Recovery Services Evaluation Report: An Assessment of Program Completion Rates, and the Relationship Between Program Completion Status and Recidivism

2009-2012 Period

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EXECUTIVE SUMMARY

Existing literature suggests there is a strong relationship between participation in prison-based substance abuse programming and reduced recidivism. One way in which Ohio's offender population participates in substance abuse treatment is through participation in the intensive outpatient treatment program, which is the focus of this evaluation. This is a three-phase program consisting of the Treatment Readiness Phase, the Intensive Outpatient Phase, and the Recovery Maintenance phase. All phases are grounded in cognitive-behavioral therapy, aiming to change inmate thinking patterns. Prior research has demonstrated that intensive outpatient programs are a cost-effective way to reduce recidivism upon release from prison, although they are most useful when accompanied by supplemental programming (community-based aftercare).

The present study has two major goals. The first is to assess completion rates (both successful completers as well as unsuccessful discharges) of offenders participating in intensive outpatient substance abuse treatment programs in Ohio prisons during the period from 2009 to 2012. The second is to establish whether there is a significant relationship between program completion status and recidivism one year after release. This work builds on prior evaluations of Recovery Services substance abuse programs by evaluating a more recent time frame, during which data quality substantially improved over prior periods, and incorporating statistical analyses at both the bivariate level and multivariate level. The multivariate findings assess the relationship between completion and recidivism while holding numerous other inmate characteristics constant.

Several key findings emerge in this study:

- Recovery Services program completion rates are high overall, with successful completion rates ranging from 79% in 2009 to 62.4% in 2012, with an overall successful completion rate of 71.2% for the four-year period. These rates include both released offenders, as well as offenders who are still incarcerated. There is a great deal of variation in completion rates between institutions, and between years within institutions.
- Looking specifically at released offenders, there is a modest and statistically significant relationship between successful completion of Recovery Services programs and recidivism, when inmates from twenty nine institutions are examined together. Within one year of release, 7% of offenders who complete treatment have been reincarcerated, compared to 11.6% of offenders who are unsuccessfully discharged from treatment. When individual institutions are evaluated, three of the twenty nine institutions (LoCI, TCI, and OSP) show a significant relationship between completion of substance abuse treatment and recidivism one year after release. Additional analyses suggest that very small sample sizes of program participants at individual institutions compromise the ability to find statistically significant relationships between program completion status and recidivism.
- Those who successfully completed Recovery Services programs exhibit a 38% reduction in the odds of recidivism relative to those who were unsuccessfully discharged, when static risk score is held constant. This is statistically significant. Older inmates, Level 1a and 1b inmates (compared to Level 3 or higher inmates), and those incarcerated on drug-related offenses have

lower odds of recidivism during the one-year period after release, while those with higher static risk scores have a greater likelihood of recidivism. After these inmate characteristics are included in the analysis, the statistical significance of program completion drops substantially. Further analyses suggest that inmates with these characteristics (older age, lower security level, incarceration on drug-related charges, lower risk scores) are more likely to successfully complete treatment. Thus, a large portion of the relationship between completion status and recidivism is explained by the selection of particular inmates into treatment completion.

- Overall, it appears that Recovery Services substance abuse treatment programs have modest effects among program completers relative to non-completers. Future analyses should account for selection into treatment, examine other outcomes besides recidivism, utilize post-release measures of community aftercare participation, and incorporate longer time frames after release, the latter of which may help to increase the number of inmates per institution included in the analyses. At the end of 2013, for example, it will be possible to examine a two-year follow-up period for the inmates released by the end of 2011, who are the focus of the present recidivism analysis.

LITERATURE REVIEW

This study evaluates the completion rates of inmates participating in Ohio Department of Rehabilitation and Correction Recovery Services outpatient substance abuse treatment programs between 2009 and 2012. It also examines the association between completion status and recidivism during the one year post-release period among those participating in Recovery Services programs beginning January 1, 2009 through the end of 2011. It is the first version of a project that will be expanded in future drafts, but provides an initial overview of substance abuse treatment in Ohio prisons. The growing body of extant literature on corrections-based substance abuse treatment programs demonstrates effectiveness of prison-based substance abuse treatment programs as awareness of the role of substance abuse in criminal offending has become better understood (Inciardi, Martin, and Butzin 2004).

