)
Unknown discharge or still in program	15 (19.0%)	12 (16.7%)

**NOTES:**

<sup>a</sup> All length of engagement 183 days or more was for clients in Outpatient MAT with CODA, which were removed from outpatient length of engagement summary statistics only.

<sup>b</sup> Neutral discharge type includes, for example, transfer to another program that better suits needs, administrative closure.

## Section III: Research Questions 4 & 5

Similarly, due to the more serious nature of the underlying substance abuse problems inherent with placement in residential treatment services, the average length of time between an individual's release from MCIJ into the community and the date of referral and entrance to community-based treatment is substantially shorter for those who went to residential treatment than outpatient treatment (Table 25). Referral date was not available for the full subsample, but based on the data that is present, the average number of days between MCIJ exit and treatment referral was 60.35 days for residential treatment and 146.78 days for outpatient treatment, which is a difference of approximately three months. Date of treatment entrance was more complete. Results indicate that, again, there was a mean difference of just over three months between the average number of days from MCIJ exit to treatment entrance for residential (53.23 days) and outpatient (158.14 days) treatment. While more observational than predictive, the mean differences observed in number of days between MCIJ exit and treatment referral and entrance by group are statistically significant ( $p < .05$ ).

Table 25: Days between MCIJ Exit & Treatment Referral and Entrance by Residential ( $n=72$ ) and Outpatient ( $n=79$ ) Programs

	Range	Mean (SD)	SE of Mean	Mean difference (SE)	t-statistic (DF)
<b>Days Between MCIJ Exit &amp; Treatment Referral</b>				-86.426 (23.401)	-3.693 (115)*
Outpatient (n=63)	0 – 560	146.78 (143.873)	18.126		
Residential (n=54)	0 – 371	60.35 (101.664)	13.835		
<b>Days Between MCIJ Exit &amp; Treatment Entrance</b>				-104.915 (22.481)	-4.667 (138)*
Outpatient (n=78)	0 – 576	158.14 (155.413)	17.597		
Residential (n=62)	0 – 418	53.23 (94.894)	12.052		

NOTES:

\*\*  $p < .05$ , \*  $p < .01$ , \*\*\*  $p < .001$ , †  $p < .10$

## SECTION III: RESEARCH QUESTION 6

### *Research Question and Analytic Strategy*

*Does participation in the treatment readiness dorm reduce future criminal justice involvement?* Consistent with the analytic approach for addressing Research Question 3, the current analyses are based on a subsample of the 299 TRD individuals who were released from MCIJ to the community in Multnomah County and were then subsequently under community supervision. In order to determine the impact that TRD programming has on participant behavior once released from the jail setting, the current research question aims to examine the relationship between TRD programming and later criminal justice system involvement. First bivariate analyses were conducted followed by the estimation of multivariate models, to isolate the impact of length of time spent engaged with TRD programming on various criminal justice outcomes while holding constant the effect of various control variables.

The key independent variable, length of time spent engaged with TRD programming (abbreviated as LOS), is not normally distributed. As such, the natural log (plus one) of the days between TRD intake and exit is used for analysis. Criminal justice outcome variables include jail utilization, felony rearrests as a measure of recidivism, and three negative probation-related events (absconding from supervision, sanction received while under supervision, and revocation of probation supervision). For each of these behavioral areas there is both a dichotomous variable that indicates whether or not that event occurred and a continuous time-to event variable. The observation window for the criminal justice outcome variables extends to 16 months past each individuals' date of release from MCIJ.

Independent sample *t*-tests were used to determine the bivariate relationship between LOS and the dichotomous variable indicating whether the event occurred, and the Pearson correlation coefficient (Pearson's *r*) was calculated to determine the bivariate relationship between LOS and time to each event. Logistic regression models were estimated for the dichotomous variables and Ordinary Least Squares (OLS) regression models were estimated for the continuous, time-to event, variables. Since individuals in the sample entered and exited the TRD and MCIJ at different times over the 18 month sample enrollment period, their time in the community "at risk" for engaging in the negative criminal justice behavioral outcomes varies across sample members. As such, a control variable for exposure time in the community is included in the multivariate models. Additionally, all continuous variables (i.e., LS/CM-I total score, age at entry, number of pre-TRD jail bed days used, exposure time in the community, and length of stay in TRD) are all mean centered for ease of interpretation.

### *Findings*

Table 26 (next page) contains descriptive information on prevalence of the negative criminal justice related behavioral outcomes among the subsample used for the current analyses. Over 60% of these individuals had at least one jail booking after MCIJ release. The number of post-TRD jail bed days used varied from 0 to 331 days, with an average of just over a month and a half (Mean = 51.31 days, SD = 61.494). The first post-TRD participation jail booking occurred on average just over four months (mean = 138.87 days, standard deviation = 164.785) after the date of MCIJ release, but ranged from zero days to nearly 18 months. Slightly under half (43.8%) of the subsample received a post-TRD engagement felony arrest within the state of Oregon, and it was, on average, just under six months after date of release from MCIJ. Looking at the negative probation events, 27.4% of the subsample absconded from probation supervision, 36.8% received a formal sanction while under probation supervision, and 28.4% were revoked from probation supervision to either state prison (Oregon Department of Corrections custody) or jail (Multnomah County jurisdiction).

## Section III: Research Question 6

Table 26: Criminal Justice Outcomes (n=299)

	Frequency (%)	Mean (SD), Range <sup>a</sup>
<b>Jail Utilization</b>		
At least one jail booking	183 (61.2%)	
Number of jail bed days used (n=183)		51.31 (61.494), 0 – 331
Days to first jail booking (n=183)		137.87 (125.88), 0 – 521
<b>Felony Rearrest</b>		
At least one rearrest	131 (43.8%)	
Time to first rearrest		175.63 (164.785), 3 – 670
<b>Probation Abscond</b>		
At least one abscond	82 (27.4%)	
Time to first abscond		276.80 (209.780), 6 – 884
<b>Sanction Received While on Probation Supervision</b>		
At least one sanction	110 (36.8%)	
Time to first sanction		237.40 (189.434), 1 – 676
<b>Revocation of Probation Supervision</b>		
Probation revoked	85 (28.4%)	
Time to revocation		298.13 (188.018), 0 – 758

NOTES:

<sup>a</sup> Statistics include Frequency and Percentage or Mean (Standard Deviation) and Range.

By way of overview, results of the bivariate analyses between TRD LOS and event occurrence or time-to each event are shown on Table 27. Significant bivariate relationships were observed between length of participation in TRD programming and the number of jail bed days used ( $p < .05$ ), absconding from probation supervision ( $p < .05$ ), receiving a probation sanction ( $p < .01$ ), revocation of probation supervision ( $p < .05$ ), and time to probation revocation ( $p < .05$ ). Additionally, the bivariate relationship between TRD LOS and having at least one jail booking and time to first post-TRD booking are both approaching the conventional level of significance ( $p < .10$ ). Multivariate models were run as robustness checks, and will be discussed by outcome area below.

Table 27: Length of Stay<sup>a</sup> in TRD and Criminal Justice Outcomes (n=299)

	Frequency (%)	Mean (SD)	t (df)	r <sup>b</sup>
<b>Jail Utilization</b>				
Post-TRD jail booking			-.855 (297) †	
No jail bookings	116 (38.8%)	2.99 (1.17)		
At least one jail booking	183 (61.2%)	2.87 (.99)		
Number jail bed days used				-.256*
Time to first booking				.085†
<b>Recidivism</b>				
Felony Rearrest			-.566 (297) ns	
No rearrest	168 (56.2%)	2.95 (1.12)		
At least one rearrest	131 (43.8%)	2.81 (1.01)		
Time to first rearrest				-.069 ns
<b>Absconding from Probation Supervision</b>				
Probation Abscond			-1.410 (297) *	
No abscond	217 (72.6%)	2.97 (1.09)		
At least one abscond	82 (27.4%)	2.77 (.97)		
Time to first abscond				.004 ns

## Section III: Research Question 6

	Frequency (%)	Mean (SD)	t (df)	r <sup>b</sup>
<b>Sanction Received While on Supervision</b>				
Probation Sanction			-2.552 (297)**	
No sanction	189 (63.2%)	3.03 (1.10)		
At least one sanction	110 (36.8%)	2.71 (.94)		
Time to first sanction				-.007 ns
<b>Revocation of Probation Supervision</b>				
Probation Revocation			-2.004 (397)*	
No revocation	214 (71.6%)	2.95 (1.07)		
Probation revoked	85 (28.4%)	2.82 (1.03)		
Time to first revocation				.115*

### NOTES:

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ , †  $p < .10$

<sup>a</sup> Length of stay in the TRD is a continuous variable operationalized as the natural log of number of days between TRD intake and exit date plus one.

<sup>b</sup> Statistics include Frequency, Mean and (Standard Deviation), t-statistic and (Degrees of Freedom), Pearson's bivariate correlation coefficient.

## Jail Utilization

The differences in means from the bivariate analysis in Table 27 indicate that individuals who have at least one post-TRD participation jail booking spent, on average, less time in the TRD than did those without any post-TRD jail bookings. By way of reminder the group-based means are calculated using the natural log of length of stay in TRD, which confuses interpretation of this bivariate finding due to the scale of the logged variable. Nonetheless, the negative  $t$ -statistic is approaching significance ( $t(297) = -.855, p = .08, 95\% \text{ CI}$ ), indicating there are trends in the data suggesting that spending more time participating in TRD programming lowers the likelihood that there will be at least one jail booking in the 365 days after MCIJ exit. Results of the multivariate logistic regression model, shown on Table 28, indicate that this nearly statistically significant relationship is maintained when additional control variables are included in the model ( $\beta = -.069, SE = .143, p < .10$ ).