Recidivism rates (re-arrest, reconviction, reincarceration after release) are significantly lower among those who participate in or complete treatment in a prison-based therapeutic community compared to those who did not receive any treatment, even without aftercare completion (Butzin, Martin, and Inciardi 2002; Duwe 2010; Pelissier et al. 2001; Wexler, DeLeon, Thomas, Kressel, and Peters 1999). Substance abuse rates are also lower after release relative to the twelve-month pre-incarceration period among those participating in a prison-based therapeutic community (Butzin et al. 2002; Pelissier et al. 2001; Staton-Tindall et al. 2009). Although studies show modest treatment effects (Duwe 2010), there are substantial savings in the form of expenses avoided for reincarceration for each offender who is successfully treated through prison-based substance abuse programs (McCollister et al. 2003; Petersen et al. 2011).

Prison-based substance abuse treatment programs are more likely to demonstrate effectiveness when they possess particular attributes or are accompanied by additional programming. Therapeutic

communities in prisons are structured residential programs that are separate from the rest of the prison population and allow leadership by group members and both group and individual counseling (Bahr et al. 2012; Duwe 2010). Participation in these communities is associated with reductions in drug use and recidivism (Butzin et al. 2002; Inciardi 1996; Inciardi et al. 2004; Pelissier et al. 2001), particularly among high-severity offenders compared to low-severity offenders (Knight, Simpson, and Hiller 1999). Participation in intensive outpatient programs, in which offenders remain in the general prison population but participate in treatment multiple times a week, is more cost-effective than daycare (all-day but not residential) or therapeutic community programs , although recidivism rates are higher in outpatient programs relative to residential programs (Petersen et al. 2011). Another study finds that while only intensive residential programs reduce the risk of re-arrest, both prison-based residential and outpatient programs reduce the odds of substance abuse during the six month post-release period (Pelissier et al. 2001).

Type and length of treatment are important for facilitating positive outcomes. Participation in programs grounded in Cognitive Behavioral Therapy (CBT) is associated with lower recidivism and drug use for periods of six months to one year post-release (Bahr et al. 2012; Pelissier et al. 2001). It is not clear, however, what aspects of cognitive behavioral treatment are effective for changing attitudes and thinking patterns related to criminal thinking and substance abuse among inmates (Pelissier et al. 2001). Treatment consisting of contingency management, where rewards are given for positive behavior, promotes abstinence from further drug use, particularly when used in combination with CBT (Bahr et al. 2012). Some literature suggests that longer treatment periods are more effective for reducing recidivism for periods of a year or more after release, particularly for high-risk offenders with five or more prior convictions (Wexler et al. 1999; Evans, Huang, and Hser 2011). In contrast, other research advises that short- and medium-term programs of 90 to 180 days are optimal in reducing negative post-release behaviors (Duwe 2010).

Recidivism rates are significantly lower among offenders completing community-based aftercare treatment during the post-release period after having completed prison-based treatment (Butzin, et al. 2002; Inciardi 1996; Inciardi et al. 1997; Inciardi et al. 2004; Knight, Simpson, and Hiller 1999; Pelissier, Jones, and Cadigan 2007; Staton-Tindall et al. 2009; Wexler et al. 1999). The National Institute of Drug Abuse, the Substance Abuse and Mental Health Service Administration, and the Office of National Drug Control Policy promote aftercare as a central component of successful ongoing recovery after release from prison (Fletcher, Chandler, and NIDA Office of Science Policy and Communications 2006; Pelissier, Jones, and Cadigan 2007; Peters and Wexler 2005). Intensive, inpatient-based transitional aftercare programs (e.g., residence in a halfway house) have received more thorough empirical evaluation than less intensive, outpatient-based aftercare (Pelissier, Jones, and Cadigan 2007). Aftercare programs providing extensive services (vocational training, case management, and parenting support in combination with residential drug treatment) and longer treatment periods significantly reduce recidivism among recently released women offenders (Grella and Rodriguez 2011).

In the present study, variables potentially associated with completion of treatment and recidivism are controlled in the multivariate analyses (see Table 5, page 47), and are also used in the bivariate comparisons between recidivists and non-recidivists in Appendix 3 and successful and unsuccessful discharges in Appendix 4 (pages 53 and 55). The treatment characteristics include discharge history (number of successful discharges and number of unsuccessful discharges since 2005), length of time in treatment (in the Intensive Outpatient Phase), time between end of treatment and release, whether the inmate received a referral for substance abuse treatment after release, and whether it was recommended he or she seek aftercare (either in prison or in the community). The offender characteristics taken into account in the analysis include static risk score, race/ethnicity, gender, mental illness, age at commitment, most recent security level, post-release supervision status, and types of offenses committed (violent or drug-related).