Table 28: Logistic Regression – Post-TRD Jail Utilization Regressed on Length of Stay in TRD<sup>a</sup>

	Model 1: Controls Only			Model 2		
	B <sup>c</sup>	SE	Exp (B)	B	SE	Exp (B)
Hispanic origin	-.226	.899	0.798	-.217	.905	0.805
Race <sup>b</sup>						
Black	1.145	.411	3.142**	1.131	.412	3.100**
Other	-.140	.624	.869	-.120	.625	0.887
LSCMI total score <sup>d</sup>	.074	.022	1.077***	.073	.022	10.76***
Age at entry	-.048	.016	0.953**	-.048	.016	0.953
Charge of Booking						
Person	-.164	.661	0.849	-.150	.662	0.861
Behavioral	-.366	.473	0.693	-.343	.475	0.710
Property	-.227	.423	0.797	-.212	.433	0.809
Alcohol & drug	-.752	.449	0.472†	-.735	.450	0.479†
Pre-TRD jail bed days used (1 year prior)	.001	.005	1.001	.001	.005	1.001
Exposure time in community	.002	.001	1.002†	.002	.001	1.002†



## Section III: Research Question 6

	Model 1: Controls Only			Model 2		
	B <sup>c</sup>	SE	Exp (B)	B	SE	Exp (B)
<b>Length of stay in TRD</b>	--	--	--	-.069	.143	0.934‡
<b>Constant</b>	-.309	.956	0.732*	-.111	1.044	0.895*
<b>Nagelkerke R<sup>2</sup></b>		.216			.217	

NOTES:

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ , ‡  $p < .10$

<sup>a</sup> Length of stay in the TRD is a continuous variable operationalized as the natural log of number of days between TRD intake and exit date plus one.

<sup>b</sup> Reference categories: White (race), Vehicle/UUMV (charge of booking)

<sup>c</sup> Coefficients include Beta, Standard Error, and Log Odds

<sup>d</sup> All continuous variables are mean centered for ease of interpretation

The bivariate relationship between TRD LOS and time to first post-TRD jail booking shown in Table 27 is positive and approaching the conventional level of statistical significance ( $r = .085$ ,  $p = .07$ ). However, as shown in Table 29, when included in the multivariate model with various personal characteristics, criminogenic factors, and other controls, we observe that this same relationship becomes statistically significant ( $b = .104$ ,  $SE = .565$ ,  $p < .05$ ). Therefore, results suggest that individuals who spend more time participating in TRD programming are less likely to have a post-TRD jail booking (approaching significance) and, if booked, have a significantly longer time to first booking than do individuals who spend less time in the TRD.

Table 29: OLS Regression – Time to First Booking Regressed on Length of Stay in TRD<sup>a</sup>

	Model 1: Controls Only			Model 2		
	b <sup>c</sup>	SE	B	b	SE	B
<b>Hispanic origin</b>	5.848	22.412	.017	5.621	22.470	.016
<b>Race<sup>b</sup></b>						
<b>Black</b>	7.751	9.240	.052	8.010	9.301	.054
<b>Other</b>	18.274	16.270	.072	18.043	16.321	0.71
<b>LSCMI total score</b>	1.899	.538	.221***	1.903	.540	.222***
<b>Age at entry</b>	-.733	.383	-.126*	-.736	.384	-.126*
<b>Charge of Booking</b>						
<b>Person</b>	21.465	15.840	.091	21.312	15.880	.091
<b>Behavioral</b>	-8.834	11.754	-.054	-9.103	11.813	-.056
<b>Property</b>	-6.257	10.837	-.042	-6.410	10.871	-.043
<b>Alcohol &amp; drug</b>	-19.961	11.731	-.134‡	-20.174	11.777	-.136‡
<b>Pre-TRD jail bed days used (1 year prior)</b>	.321	.113	.175**	.321	.113	.175**
<b>Exposure time in community</b>	-.007	.025	-.018	-.007	.025	-.017
<b>Length of stay in TRD</b>	--	--	--	.1035	.565	.018*
<b>Constant</b>	27.993	24.795	--*			
<b>R<sup>2</sup></b>		.116			.119	
<b>R<sup>2</sup> Change</b>		--			.003***	

NOTES:

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ , ‡  $p < .10$

<sup>a</sup> Length of stay in the TRD is a continuous variable operationalized as the natural log of number of days between TRD intake and exit date plus one.

<sup>b</sup> Reference categories: White (race), Vehicle/UUMV (charge of booking)

<sup>c</sup> Coefficients include the unstandardized coefficient, standard error, and standardized coefficient (Beta)

## Felony Rearrest

The second set of criminal justice outcome variables for this research question include whether the individual received a felony after MCIJ release and time to first rearrest. The bivariate analyses for the relationship between both rearrest outcome measures and TRD LOS are not statistically significant (see Table 27). While the mean length of stay (normalized with a natural log transformation, confusing interpretation of the mean difference) for the group that was not rearrested is higher than that observed for those who were rearrested, this relationship is not found to be statistically significant. This limits any conclusions that can be drawn about the impact that engaging in TRD programming has on behavior as measured by recidivism defined as formal felony rearrest.

## Negative Probation Events

### Probation Absconds

While the bivariate relationship between TRD LOS and time to first post-TRD abscond from probation supervision is not significant ( $r = .004$ , ns; see Table 27), the observed difference in means suggests that individuals who abscond from probation supervision spent, on average, less time participating in TRD programming than did those individuals who were not observed to abscond from probation supervision ( $t(297) = -1.410$ ,  $p < .05$ ). The negative direction of the beta coefficient from the multivariate logistic regression model shown in Table 30 shows that the relationship remains robust with the inclusion of various control variables ( $B = -1.175$ ,  $SE = .336$ ,  $p < .05$ ).

Table 30: Logistic Regression – Probation Abscond Regressed on Length of Stay in TRD<sup>a</sup>

	Model 1: Controls Only			Model 2		
	B <sup>c</sup>	SE	Exp (B)	B	SE	Exp (B)
Hispanic origin	.137	.911	1.147	.171	.913	1.187
Race <sup>b</sup>						
Black	.313	.346	1.367	.260	.349	1.297
Other	-.419	.646	0.658	-.400	.649	0.670
LSCMI total score <sup>d</sup>	.036	.021	1.036‡	.036	.022	1.037‡
Age at entry	-.022	.015	0.979	-.021	.015	0.979
Charge of Booking						
Person	-.638	.603	0.528	-.616	.604	0.540
Behavioral	-1.056	.471	0.348*	-1.022	.473	0.360*
Property	-.718	.411	0.488‡	-.700	.412	0.496‡
Alcohol & drug	.126	.421	1.134	.159	.423	1.173
Pre-TRD jail bed days used (1 year prior)	.003	.004	1.003	.003	.004	1.003
Exposure time in community	.000	.001	1.000	.000	.001	1.000
Length of stay in TRD	--	--	--	-1.175	.336	0.840*
Constant	-.918	.949	0.399	-.466	1.012	.628
Nagelkerke R <sup>2</sup>		.083			.092	

NOTES:

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ , ‡  $p < .10$

<sup>a</sup> Length of stay in the TRD is a continuous variable operationalized as the natural log of number of days between TRD intake and exit date plus one.

<sup>b</sup> Reference categories: White (race), Vehicle/UUMV (charge of booking)

<sup>c</sup> Coefficients include Beta, Standard Error, and Log Odds

<sup>d</sup> All continuous variables are mean centered for ease of interpretation

## Section III: Research Question 6

Similar to the OLS regression model where TRD LOS emerges as significantly associated with time to first jail booking, Table 31 shows that the previously non-significant effect of TRD LOS on time to first abscond is approaching significance in the multivariate model ( $b = -16.133$ ,  $SE = 6.181$ ,  $p < .10$ ). Although this relationship does not reach the conventional level of statistical significance, it is negative which is opposite of what would be expected. When considering the statistically significant results for this set of outcome variables, results suggest that spending more time participating in TRD programming decreases the likelihood that an individual will abscond from probation supervision.

Table 31: OLS Regression – Time to First Abscond Regressed on Length of Stay in TRD<sup>a</sup>

	Model 1: Controls Only			Model 2		
	b <sup>c</sup>	SE	B	b	SE	B
Hispanic origin	191.157	152.897	.146	207.648	155.939	.158
Race <sup>b</sup>						
Black	-49.236	55.339	-.103	-51.118	55.693	-.107
Other	212.946	107.458	.226*	217.051	108.118	.231*
LSCMI total score	2.652	4.208	.077	2.153	4.305	.062
Age at entry	.602	2.837	.027	.463	2.859	.020
Charge of Booking						
Person	-142.502	109.955	-.168	-125.825	113.758	-.148
Behavioral	-23.144	78.342	-.036	-13.886	80.145	-.021
Property	101.812	67.627	.188	101.020	67.970	.186
Alcohol & drug	7.280	66.546	.015	11.641	67.244	.025
Pre-TRD jail bed days used (1 year prior)	-.171	.719	-.028	-.237	.730	-.039
Exposure time in community	.538	.159	.410***	.542	.159	.413***
Length of stay in TRD	--	--	--	-16.133	6.181	-.075‡
Constant	-151.177	175.464	--	-91.314	201.313	--
R <sup>2</sup>		.150			.172	
R <sup>2</sup> Change		--			.022**	

NOTES:

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ , ‡  $p < .10$

<sup>a</sup> Length of stay in the TRD is a continuous variable operationalized as the natural log of number of days between TRD intake and exit date plus one.

<sup>b</sup> Reference categories: White (race), Vehicle/UUMV (charge of booking)

<sup>c</sup> Coefficients include the unstandardized coefficient, standard error, and standardized coefficient (Beta)

## Sanctions Received

The bivariate relationship between TRD LOS and receiving a sanction while under probation supervision is statistically significant and in the expected direction such that TRD participants who end up receiving a formal sanction spent, on average, significantly less time participating in TRD programming than did the group of individuals who did not receive a sanction ( $t(297) = -2.552$ ,  $p < .01$ ; see Table 27). Results of the logistic regression model shown in Table 32 suggest that that negative bivariate relationship remains when controlling for all the covariates included in the multivariate model ( $B = -.286$ ,  $SE = .137$ ,  $p < .05$ ).

## Section III: Research Question 6

Table 32: Logistic Regression – Sanction Received Regressed on Length of Stay in TRD<sup>a</sup>

	Model 1: Controls Only			Model 2		
	B <sup>c</sup>	SE	Exp (B)	B	SE	Exp (B)
Hispanic origin	-1.579	1.193	0.206	-1.585	1.192	0.205
<b>Race<sup>b</sup></b>						
Black	1.291	.348	3.637***	1.247	.352	3.418***
Other	-.638	.700	0.528	-.610	.708	0.543
LSCMI total score <sup>d</sup>	.047	.021	1.048*	.047	.022	1.049*
Age at entry	-.037	.015	0.964*	-.037	.015	0.963*
<b>Charge of Booking</b>						
Person	.626	.596	1.870	.669	.602	1.953
Behavioral	-.404	.453	0.668	-.334	.458	0.716
Property	.343	.399	1.409	.379	.403	1.461
Alcohol & drug	.496	.440	1.643	.549	.446	1.730
Pre-TRD jail bed days used (1 year prior)	.007	.004	1.007‡	.007	.004	1.007‡
Exposure time in community	.001	.001	1.001	.001	.001	1.001
Length of stay in TRD	--	--	--	-.286	.137	0.751*
Constant	-1.265	.933	0.282*	-.452	1.016	0.636*
Nagelkerke R <sup>2</sup>		.191			.213	

NOTES:

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ , ‡  $p < .10$

<sup>a</sup> Length of stay in the TRD is a continuous variable operationalized as the natural log of number of days between TRD intake and exit date plus one.

<sup>b</sup> Reference categories: White (race), Vehicle/UUMV (charge of booking)

<sup>c</sup> Coefficients include Beta, Standard Error, and Log Odds

<sup>d</sup> All continuous variables are mean centered for ease of interpretation

Neither the bivariate (see Table 27) nor multivariate OLS model (Table 33) found a statistically significant relationship between TRD LOS and time to first sanction. Therefore, results suggest that individuals who spend more time participating in TRD programming are significantly less likely to receive a formal sanction, but that does not seem to have a statistically significant impact on time to that first sanction.

Table 33: OLS Regression – Time to First Sanction Regressed on Length of Stay in TRD<sup>a</sup>

	Model 1: Controls Only			Model 2		
	b <sup>c</sup>	SE	B	b	SE	B
Hispanic origin	-175.564	182.733	-.093	-165.685	183.186	-.088
<b>Race<sup>b</sup></b>						
Black	10.212	40.119	.026	9.025	40.168	.023
Other	62.154	107.654	.057	61.625	107.732	.056
LSCMI total score	-3.961	3.132	-.131	-4.205	3.145	-.139
Age at entry	.464	1.818	.026	.338	1.824	.019
<b>Charge of Booking</b>						
Person	38.065	68.401	.061	38.165	68.450	.061
Behavioral	-8.813	60.339	-.016	-1.245	60.920	-.002
Property	54.893	52.736	.128	60.967	53.171	.143
Alcohol & drug	-20.399	54.726	-.046	-16.005	54.966	-.036
Pre-TRD jail bed days used (1 year prior)	.150	.459	.032	.150	.459	.032
Exposure time in community	.489	.124	.399***	.484	.124	.395***
Length of stay in TRD	--	--	--	-18.273	19.513	-.090

## Section III: Research Question 6

	Model 1: Controls Only			Model 2		
	b <sup>c</sup>	SE	B	b	SE	B
Constant	13.226	139.675	--	73.710	153.977	--*
R <sup>2</sup>		.245			.253	
R <sup>2</sup> Change		--			.008*	

NOTES:

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ , ‡  $p < .10$

<sup>a</sup> Length of stay in the TRD is a continuous variable operationalized as the natural log of number of days between TRD intake and exit date plus one.

<sup>b</sup> Reference categories: White (race), Vehicle/UUMV (charge of booking)

<sup>c</sup> Coefficients include the unstandardized coefficient, standard error, and standardized coefficient (Beta)

## Revocation of Probation Supervision

The last set of analyses shown in Table 27 uncovered statistically significant bivariate relationships between length of time engaged in TRD programming and both likelihood of experiencing revocation of probation supervision ( $t(297) = -2.004, p < .05$ ) and time to probation revocation after MCIJ exit ( $r = .115, p < .05$ ). Results of the logistic regression model (Table 34) affirm this previously established bivariate relationship, indicating that when controlling for additional variables, individuals who spend more time participating in TRD programming are significantly less likely to have their probation supervision revoked than are individuals who spend less time in the TRD ( $B = -.637, SE = .014, p < .05$ ).

Table 34: Logistic Regression – Probation Revocation Regressed on Length of Stay in TRD<sup>a</sup>

	Model 1: Controls Only			Model 2		
	B <sup>c</sup>	SE	Exp (B)	B	SE	Exp (B)
Hispanic origin	-.160	.924	0.852	-.158	.927	0.854
Race <sup>b</sup>						
Black	.676	.354	1.967‡	.639	.357	1.894‡
Other	-.689	.720	0.502	-.671	.725	0.511
LSCMI total score <sup>d</sup>	.060	.023	1.062**	.061	.023	1.063*
Age at entry	-.052	.016	0.949***	-.053	.017	0.948***
Charge of Booking						
Person	.314	.591	1.369	.332	.592	1.394
Behavioral	-.219	.457	0.803	-.184	.459	0.832
Property	-.299	.427	0.742	-.284	.429	0.753
Alcohol & drug	-.151	.477	0.860	-.131	.478	0.877
Pre-TRD jail bed days used (1 year prior)	.008	.004	1.008*	.008	.004	1.008*
Exposure time in community	.002	.001	1.002‡	.002	.001	1.002‡
Length of stay in TRD	--	--	--	-.637	.014	0.849*
Constant	-1.882	1.004	0.152‡	-1.429	1.076	0.239‡
Nagelkerke R <sup>2</sup>		.186			.193	

NOTES:

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ , ‡  $p < .10$

<sup>a</sup> Length of stay in the TRD is a continuous variable operationalized as the natural log of number of days between TRD intake and exit date plus one.

<sup>b</sup> Reference categories: White (race), Vehicle/UUMV (charge of booking)

<sup>c</sup> Coefficients include Beta, Standard Error, and Log Odds

<sup>d</sup> All continuous variables are mean centered for ease of interpretation

## Section III: Research Question 6

Table 35 shows that, for those who are revoked, there is a statistically significant, positive relationship between TRD LOS and time to revocation ( $b = 27.513$ ,  $SE = 3.396$ ,  $p < .05$ ). This suggests that, when revoked, clients who spend more time engaged with TRD programming will be successful for longer (i.e., have a longer time to revocation after MCIJ exit).

Table 35: OLS Regression – Time to Probation Revocation Regressed on Length of Stay in TRD<sup>a</sup>

	Model 1: Controls Only			Model 2		
	b <sup>c</sup>	SE	B	b	SE	B
Hispanic origin	180.480	150.974	.155	159.835	151.538	.138
Race <sup>b</sup>						
Black	-1.961	50.607	-.005	6.772	50.997	.017
Other	17.135	125.790	.018	-1.007	126.355	-.001
LSCMI total score	2.095	4.085	.064	2.135	4.072	.066
Age at entry	1.906	2.626	.090	2.276	2.637	.108
Charge of Booking						
Person	95.895	79.347	.158	72.594	81.551	.120
Behavioral	-.22847	65.168	-.048	-35.951	65.919	-.075
Property	22.56	63.294	.049	22.959	63.103	.050
Alcohol & drug	-51.700	69.340	-.105	-58.775	69.392	-.119
Pre-TRD jail bed days used (1 year prior)	-1.435	.661	-.264*	-1.345	.664	-.247*
Exposure time in community	.198	.141	.164	.221	.142	.183
Length of stay in TRD	--	--	--	27.513	3.3966	.150*
Constant	89.882	154.596	--	-13.152	177.291	--
R <sup>2</sup>		.178			.196	
R <sup>2</sup> Change		--			.018*	

NOTES:

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ , †  $p < .10$

<sup>a</sup> Length of stay in the TRD is a continuous variable operationalized as the natural log of number of days between TRD intake and exit date plus one.

<sup>b</sup> Reference categories: White (race), Vehicle/UUMV (charge of booking)

<sup>c</sup> Coefficients include the unstandardized coefficient, standard error, and standardized coefficient (Beta)

## SECTION III. RESEARCH QUESTION 7

### *Research Question and Analytic Strategy*

*Is there an ideal length of stay in the treatment readiness dorm?* In order to determine if there is an ideal length of stay (or “dosage”) of TRD programming, the current analyses took into account the impact on various community-based treatment and criminal justice outcomes. The current analysis plan was developed based on a review of the empirical literature measuring treatment or service dosage for criminal justice interventions (e.g., Bouffard & Taxman, 2004; Santiago, Beauford, Campt, & Kim, 1996; Swartz, Lurigio, & Slomka, 1996; Tunis, Austin, Morris, Hardyman, & Bolyard, 1998). After looking at the descriptive statistics for client length of stay (calculated for Research Question 1), a set of variables was generated to indicate whether each individual had a length of stay that reached or extended beyond each three cut points: 8 or more days, 15 or more days, and 30 or more days.

Analyses were conducted to establish the direction and significance level of the bivariate relationships between each of these length of stay groups, as well as the continuous natural log of total length of stay (plus 1) and the community-based treatment and criminal justice outcomes of interest. As is the case with the other research questions that examine the influence of TRD participation on post-MCIJ release outcomes, the current analyses are based on a subsample of 299 individuals who were released from MCIJ to the community and were subsequently under community supervision within Multnomah County. Findings from this research question are used to inform the analyses in Research Question 8.

### *Findings*

Table 36 (shown on the following page) contains summary information regarding the series of bivariate analyses that were run to establish the relationship between the various operationalization’s of length of stay (i.e., the length of stay groups and continuous operationalization) and the community-based treatment and criminal justice outcomes of interest. Looking at outcomes across the length of stay groups, the following general conclusions can be drawn:

- Participating in TRD programming for 8 or more days has better outcomes than 0 to 7 days
- Participating in TRD programming for 15 or more days has better outcomes than 0 to 14 days
- Participating in TRD programming for 30 or more days has better outcomes than 0 to 29 days

It is also important to point out that there are some cases shown in Table 36 (next page) whereby the bivariate relationship between outcome and TRD length of stay is significant (or approaching significance) for the continuous variable operationalization, but either not significant or less significant for the 30 days or more operationalization (e.g., treatment retention, time to first booking, and receiving at least one sanction). In these cases it would appear that there is a relationship detected, but the dosage metric of 30+ days was not refined enough to detect it.

Taken together, this dosage analysis lends support to the assertion that at least 30 days in the TRD is critical for maximum success.