Gender is an important characteristic predictive of treatment participation and recidivism. Female inmates tend to have higher lifetime history rates of nearly all psychiatric disorders relative to males (Messina, Burdon, Hagopian, and Prendergast 2006; Zlotnick et al. 2008) as well as co-occurring substance abuse/dependence that leads to prison-based treatment (Belenko and Houser 2012). Women with a history of drug use are more likely to participate in all types of prison-based substance abuse treatment compared to men (Belenko and Houser, 2012). A study of therapeutic community participants in the California prison system who were paroled indicates that prison-based treatment reduces the incidence of reincarceration for women and not men, although aftercare reduced the incidence of reincarceration for both genders (Messina et al. 2006). Some research suggests white offenders are less likely to be re-arrested, compared to racial/ethnic minority offenders, during a twelve-month period following assessment for a community-based drug treatment program in California (Evans, Huang, and Hser 2011). Yet other research on the California system finds white and black men who had been through prison-based TC's are more likely to be reincarcerated compared to Hispanic men (Messina et al. 2006). White and non-Hispanic offenders are found to be less likely to engage in substance use after release (Pelissier et al. 2001).

Age and mental health status are also important variables to consider in studying prison-based substance abuse treatment programs. Older inmates are more likely to report receiving substance abuse treatment in prison among those with identified substance abuse or dependence (Belenko and Houser 2012), and are also more likely to complete prison-based substance abuse programs (Petersen et al. 2011). Older offenders are also less likely to be re-arrested after release (Pelissier et al. 2001). A Swedish study finds that mentally ill offenders with substance abuse problems, particularly those with unstable treatment histories, have a higher-than-expected likelihood of engaging in both violent and non-violent recidivism (Alm et al. 2011). The latter research suggests that both mental health status and

mental health treatment should be taken into account in studies of recidivism among offenders receiving substance abuse treatment.

Offenders are categorized according to risk level, which is directly associated with the likelihood of recidivism (Evans, Huang, and Hser 2011; Jolley and Kerbs 2010). High-risk offenders, who are classified as offenders with five or more convictions in the five-year period preceding entry into treatment, have a greater need for more intensive substance abuse programs relative to low-risk offenders; they respond better to longer treatment durations and more poorly to shorter ones (Evans, Huang, and Hser 2011). Characteristics that are predictive of both participation in substance abuse treatment and recidivism tend to co-occur with high-risk status. High-risk inmates are more likely to be male, younger, to have received mental health services, and to have greater numbers of convictions for all offenses, including drug-related and violent offenses (Evans, Huang, and Hser 2011).

Prison-based substance abuse treatment evaluation studies are fraught with methodological problems. One major issue is the problem of potential sample selection bias, as individuals who begin treatment may differ appreciably on particular characteristics compared to those who did not begin treatment or those who began treatment but did not complete it. Selection might occur because of self-selection into treatment, selection of inmates by prison staff into programs, and/or selection of inmates via retention in treatment programs (Pelissier et al. 2001). For example, treatment motivation is significantly associated with completion of in-prison treatment and aftercare, which in turn is significantly predictive of recidivism and relapse to drug use (DeLeon, Melnick, Thomas, Kressel, and Wexler 2000). Inmates who self-select into treatment have a higher risk of re-arrest and substance abuse after release than those who do not select themselves into treatment (Pelissier et al . 2001). Parole boards are responsible for selecting inmates for prison-based treatment in some jurisdictions, and they select inmates with more severe drug- and crime-related problems and more drug-related

prior offenses (Knight et al. 1999). Therefore, any effects of treatment might actually be attributable to pre-existing differences in characteristics, and not because of the treatment itself (Baser 2006; Duwe 2010; Hahs-Vaughn and Onwuegbuzie 2006; Williamson, Morley, Lucas, and Carpenter 2011). Pelissier and colleagues (2001) underscore how the positive impact of residential treatment found in their analyses would have been less pronounced without accounting for selection bias.

A primary method for overcoming potential bias is random selection of offenders into substance treatment and control (non-treatment) groups. However, in practice it may neither be possible nor ethically warranted to deny individuals treatment (Baser 2006). Researchers in medicine (Austin 2011; Williamson, Morley, Lucas, and Carpenter 2011) and education (Hahs-Vaughn and Onwuegbuzie 2006) have made use of propensity score matching approaches to eliminate bias between treated and untreated samples. This approach has been employed recently in criminal justice research that examines the relationship between prison-based substance abuse treatment and recidivism (Duwe 2010). Propensity score matching, in combination with Cox regression models that employ a time-to-event strategy (Hosmer and Lemeshow 1999) to predict recidivism will be utilized in future versions of the present study. These approaches offer a greater level of methodological rigor than has been employed in much of the past research on substance abuse and recidivism.