## Section III: Research Question 7

Table 36: Relationships between LOS and Community-based Treatment and Criminal Justice Outcomes

	8+ days (n=212)	15+ days (n=161)	30+ days (n=102)	Continuous (In) (n=299)
<b>Community-based Tx Outcomes</b>				
Treatment Engagement	-, ns	+, ns	+, ‡	+, ‡
Treatment Retention	-, ns	-, ‡	+, ‡	+, *
<b>Criminal Justice Outcomes</b>				
<b>Jail Utilization</b>				
At least one jail booking	+, ns	+, ns	+, *	-, ‡
# bed days used <sup>a</sup>	+, ns	+, *	+, *	-, *
Time to first booking	-, ns	-, ns	+, ns	+, ‡
<b>Felony Rearrest</b>				
At least one rearrest	+, ‡	+, ns	-, ‡	-, ns
Time to first rearrest	-, ns	-, ns	-, ns	-, ns
<b>Absconds</b>				
At least one abscond	-, ns	-, ‡	-, *	-, *
Time to first abscond	+, ns	+, ns	-, ‡	+, ns
<b>Sanctions</b>				
At least one sanction	-, ns	-, ns	-, *	-, **
Time to first sanction	+, ns	-, ns	-, ns	-, ns
<b>Revocations</b>				
At least one revocation	-, ns	-, ns	-, *	-, *
Time to first revocation	+, ns	+, ns	+, *	+, *

**NOTES:**

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ , ‡  $p < .10$ , ns = not significant ; + positive relationship, - negative relationship

<sup>a</sup> The outcome observation window for jail bed days used extends for 365 days after the date of MCIJ exit

## SECTION III. RESEARCH QUESTION 8

### *Research Question and Analytic Strategy*

*How does length of stay in the treatment readiness dorm impact future criminal justice involvement?* In the absence of having a true (contemporaneous) control group, one statistical method to establish impact of participation in TRD programming on later behavior is to compare the sample to itself. Analyses for this research question again relied on the subsample of 299 individuals who were released from MCIJ into the community and were then under community supervision in Multnomah County. This group of 299 individuals was then divided into two groups based on their length of stay in the treatment readiness dorm. Informed by the findings of Research Question 7 previously discussed, the length of stay cut-point was set at 30 days splitting the subsample of 299 individuals into two groups.

Once constructed, the 29-days-or-less group had 197 individuals (65.9%) while the 30-days-or-more group had 102 individuals (34.1%). Once the groupings were established bivariate analyses (Pearson's chi-square for categorical dependent variables and *t*-tests for continuous dependent variables) were run to compare the criminal justice outcome variables across the length of stay groups. Consistent with the analyses for Research Question 6, all criminal justice outcomes are operationalized in two ways – as both a dichotomous variable that indicates whether the event occurred during the observation window, and a continuous variable measuring time between MCIJ release and the criminal justice outcome event of interest<sup>15</sup>.

Finally, multivariate logistic and OLS regression models were estimated in order to determine the impact of length of stay in TRD on future criminal justice behavior while controlling for the effect of various demographic, criminogenic, and offense variables. While not exactly the same as having a control group, this analytic approach will allow us to compare the impact of participation in dorm programming for those who spent more versus less time in the Dorm, providing further information on the overall impact of TRD participation on various community-based treatment and criminal justice behavioral outcomes.

### *Findings*

#### **Jail Utilization**

Table 37 contains information on post-TRD jail utilization across the length of stay groups. Results of the cross tabulation and Pearson chi-square suggest that individuals who spend at least 30 days in the TRD are less likely to experience at least one jail booking after release from MCIJ ( $\chi^2(1) = 2.000, p < .05$ ). While the chi-square value indicates that this relationship is statistically significant, the value of .047 for Phi and Cramer's V suggests that this bivariate relationship is very small in magnitude.

<sup>15</sup> Individuals who did not experience the event of interest are removed from analyses examining the bivariate and multivariate relationship between length of stay group and time-to the various criminal justice outcomes.

## Section III: Research Question 8

Table 37: Jail Utilization by Length of Stay Group (Split Sample Analysis)

	n	Jail Utilization <sup>a</sup>		Time to First Booking <sup>b</sup>
		No Jail Booking	At Least one Jail Booking	Mean (SD)
<b>29 days or less</b>	197	63	134	50.30 (60.271)
<b>30 days or more</b>	102	41	64	53.36 (64.044)
<b>Total</b>	299	104	195	

NOTES:

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ , †  $p < .10$ , (ns) = not significant

<sup>a</sup>  $\chi^2(1) = 2.000^*$ ,  $\Phi = .047^*$ , Cramer's  $V = .047^*$

<sup>b</sup> Mean difference = 3.06,  $t(297) = .408$  (ns)

This finding is actually confirmed in the results of the multivariate logistic regression model (Table 38), whereby the odds ratio<sup>16</sup> of 0.966 is just under the value of 1. Therefore, while the current analyses find a statistically significant, negative relationship between spending 30 days or more in the TRD and experiencing at least one post-MCIJ jail booking, the magnitude of that relationship is, in fact, negligible.

Table 38: Logistic Regression –Jail Booking Regressed on Length of Stay Group (Split Sample Analysis)

	Model 1: Controls Only			Model 2		
	B <sup>b</sup>	SE	Exp (B)	B	SE	Exp (B)
<b>Hispanic origin</b>	-.226	.899	0.798	-.240	.912	0.787
<b>Race<sup>a</sup></b>						
<b>Black</b>	1.145	.411	3.142**	1.131	.412	3.099**
<b>Other</b>	-.140	.642	0.869	-.098	.627	0.907
<b>LSCMI total score<sup>c</sup></b>	.074	.022	1.077***	.074	.022	1.007***
<b>Age at entry</b>	-.048	.016	0.953**	-.048	.016	0.953**
<b>Charge of Booking</b>						
<b>Person</b>	-.164	.661	0.849	-.145	.661	0.865
<b>Behavioral</b>	-.366	.473	0.693	-.324	.476	0.723
<b>Property</b>	-.227	.432	0.797	-.198	.434	0.821
<b>Alcohol &amp; drug</b>	-.752	.449	0.472†	-.702	.452	0.496†
<b>Pre-TRD jail bed days used (1 year prior)</b>	.001	.005	1.001	.001	.005	1.001
<b>Exposure time in community</b>	.002	.001	1.002†	.002	.001	1.002†
<b>Length of stay 30+ days</b>	--	--	--	-.267	.113	0.766*
<b>Constant</b>	-.309	.956	0.734	-.213	.966	0.808
<b>Nagelkerke R<sup>2</sup></b>		.216			.220	

NOTES:

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ , †  $p < .10$

<sup>a</sup> Reference categories: White (race), Vehicle/UUMV (charge of booking)

<sup>b</sup> Coefficients include Beta, Standard Error, and Log Odds

<sup>c</sup> All continuous variables are mean centered for ease of interpretation

Table 37 includes information on the average time to first post-TRD jail booking for the 195 individuals who received at least one jail booking during the observation window. Results of the bivariate analysis indicate that there is a mean difference of 3.06 days between average time-to-first booking for the 29 days or less group (mean=50.30 days) and the 30 days or more group (mean=53.56 days). This difference, however, is not found to be statistically significant, which is confirmed by the non-significant coefficient for Length of Stay from the multivariate OLS regression model (Table 39).

<sup>16</sup> The Odds Ratio is the value associated with the exponent of the Beta coefficient, indicated in the current tables as Exp(B).

## Section III: Research Question 8

Table 39: OLS Regression – Time to First Booking Regressed on Length of Stay Group (Split Sample Analysis)

	Model 1: Controls Only			Model 2		
	b <sup>b</sup>	SE	B	b	SE	B
Hispanic origin	5.848	22.412	.017	6.021	22.449	.017
Race <sup>a</sup>						
Black	7.751	9.240	.052	8.075	9.273	.055
Other	18.274	16.270	.072	17.728	16.326	.070
LSCMI total score	1.899	.538	.221***	1.899	.539	.221***
Age at entry	-.733	.383	-.126*	-.735	.384	-.126*
Charge of Booking						
Person	21.465	15.841	.091	21.123	15.877	.090
Behavioral	-8.834	11.754	-.054	-9.399	11.818	-.058
Property	-6.257	10.837	-.042	-6.662	10.879	-.045
Alcohol & drug	-19.961	11.731	-.134‡	-20.711	11.831	-.139‡
Pre-TRD jail bed days used (1 year prior)	.321	.113	.175**	.321	.113	.175**
Exposure time in community	-.007	.025	-.018	-.006	.025	-.015
Length of stay 30+ days	--	--	--	4.339	8.028	.033
Constant	27.993	24.795	--	26.399	25.007	--
R <sup>2</sup>		.159			.160	
R <sup>2</sup> Change		--			.001	

NOTES:

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ , ‡  $p < .10$

<sup>a</sup> Reference categories: White (race), Vehicle/UUMV (charge of booking)

<sup>b</sup> Coefficients include the unstandardized coefficient, standard error, and standardized coefficient (Beta)

## Felony Rearrest

Information on experiencing a felony rearrest and time-to first rearrest by length of stay group is presented in Table 40. Findings from the multivariate logistic and OLS regression models are on Tables 41 and 42, respectively. The cross tabulation (Table 40) finds that of the 131 former TRD participants who received a felony rearrest during the post-MCIJ observation period, 65.6% ( $n = 86$ ) of those individuals spent 29 days or less participating in TRD programming, while the other 34.4% ( $n = 45$ ) spent 30 days or more in the TRD. While substantively this looks like a large difference, the significance level of  $p < .10$  associated with the chi-square value of 0.245 indicates that this relationship does not reach conventional levels of statistical significance.

Table 40: Felony Rearrest by Length of Stay Group (Split Sample Analysis)

	<i>n</i>	Felony Rearrest <sup>a</sup>		Time to First Rearrest <sup>b</sup>
		No Rearrest	At Least one Rearrest	Mean (SD)
29 days or less	197	17	86	181.37 (170.861)
30 days or more	102	7	45	164.25 (153.001)
Total	299	24	131	

NOTES:

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ , ‡  $p < .10$ , (ns) = not significant

<sup>a</sup>  $\chi^2 (1) = .245$ ,  $\Phi = .040$ ,  $\Phi = .040$

<sup>b</sup> Mean difference = 17.12,  $t(153) = -.609$  (ns)

## Section III: Research Question 8

The above trend toward increased likelihood of experiencing a felony rearrest associated with spending less time participating in TRD programming maintains in the multivariate logistic regression model (Table 41). The negative standardized Beta coefficient and odds ratio of less than one further confirm that there is some sort of relationship observed in the data, but it, again, does not reach the conventional level of statistical significance.

Table 41: Logistic Regression – Felony Rearrest Regressed on Length of Stay Group (Split Sample Analysis)

	Model 1: Controls Only			Model 2		
	B <sup>b</sup>	SE	Exp (B)	B	SE	Exp (B)
Hispanic origin	.584	1.491	1.793	.598	1.483	1.818
Race <sup>a</sup>						
Black	-.182	.633	0.843	-.186	.631	0.831
Other	-2.537	1.067	0.079*	-2.565	1.079	0.077*
LSCMI total score <sup>c</sup>	.100	.049	1.105*	.101	.049	1.106*
Age at entry	-.023	.033	0.977	-.023	.033	0.977
Charge of Booking						
Person	-1.427	1.173	0.240	-1.463	1.188	0.232
Behavioral	-2.329	1.057	0.097*	-2.355	1.068	0.095*
Property	-2.656	1.002	0.070**	-2.678	1.014	0.069**
Alcohol & drug	.252	1.440	1.287	.226	1.449	1.254
Pre-TRD jail bed days used (1 year prior)	-.004	.006	0.996	-.004	.006	0.996
Exposure time in community	-.006	.002	0.994**	-.006	.002	0.994
Length of stay 30+ days	--	--	--	-1.142	.612	0.853‡
Constant	5.279	2.403	196.185*	5.235	2.405	187.773*
Nagelkerke R <sup>2</sup>		.369			.371	

NOTES:

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ , ‡  $p < .10$

<sup>a</sup> Reference categories: White (race), Vehicle/UUMV (charge of booking)

<sup>b</sup> Coefficients include Beta, Standard Error, and Log Odds

<sup>c</sup> All continuous variables are mean centered for ease of interpretation

Regarding the impact of length of stay in the TRD on time to first felony rearrest, the  $t$ -statistic ( $t[153] = -.609$ ; Table 40) is not significant, which is again consistent with the non-significant relationship identified in the OLS model in Table 42. Taken together, the findings regarding the influence of spending at least 30 days participating in TRD programming on subsequent felony rearrests outcomes suggest that there was, in fact, some relationship between length of stay in TRD and likelihood of rearrest (i.e., spending at least 30 days in the dorm decreases the likelihood of a subsequent rearrest). However, length of TRD engagement does not influence time to rearrest for those who were arrested during the outcome observation window.

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Table 42: OLS Regression – Time to First Felony Rearrest Regressed on Length of Stay Group (Split Sample Analysis)

	Model 1: Controls Only			Model 2		
	b <sup>b</sup>	SE	B	b	SE	B
Hispanic origin	-110.689	75.378	-.128	-111.256	75.994	-.129
<b>Race<sup>a</sup></b>						
Black	40.428	31.020	.112	40.320	31.117	.112
Other	144.705	57.870	.222*	144.888	58.155	.222*
LSCMI total score	-6.135	2.288	-.226**	-6.118	2.306	-.225**
Age at entry	.205	1.396	.013	.208	1.402	.013
<b>Charge of Booking</b>						
Person	54.609	47.962	.102	54.933	48.317	.103
Behavioral	116.587	40.749	.273**	116.943	41.137	.274**
Property	112.607	37.767	.283**	112.853	38.039	.284**
Alcohol & drug	40.881	43.352	.091	41.252	43.756	.094
Pre-TRD jail bed days used (1 year prior)	.358	.337	.089	.357	.339	.089
Exposure time in community	.203	.089	.190*	.203	.090	.190*
Length of Stay in TxRD	--	--	--	2.440	28.867	.007
Constant	131.737	98.866	--	131.850	99.294	--
R <sup>2</sup>		.236			.236	
R <sup>2</sup> Change		--			.000	

NOTES:

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ , †  $p < .10$

<sup>a</sup> Reference categories: White (race), Vehicle/UUMV (charge of booking)

<sup>b</sup> Coefficients include the unstandardized coefficient, standard error, and standardized coefficient (Beta)

## Negative Probation Events

### Probation Absconds

The analyses shown in Table 43 indicate that a statistically significant, negative bivariate relationship between 30 plus days of TRD participation and receiving an abscond from probation supervision is observed in the data such that individuals who spend 29 days or less in the TRD are significantly more likely to abscond from probation supervision than are individuals in the group who spent 30 plus days participating in TRD programming ( $\chi^2(1) = 2.667, p < .05$ ).

Table 43: Probation Absconds by Length of Stay Group (Split Sample Analysis)

	n	Absconds <sup>a</sup>		Time to First Abscond <sup>b</sup>
		No Abscond	At Least one Abscond	Mean (SD)
<b>29 days or less</b>	197	137	60	282.93 (189.947)
<b>30 days or more</b>	102	80	22	260.09 (260.772)
<b>Total</b>	299	217	82	

NOTES:

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ , †  $p < .10$ , (ns) = not significant

<sup>a</sup>  $\chi^2(1) = 2.667^*$ ,  $\Phi = -.094^*$ , Cramer's  $V = .094^*$

<sup>b</sup> Mean difference = 22.84,  $t(297) = -.435^\ddagger$

## Section III: Research Question 8

However, this bivariate relationship does not retain the same level of statistical significance in the multivariate logistic regression model (Table 44). While the logistic regression still finds a negative relationship with a relatively large odds ratio (Exp[B] = 0.651), this relationship is only approaching the conventional level of statistical significance.

Table 44: Logistic Regression – Probation Abscond Regressed on Length of Stay Group (Split Sample Analysis)

	Model 1: Controls Only			Model 2		
	B <sup>b</sup>	SE	Exp (B)	B	SE	Exp (B)
Hispanic origin	.137	.911	1.147	.109	.922	1.115
Race <sup>a</sup>						
Black	.313	.346	1.367	.272	.349	1.312
Other	-.419	.6646	0.658	-.387	.651	0.679
LSCMI total score <sup>c</sup>	.036	.021	1.036‡	.037	.022	1.037‡
Age at entry	-.022	.015	0.979	-.021	.015	0.979
Charge of Booking						
Person	-.638	.603	0.528	-.604	.604	0.547
Behavioral	-1.056	.471	0.348*	-1.016	.474	0.362*
Property	-.718	.411	0.488‡	-.687	.413	0.503‡
Alcohol & drug	.126	.421	1.134	.195	.426	1.216
Pre-TRD jail bed days used (1 year prior)	.003	.004	1.003	.003	.004	1.003
Exposure time in community	.000	.001	.081	.000	.001	1.000
Length of stay 30+ days	--	--	--	-.429	.315	0.651‡
Constant	-.918	.949	0.399	-.804	.955	0.447
Nagelkerke R <sup>2</sup>		.083			.094	

NOTES:

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ , ‡  $p < .10$

<sup>a</sup> Reference categories: White (race), Vehicle/UUMV (charge of booking)

<sup>b</sup> Coefficients include Beta, Standard Error, and Log Odds

<sup>c</sup> All continuous variables are mean centered for ease of interpretation

Looking at the bivariate relationship of the second abscond-related outcome variable (time to first post-MCIJ abscond, Table 43), although it is in the expected direction such that the average time to abscond is 22.84 days shorter for those absconders who spent 29 days in the TRD or less than 30 days or more, it is only approaching statistical significance ( $t(297) = -.435, p < .10$ ). When considering this relationship in the multivariate context with the ability to control for the influence of specified control variables on the outcome, the relationship actually further decreases significance level such that it is no longer even approaching the conventional level of significance (Table 45).



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Table 45: OLS Regression – Time to First Abscond Regressed on Length of Stay Group (Split Sample Analysis)

	Model 1: Controls Only			Model 2		
	b <sup>b</sup>	SE	B	b	SE	B
Hispanic origin	191.157	152.879	.146	195.544	153.384	.148
Race <sup>a</sup>						
Black	-49.236	55.339	-.103	-48.084	55.519	-.101
Other	212.946	107.458	.226*	218.034	107.961	.232*
LSCMI total score	2.652	4.208	.077	2.582	4.221	.075
Age at entry	.602	2.837	.027	.407	2.855	.018
Charge of Booking						
Person	-142.502	109.955	-.168	-124.714	112.533	-.147
Behavioral	-23.144	78.342	-.036	-9.274	80.429	-.014
Property	101.812	67.627	.188	98.589	67.946	.182
Alcohol & drug	7.280	66.546	.015	11.812	66.983	.025
Pre-TRD jail bed days used (1 year prior)	-.171	.719	-.028	-.215	.723	-.035
Exposure time in community	.538	.159	.410***	.538	.159	.410***
Length of stay 30+ days	--	--	--	-42.679	53.810	-.091
Constant	-151.177	175.464	--*	-133.371	177.405	--*
R <sup>2</sup>		.272			.285	
R <sup>2</sup> Change		--			.013	

NOTES:

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ , †  $p < .10$

<sup>a</sup> Reference categories: White (race), Vehicle/UUMV (charge of booking)

<sup>b</sup> Coefficients include the unstandardized coefficient, standard error, and standardized coefficient (Beta)

## Sanctions Received

The cross tabulation and Pearson chi-square statistic in Table 46 suggest that individuals who spend 30 days or more participating in TRD program are significantly less likely to receive a formal sanction while under probation supervision. This bivariate relationship is suggested by the statistically significant chi-square value of 5.805 ( $p < .05$ ) and the observation that 74.5% ( $n = 82$ ) of the 110 sample members who received a formal sanction spent 29 days or less in the TRD.

Table 46: Probation Sanctions Received by Length of Stay Group (Split Sample Analysis)

	n	Sanctions <sup>a</sup>		Time to First Sanction <sup>b</sup>
		No Sanction	At Least one Sanction	Mean (SD)
29 days or less	197	115	82	237.62 (193.878)
30 days or more	102	74	28	236.79 (197.175)
<b>Total</b>	<b>299</b>	<b>189</b>	<b>110</b>	

NOTES:

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ , †  $p < .10$ , (ns) = not significant

<sup>a</sup>  $\chi^2(1) = 5.805^*$ ,  $\Phi = -.139^*$ , Cramer's  $V = .139^*$

<sup>b</sup> Mean difference = 0.83,  $t(108) = -.020$  (ns)

## Section III: Research Question 8

Table 47 contains the results of a multivariate logistic regression whereby receiving a formal sanction is regressed on the length of stay groups of 29 days or less and 30 days or more. Findings suggest that the statistically significant, negative bivariate relationship between spending 30 days or more in the TRD and receiving a probation sanction is upheld in the multivariate context ( $\text{Exp}[B] = 0.550, p < .05$ ).

Table 47: Logistic Regression – Probation Sanctions Regressed on Length of Stay Group (Split Sample Analysis)

	Model 1: Controls Only			Model 2		
	B <sup>b</sup>	SE	Exp (B)	B	SE	Exp (B)
Hispanic origin	-1.579	1.193	0.206	-1.712	1.215	0.181
Race <sup>a</sup>						
Black	1.293	.348	3.637***	1.272	.352	3.567***
Other	-.638	.700	0.528	-.604	.708	0.547
LSCMI total score <sup>c</sup>	.047	.021	1.048*	.048	.021	1.049*
Age at entry	-.037	.015	0.964*	-.038	.015	0.963*
Charge of Booking						
Person	.626	.596	1.870	.673	.600	1.961
Behavioral	-.404	.453	0.668	-.329	.459	0.720
Property	.343	.399	1.409	.397	.403	1.488
Alcohol & drug	.496	.440	1.643	.596	.449	1.815
Pre-TRD jail bed days used (1 year prior)	.007	.004	1.007‡	.007	.004	1.007‡
Exposure time in community	.001	.001	1.001	.000	.001	1.00
Length of stay 30+ days	--	--	--	-.598	.309	0.550*
Constant	-1.265	.933	0.282‡	-1.029	.948	0.537*
Nagelkerke R <sup>2</sup>		.191			.209	

NOTES:

\*  $p \leq .05$ , \*\*  $p \leq .01$ , \*\*\*  $p \leq .001$ , ‡  $p \leq .10$

<sup>a</sup> Reference categories: White (race), Vehicle/UUMV (charge of booking)

<sup>b</sup> Coefficients include Beta, Standard Error, and Log Odds

<sup>c</sup> All continuous variables are mean centered for ease of interpretation

While the findings regarding the influence of the TRD on receiving a future sanction are statistically significant, the *t*-statistic (Table 46) and results of the OLS regression model (Table 48) suggest participation in TRD programming for 30 plus days does not impact the amount of time between MCIJ release and the date of the first sanction any differently than a shorter amount of Dorm exposure. It is important to remember, however, that even though these analyses suggest that a length of stay of 30 days or more in the TRD is not significantly associated with a greater time to first sanction, results do suggest that participation in TRD programming for 30 plus days significantly decreases the likelihood that an individual will receive a formal sanction to begin with.

## Section III: Research Question 8

Table 48: OLS Regression – Time to First Sanction Regressed on Length of Stay Group (Split Sample Analysis)

	Model 1: Controls Only			Model 2		
	b <sup>b</sup>	SE	B	b	SE	B
Hispanic origin	-175.564	182.733	-.093	-181.181	183.995	-.096
<b>Race<sup>a</sup></b>						
Black	10.212	40.119	.026	10.735	40.322	.027
Other	62.154	107.654	.057	58.480	108.454	.053
LSCMI total score	-3.961	3.132	-.131	-3.933	3.147	-.130
Age at entry	.464	1.818	.026	.404	1.831	.022
<b>Charge of Booking</b>						
Person	38.065	68.401	.061	38.653	68.730	.062
Behavioral	-8.813	60.339	-.016	-7.265	60.714	-.013
Property	54.893	52.736	.128	57.850	53.375	.135
Alcohol & drug	-20.399	54.726	-.046	-18.174	55.195	-.041
Pre-TRD jail bed days used (1 year prior)	.150	.459	.032	.147	.461	.032
Exposure time in community	.489	.124	.399***	.484	.125	.395***
Length of stay 30+ days	--	--	--	18.720	41.115	.044
Constant	13.226	139.675	--			
R <sup>2</sup>		.245			.247	
R <sup>2</sup> Change		--			.002	

NOTES:

\*  $p \leq .05$ , \*\*  $p \leq .01$ , \*\*\*  $p \leq .001$ , †  $p \leq .10$

<sup>a</sup> Reference categories: White (race), Vehicle/UUMV (charge of booking)

<sup>b</sup> Coefficients include the unstandardized coefficient, standard error, and standardized coefficient (Beta)

## Revocation of Probation Supervision

The last set of relationships explored for this research question are those between the outcomes of experiencing revocation of probation supervision and time to first probation revocation and having spent 30 or more days engaged with TRD programming at MCIJ. Results of the cross tabulation in Table 49 suggest that there is a statistically significant, negative relationship between length of stay in the TRD and future probation revocation ( $\chi^2(1) = 3.101, p < .01$ ). In other words, clients who spent 30 days or more in the TRD were significantly less likely to experience a future probation revocation than were clients who spent 29 days or less participating in TRD programming.

Table 49: Probation Revocation by Length of Stay Group (Split Sample Analysis)

	n	Revocation <sup>a</sup>		Time to First Revocation <sup>b</sup>
		No Revocation	Probation Revocation	Mean (SD)
29 days or less	197	141	56	292.95 (185.536)
30 days or more	102	73	29	308.14 (195.643)
<b>Total</b>	299	214	85	

NOTES:

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ , †  $p < .10$ , (ns) = not significant

<sup>a</sup>  $\chi^2(1) = 3.101^*$ ,  $\Phi = -.145^*$ , Cramer's  $V = .145^*$

<sup>b</sup> Mean difference = 10.107,  $t(83) = 2.351^*$

## Section III: Research Question 8

This significant relationship maintains through the addition of various controls to the multivariate model, as is shown in Table 50 ( $B = -.232$ ,  $\text{Exp}(B) = 0.808$ ,  $p < .01$ ). Specifically, these results suggest that clients who spend 30 or more days engaged with TRD programming are 0.808 times less likely to experience revocation of probation supervision than are clients who spend 29 days or less in the TRD.

Table 50: Logistic Regression – Revocation of Probation Supervision Regressed on Length of Stay Group (Split Sample Analysis)

	Model 1: Controls Only			Model 2		
	B <sup>b</sup>	SE	Exp (B)	B	SE	Exp (B)
Hispanic origin	-.160	.926	0.852	-.165	.925	0.848
<b>Race<sup>a</sup></b>						
Black	.676	.354	1.967‡	.674	.355	1.962‡
Other	-.689	.720	0.502	-.687	.721	0.503
LSCMI total score <sup>c</sup>	.060	.023	1.062**	.060	.023	1.062**
Age at entry	-.052	.016	0.949***	-.052	.016	0.949***
<b>Charge of Booking</b>						
Person	.314	.591	1.369	.316	.592	1.372
Behavioral	-.219	.457	0.809	-.215	.459	0.806
Property	-.299	.427	0.742	-.296	.429	0.744
Alcohol & drug	-.151	.477	0.860	-.146	.479	0.864
Pre-TRD jail bed days used (1 year prior)	.008	.004	1.008*	.008	.004	1.008*
Exposure time in community	.002	.001	1.002‡	.002	.001	1.002‡
Length of stay 30+ days	--	--	--	-.232	.021	0.808**
Constant	-1.882	1.004	0.152‡	-1.871	1.010	0.154‡
Nagelkerke R <sup>2</sup>		.186			.193	

NOTES:

\*  $p \leq .05$ , \*\*  $p \leq .01$ , \*\*\*  $p \leq .001$ , ‡  $p \leq .10$

<sup>a</sup> Reference categories: White (race), Vehicle/UUMV (charge of booking)

<sup>b</sup> Coefficients include Beta, Standard Error, and Log Odds

<sup>c</sup> All continuous variables are mean centered for ease of interpretation

Finally, results shown in Tables 49 and 51 also indicate that, when revoked, individuals who spend 30 days or more in the TRD are revoked significantly later (measured in days between MCIJ release and date of revocation) than are clients who spend 29 days or less in the TRD. This statistically significant, positive relationship is observed at both the bivariate ( $t [83] = 2.351$ ,  $p < .05$ ) and multivariate levels ( $B = .129$ ,  $p < .05$ ). Taken together the results of this analysis suggest that individuals who spend at least 30 days participating in TRD programming are significantly less likely to have their probation revoked and, if revoked, they will remain successful under probation supervision for longer until that revocation occurs.

## Section III: Research Question 8

Table 51: OLS Regression – Time to Probation Revocation Regressed on Length of Stay Group (Split Sample Analysis)

	Model 1: Controls Only			Model 2		
	b <sup>b</sup>	SE	B	b	SE	B
Hispanic origin	180.480	150.974	.155	188.341	151.189	.162
<b>Race<sup>a</sup></b>						
Black	-1.961	50.607	-.005	9.032	51.798	.023
Other	17.135	125.790	.018	-15.742	130.053	-.016
LSCMI total score	2.095	4.085	.064	1.595	4.115	.049
Age at entry	1.906	2.626	.090	2.020	2.625	.095
<b>Charge of Booking</b>						
Person	95.895	79.349	.158	74.306	82.257	.123
Behavioral	-22.847	65.168	-.048	-32.013	65.818	-.067
Property	22.560	63.294	.049	15.272	63.719	.033
Alcohol & drug	-51.700	69.340	-.105	-61.572	70.048	-.125
Pre-TRD jail bed days used (1 year prior)	-1.435	.661	-.264*	-1.377	.664	-.253*
Exposure time in community	.198	.141	.164	.228	.145	.189
Length of Stay 30+ days	--	--	--	51.803	18.992	.129*
Constant	89.882	154.596	--	68.081	156.146	--
<b>R<sup>2</sup></b>		.178			.191	
<b>R<sup>2</sup> Change</b>		--			.013*	

NOTES:

\*  $p \leq .05$ , \*\*  $p \leq .01$ , \*\*\*  $p \leq .001$ , †  $p \leq .10$

<sup>a</sup> Reference categories: White (race), Vehicle/UUMV (charge of booking)

<sup>b</sup> Coefficients include the unstandardized coefficient, standard error, and standardized coefficient (Beta)

## SECTION IV. SUMMARY AND POLICY IMPLICATIONS

Driven by the eight research questions, the outcome evaluation of Treatment Readiness Dorm (TRD) programming at Multnomah County's Inverness Jail (MCIJ) was conducted on 529 individuals who participated in the program during an 18 month period (January, 2017 – June, 2018). TRD programming, a component of Multnomah County's Justice Reinvestment Program (MCJRP), is an ongoing collaborative program developed in partnership between Volunteers of America Oregon, Multnomah County Sheriff's Office, and the Department of Community Justice. Additional support for the research was provided by the Multnomah County Local Public Safety Coordinating Council and Justice Reinvestment Steering Committee. This work was funded by the Oregon Criminal Justice Commission through a Justice Reinvestment supplemental research grant.

The evaluation largely found positive outcomes associated with participation in TRD programming in MCIJ. Taken together, the results of the current evaluation suggest that longer participation in TRD programming is associated with positive impacts on attitudes toward addiction and recovery, participation in community-based substance abuse treatment programs, and improved criminal justice behavioral outcomes. In other words, clients who spent more time engaged with TRD programming were significantly better-equipped for success in the community than clients who spent less time engaged with TRD programming.

*Clients who spent more time engaged with the program were significantly better equipped for success upon reentry to the community*

### *Review of Main Findings*

#### Description of Study Sample

Program participants were 63.1% White, 82.6% Non-Hispanic, and averaged 36.1 years old at entry to the TRD. Clients had an average of 1.99 jail bookings and used an average of approximately 32 bed days in the 365 days prior to their TRD stay. The primary charges at booking were 26% Unauthorized Use of a Motor Vehicle (UUMV), 25% Property offenses, 22% Alcohol & Drug offenses, 19% Behavioral offenses, and 8% Person-based offenses.

Consistent with the larger MCJRP population, 75% of the sample was assessed as either High or Very High risk on the LS/CM-I. Clients identified their first drug of choice as 35% Methamphetamine or other amphetamine, 25% Heroin/Opioids, 19% Alcohol, 15% Marijuana, and 6% Cocaine/Crack (with less than 1% indicated Other or missing data).

### Characteristics of Dorm Stay

The average length of stay in TRD was 44.72 days (standard deviation=54.454 days), ranging from 0 to 408 days. In total, 22% of the sample spent a week or less in the TRD, 31.6% spent between 8 and 30 days, and 46.4% were in the Dorm for a month or longer. Regarding destination following release from MCIJ, 61% of TRD participants were released directly to the community in Multnomah County, 26% went to prison, and 13% were released to the custody of another jurisdiction.

### Extent of TRD Services Received

The 529 individuals in the study sample received 20,501 treatment sessions (60-90 minutes) specific to TRD programming during the 18 month observation period. This calculates out to approximately 29,600 hours of readiness for change and substance abuse treatment services.

### Impact on Attitudes toward Addiction and Treatment Readiness<sup>17</sup>

Participation in TRD programming for 30 days or more was associated with increased Recognition of an Alcohol problem and increased acknowledgement of the need for Taking Steps to address an Alcohol problem. Similarly, participation in 30 plus days of TRD programming was associated with increased Recognition of a Drug problem, although that relationship is only marginally significant.

### Impact on Treatment Outcomes

Trends in the data suggest that increased length of stay in the TRD was only marginally associated with a greater likelihood of engagement with community-based substance abuse treatment services. However, once engaged, clients who spent more time in the TRD spent a significantly longer time engaged in those post-release treatment programs.

### Impact on Future Criminal Justice Outcomes

Clients who spent more time participating in TRD programming were less likely to experience at least one jail booking and, if booked, used significantly less jail bed days in the 365 days after MCIJ release than clients who spent less time participating in TRD programming. Additionally, for clients who experienced a jail booking, the time between MCIJ release and the first subsequent jail booking was marginally longer when they spent more time participating in TRD programming.

### Main Findings:

- Average length of stay in the TRD was 44.72 days and ranged from 0 to 408 days.
- Sample members received 20,501 treatment sessions, and approximately 29,600 hours of services specific to TRD programming.
- TRD participation was associated with increased Recognition of an Alcohol and Drug problem, and a reported increase in Taking Steps to address an Alcohol problem.
- Spending a greater amount of time engaged with TRD programming was associated with increased community-based treatment retention.
- Increased length of TRD participation was marginally associated with a lower likelihood of, and time to, future jail booking.

<sup>17</sup> The impact of TRD participation on attitudes related to addiction and treatment readiness is measured by pre- to post-TRD differences in SOCRATES scores.



## Section IV: Summary and Policy Implications

Consistent with much recidivism research within the area of criminal justice policy and intervention, the current research did not find a significant relationship between TRD participation and either receipt of or time-to a felony rearrest.

In comparison to spending less time in the Dorm, individuals who participated in TRD programming longer were significantly less likely to abscond from their probation supervision, to receive a formal probation sanction, and to experience a revocation of their probation supervision. For those clients who did experience a probation revocation, individuals who spent a longer time in the Dorm remained successful for significantly longer (greater time between MCIJ release and date of revocation) than did those who spent less time participating in TRD programming.

### Ideal Length of Stay

Taking the results of analyses from multiple research questions into consideration, findings indicate that participating in TRD programming for:

- 8 or more days was associated with better outcomes than 0 to 7 days;
- 15 or more days was associated with better outcomes than 0 to 14 days; and
- 30 or more days was associated with better outcomes than 0 to 29 days.

### Interpretation of Findings

The research findings highlighted above can be translated into concrete policy implications and data-informed recommendations.

First, the current data suggest that it is critical for clients to receive at least 30 days of TRD services to achieve maximum impact. This finding was generated after examination of bivariate and multivariate statistical models designed to estimate the influence of length of TRD participation on various indicators of attitudinal change and behavioral impact. Due to internal MCSO policy regarding fulfillment of jail inmate labor contracts and the requirement that workers must be post-adjudication, once a TRD participant is sentenced, they are automatically and immediately transferred to one of the work dorms within MCIJ. This policy of automatic transfer post-adjudication leads to a situation where some clients are removed from TRD participation only to be placed in a different part of MCIJ (sometime for extensive periods of time), where their work obligations eliminate the possibility of meaningful participation in the TRD program<sup>18</sup>.

As such, one of main policy recommendations directly informed by the current research is to work collaboratively to modify internal MCSO and jail policy to allow post-sentencing clients to remain in the TRD, at least until they reach that 30 day mark, while also ensuring that labor contracts are met. To clarify, the suggestion is not that individuals should

<sup>18</sup> There is currently a one-hour session offered on one workday evening for former TRD participants to continue to engage with the treatment readiness services, but it is limited to one hour a week and therefore limits the extent to which participants can meaningfully engage with the services.

### Main Findings:

- More time spent in the TRD was associated with fewer jail bed days utilized in the 365 days post-MCIJ release.
- Increased length of participation in TRD programming decreased the likelihood of probation absconds, sanctions, and revocations.
- Spending more time in the TRD was associated with longer time to probation revocation.
- Results of the dosage analysis indicate that it is critical for clients to receive at least 30 days of TRD services to achieve

## Section IV: Summary and Policy Implications

stay in jail longer than they otherwise would, but simply that sentenced individuals should be allowed and encouraged to continue TRD program participation through that critical 30-day point instead of automatically being transferred to a work dorm.

Second, the data suggest that TRD participation increases community-based substance abuse treatment retention once initially engaged, but does not seem to have a significant impact on initial treatment engagement. One of the original goals of the TRD program was to facilitate a smooth handoff between the institutional setting and community-based treatment providers, but for various reasons this does not appear to be happening. The jail release data previously discussed highlighted that just over 10% of the sample was released directly from MCIJ to a residential substance abuse treatment facility, but this was not the case for all individuals who were found to have engaged with residential substance abuse treatment nor all individuals who were assessed as requiring a residential level of care upon release.

The period between release from the jail facility and entering either a residential or outpatient treatment program can be an especially vulnerable time for former TRD participants, especially in light of the finite amount of available treatment resources, which can lead to long periods spent on a wait list for services. Noting this gap in service provision and beneficial social support(s) and in an effort to maximize the impact of TRD services on future behavior, the Multnomah County TRD partners have already begun to brainstorm solutions to target this vulnerable time period between MCIJ release and entrance to community-based treatment services.

Overall, the findings of the current outcome evaluation lead to the conclusion that TRD programming is helping support the larger goals of HB3194 and Multnomah County's Justice Reinvestment Program. Based on a statistical analysis of various attitudinal and behavioral outcomes, this research suggests that participation in TRD programming helps to set individuals up for success upon reentry from the jail facility into the community.

# APPENDIX A: REFERENCES

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# APPENDIX B: PROGRAM INFORMATION SHEET

## Treatment Readiness Dorm (TxRD)

Multnomah County Justice Reinvestment Program (MCJRP)

“The Treatment Readiness program seeks to engage and motivate individuals at Inverness Jail to increase their readiness to engage in treatment upon release.”

Treatment Readiness Fact Sheet, March 2018. Volunteers of America Oregon.

### Project Goals

**Short-term Goal:** Provide services to individuals while incarcerated to prepare and motivate clients to fully engage with treatment programs upon release.

**Long-term Goal:** Serving MCJRP eligible men with drug/alcohol problems; conduct assessments and make recommendations regarding level of substance abuse treatment and care clients should receive upon release from custody.

### Partner Agencies and Roles

**Multnomah County District Attorney's (DA) Office:** Assigns case as MCJRP eligible (based on charge and presumptive prison sentence); includes a TxRD flag or designation with case materials in charging records.

**Multnomah County Sheriff's Office (MCSO):** Classification officer determines dorm eligibility (based on security designation) for individuals with TxRD flag; provides operational support at Inverness Jail (MCIJ).

**Volunteers of America of Oregon (VOA):** Responsible for assessments, services, and program curriculum delivered to clients of the Treatment Readiness Dorm.

**Department of Community Justice (DCJ):** Funds VOA service delivery on TxRD; conducts a formal outcome evaluation funded by the Oregon Criminal Justice Commission.

### Length of Stay Basics

Length of stay varies widely because dorm eligibility requires that the case be pre-adjudicated or sentenced but serving time on a sanction/revocation. The time an individual enters and exits the dorm is not controlled by the treatment provider (VOA). The table below shows the length of stay for 529 individuals who participated in the TxRD January 1, 2017 through June 30, 2018.

### Implementation Timeline & Capacity Changes

07/2013

OR HB3194 enacted

Sample Enrollment Period Outcome Evaluation (1/1/17 to 6/30/18)

05/2016

TxRD opens on Dorm 8 (capacity = 59 beds). Roughly 20 "pop-overs" are housed on the dorm, but not participating in the treatment readiness programming.

04/2017

TxRD moves to Dorm 10 at MCIJ (capacity = 55 beds of 78 in dorm)

Range: 0 to 471 days; Average = 49.3 days

Length of Stay (n=529)	Percent
0-7 days	19.5%
8-14 days	12.7%
15-30 days	17.0%
31-60 days	21.7%
61-90 days	13.4%
91+ days	15.7%
<b>Total</b>	<b>100%</b>

# Treatment Readiness Dorm

“The Treatment Readiness program seeks to engage and motivate individuals at Inverness Jail to increase their readiness to engage in treatment upon release.”

Treatment Readiness Fact Sheet, March 2018, Volunteers of America Oregon.

## Client Entrance to Dorm

05/2016

TxRD opens (Dorm 10) and houses 55 males incarcerated at MCIJ.

### TxRD Clients are either:



**Pre-adjudication** - serving time pre-sentence in MCIJ prior to court process



**Sentenced** - serving time for a sanction or revocation while on MCJRP community supervision

After entrance to the TxRD, VOA staff determine client eligibility for service delivery in order to remain on the dorm.

Clients on the TxRD are assessed as having a substance use disorder necessitating treatment upon release to the community.

## On-Dorm

All TxRD participants receive an ASAM assessment (i.e. level of treatment need), engage in treatment planning, and participate daily in a variety of evidence-based small group therapy and counselor-led activities.

Programming on the TxRD is facilitated by trained professionals from VOAOR.

### Evidence-Based Programming Curriculum:

**Don't Panic**  
(Process Group & Motivational Enhancement Therapy)

**Dialectical Behavioral Therapy (DBT)**  
(Group cognitive treatment)

**Group Treatment for Substance Abusers: A Stages of Change Model**

**The Matrix Model for Criminal Justice Settings** (Relapse Prevention & Skill Building)



## Client Exit from Dorm

### Pathways that participants take when exiting the treatment readiness dorm:

#### Sentenced - Prison

**Sentenced - Jail**  
(individual is transferred from the TxRD to a work or other dorm)

**Exit to Community Supervision Unsentenced -**  
Exit to the community (release ROR, released on bail, released to pretrial supervision)

**Jurisdiction Change**  
Transferred to another county or state jurisdiction; no longer in Multnomah County custody or supervision

**Removed for Lack of Participation**  
Transferred to another dorm in MCIJ

**Removed for Other Reasons**  
(e.g., mental health or physical health concerns, client-initiated safety concerns)



# APPENDIX C: VOLUNTEERS OF AMERICA OREGON PROGRAM INFORMATION

## **TREATMENT READINESS**

*Preparing for change at the Multnomah County Inverness Jail*



*A program of Volunteers of America Oregon*

The **Treatment Readiness** program seeks to engage and motivate individuals at Inverness Jail to increase their readiness to engage in treatment upon release.

VOA utilizes evidenced based practices and curriculum designed to engage people and create relationships before release to reduce their risk to re-offend. VOA staff work with Multnomah County Sherriff's Office, Department of Community Justice and Corrections Health to coordinate interventions and placement.



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## TREATMENT READINESS



*Preparing for change at the Multnomah County Inverness Jail*

*A program of Volunteers of America Oregon*

The individuals in the **Treatment Readiness** dorm will be split into four cohorts, each tied to a respective counselor (Cohort A, B, C, D). All participants will engage in ASAM assessment, treatment planning, weekly group therapy and counselor led group activities. In addition to services provided by VOA staff MCSO coordinates activities based on facility class offerings, in-jail work program scheduling, and movement logistics. Other activities to occur on the unit include exercise/yard, self-help groups, homework, mindfulness practice, meditation and writing, practice of stress management skills, 12 step work, watching treatment related videos, and celebrations of recovery.

VOAOR’s process and curriculum groups designed to motivate individuals for treatment post-release:

<p><b><i>Don’t Panic</i></b></p> <p>Process Group using Motivational Enhancement Therapy to help eliminate barriers to treatment, support motivation to change, build trust with staff and cohort, and increase understanding of program rules and expectations in the unit, as well as in post-release treatment. It presents a preview of skills they will learn, pre-contemplation exercises, and general information about how treatment works - to reduce anxiety and get oriented.</p>
<p><b><i>DBT (Dialectical Behavioral Therapy)</i></b></p> <p>An excellent beginning therapy for those entering the Treatment Readiness Unit. The key components of the DBT curriculum include: Mindfulness; Interpersonal Effectiveness; Emotion Regulation; and Distress Tolerance. The skills taught in this curriculum would be helpful for this population as incarceration combined with post-detox can be a highly stressful and emotional time for most clients.</p>
<p><b><i>Group Treatment for Substance Abuse: A Stages of Change Model</i></b></p> <p>Uses Motivational Interviewing to help clients move through the stages of change by building skills for acknowledging a problem, deciding to act, developing and executing a plan, and accomplishing other critical tasks. A Cognitive Behavioral Treatment curriculum specifically designed to meet the needs of clients who may be pre-contemplative and unsure if they have a substance abuse problem. (17 structured sessions)</p>
<p><b><i>The Matrix Model for Criminal Justice Settings</i></b></p> <p>The Matrix Model has been specifically adapted to meet the unique needs of law-involved clients and includes a focus on criminal thinking, re-entry, and adjustment issues.</p> <ul style="list-style-type: none"> <li>• <b>Relapse Prevention</b> Cognitive Behavioral Therapy combined with Drug and Alcohol Education to help clients maintain abstinence, gain a prosocial lifestyle, and offer guidance on handling triggers and cravings. (46 sessions)</li> <li>• <b>Skill building</b> Skills training and practice is essential for substance-abusing offenders. Counselor or mentor led pre-release, cognitive behavioral skill-building curriculum including Goal-setting, Problem-solving, scheduling, identifying strengths and resources, expectations of others (PO’s, family, peers, counselors, mentors), communication, identifying criminal behaviors, and an introduction to outside support groups. (23 sessions).</li> </ul>

DORM 10 GROUP SCHEDULE

	Monday	Tuesday	Wednesday	Thursday	Friday
<b>10-11:30a</b> <b>Cohort A/B</b>	DBT Skills Group (Room 116)	Matrix All Cohorts	Stages Of Change All Cohorts	DBT/ Mindfulness Activity Time	Recovery Skills Group
<b>10-11:30a</b> <b>Cohort C/D</b>	DBT/ Mindfulness Activity Time			DBT Skills Group (Room 116)	
<b>In Dorm                      Presentations</b> <b>1-2:30</b>	Educational Presentation	Educational Presentation	Educational Presentation	Educational Presentation	Movie Day
<b>4-5p</b> <b>Room 116</b>	Process Group Cohort D	Transition Group (Work dorm clients)	Process Group Cohort A	Process Group Cohort B	
	Process Group Cohort C (Rm 111)	CPR Group Ages 30 and under (Rm 107)			

## APPENDIX D: ADDITIONAL TABLES

Table D1. Overview of Variables by Data Source

	REDCap	DSS-J	CIS (aka DOC400)	eSWIS	GES	LEDS	Tx Data Sources
<b>Ownership</b>	DCJ-owned system	Multnomah County	Oregon Dept. of Corrections and DCJ	Multnomah County Sheriff's Office (MCSO)	Multnomah County Sheriffs' Office (MCSO)	Oregon State Police	DCJ
<b>Information</b>	VOA clinicians and staff who work on the TRD enter client data in intake and exit forms upon entrance to and exit from the TRD.	<ul style="list-style-type: none"> <li>• Interagency data warehouse with various contributing agencies (including MCSO, the courts, and DCJ) that is managed by a team within County IT.</li> <li>• Used to match SWIS ID to SID to ensure there is a linkable unique identifier for extraction of data from various sources.</li> </ul>		Sheriffs' Warrants and Information System (eSWIS) is the electronic record system that captures all jail booking information.	<ul style="list-style-type: none"> <li>• Group Event Scheduler (GES) module of eSWIS contains information on the nature and amount of services and programs individuals engaged in at MCIJ during booking with TRD stay.</li> </ul>	Law Enforcement Data System (LEDS)	Various data sources: <ul style="list-style-type: none"> <li>• Program intake and exit data (REDCap and ICS)</li> <li>• Client rosters associated with invoices</li> <li>• Treatment Module of CIS</li> </ul>
<b>Identifier Variable</b>	SWIS ID	All	SID	SWIS ID	SWIS ID	SID	SID (of available), Name, Date of Birth
<b>Variables</b>	Personal Identifiers: <ul style="list-style-type: none"> <li>• SWIS ID</li> <li>• Name</li> <li>• DOB</li> </ul>	SID	Abscond events	Dates of entrance to and exit from MCIJ for booking with TRD stay	# of hours engaged in various program types	Arrest date(s)	<ul style="list-style-type: none"> <li>• Treatment area (substance abuse vs. other)</li> <li>• Service type (residential or outpatient)</li> </ul>
	<ul style="list-style-type: none"> <li>• Client race and ethnicity</li> <li>• Date of entrance to TRD</li> </ul>		Sanction events	Charges at booking		ORS code for each arrest	Referral date (if available)
	Date of exit from TRD		Revocation events	Type of exit from MCIJ		Offense level	Date of program entrance
	SOCRATES scores (at intake and exit)			Jail utilization 365-days before/after TRD stay			Date of program exit

## Appendices

	REDCap	DSS-J	CIS (aka DOC400)	eSWIS	GES	LEDS	Tx Data Sources
<b>Variables (cont.)</b>	Type of exit from TRD						Discharge type (if available)
	1 <sup>st</sup> , 2 <sup>nd</sup> , 3 <sup>rd</sup> drugs of choice						
<b>Extent Missing</b>	<i>Varies by data element</i> <ul style="list-style-type: none"> <li>•SOCRATES at exit: 293 (55.4%) missing</li> <li>•Intake/exit date: 12 (2.3%) missing</li> </ul>	None	None	20 (3.8%) missing	10 (1.9%) missing	None	Unknown <sup>a</sup>

<sup>a</sup>Due to limitations in the community-based treatment data sources, it is not possible to confidently identify clients that were either (1) referred to treatment but chose to not attend/engage or (2) never referred and did not engage in treatment. As a result, we cannot be sure whether absence of data is due to the client not having engaged in treatment or no data being available