Another issue is that comparison groups differ from study to study, and finer distinctions within comparison groups are not drawn. For example, when investigating the impact of treatment, some studies include treatment dropouts as a comparison group along with a separate no-treatment group (Duwe 2010; Inciardi et al. 2004). Drawing a distinction between these two groups is warranted, given that some exposure to treatment does have positive effects on behavior, even if programs are not completed (Butzin, Martin, and Inciardi 2002; Inciardi, Martin, and Butzin 2004). However, a further distinction is not drawn between whether the drop-out process is due to the inmate's behavior (e.g.,

voluntary quitting/termination, being discharged for rule infractions or program violations) or due to factors beyond the inmate's control (e.g. administrative terminations for time conflicts with programming or institutional transfers). In the present study, "negative" discharges (such as those for rule infractions) are distinguished from administrative (termed "neutral") discharges (including those for transfers, releases, and school or work responsibilities). Whereas the former are included in the analyses, the latter are not.

The present study evaluates the relationship between completion status of Recovery Services programs in Ohio prisons and recidivism at a one-year follow-up interval. When inmates enter the ODRC prison system through a reception center, they are administered the Texas Christian University Drug Screen instrument (TCU Drug Screen), where they are given an R score ranging from 0 to 9. Scores of three to five are classified as R2-level, while scores of six to nine are considered R3-level. Both levels indicate high substance abuse treatment need (Texas Christian University, Institute of Behavioral Research 2006). The R score is the key indicator used to place inmates in treatment. The Ohio DRC outpatient substance abuse treatment programs consist of three phases occurring in the order below (Bureau of Recovery Services 2011). The goal is for each phase to be administered to inmates in the same fashion across all institutions.

1. **Treatment Readiness Program (TRP)**: A 60-hour program occurring over the course of four weeks, designed to give inmates an orientation to recovery services, cognitive behavioral therapy and journaling, which are important components of the treatment process. Fifteen hours per week of programming is provided. Counselors create discharge summaries at the end of treatment to allow inmates to progress onto the next phase.

2. **Intensive Outpatient Program (IOP)**: A 180-hour program occurring over the course of twelve weeks, which includes topics covering rational thinking, criminal lifestyles, and living with others. Cognitive behavioral group therapy and journaling are key components of this phase. Fifteen hours per week of programming is provided. Counselors create discharge summaries at the end of treatment to allow inmates to progress onto the next phase.
3. **Recovery Maintenance (Continuing Care) (RM)**: Consists of Recovery Maintenance and RDAP follow-up journals in a 16-hour program occurring over the course of eight weeks. Two hours of programming per week per inmate is provided in the form of cognitive behavioral therapy and journaling. Ancillary programming is also recommended to inmates, referred to as aftercare (i.e., Alcoholics Anonymous or Narcotics Anonymous). A continuing care treatment plan is provided at the end, as well as a discharge summary from the counselor.

METHODS

Data

Data were obtained from four Excel files from ODRC Recovery Services at the beginning of February 2013, and downloaded into SPSS. The first file contained all individuals who began Intensive Outpatient Treatment while incarcerated between 2005 and 2012, classified by the institution at which services were received. Prior to 2011, data on Recovery Services participation and completion for all three phases of treatment was gathered solely for each inmate in the Intensive Outpatient Program file. Thus, a successful discharge corresponded to completion of all three phases of treatment, whereas an unsuccessful discharge corresponded to unsuccessful discharge from any of the three phases. However, between the September 2010 and May 2012, institutions began gathering information on each phase of

treatment separately for each inmate, with the majority of institutions making the change by the summer months of 2011. Thus, one could ascertain specifically during which phase inmates were unsuccessfully discharged from treatment, if at all. The second and third files received from Recovery Maintenance contained TRP and RM information for inmates entering Recovery Services during the later three-phase data collection time period. A fourth file contained TCU scores for inmates entering the ODRC prisons through the reception centers (ORW, Lorain, and CRC). However, this latter piece of data is not incorporated into the project at present, given the large amount of duplicate cases as well as cases with incorrect inmate identification numbers.

Each treatment phase file had a notable amount of missing data (i.e., missing program completion dates and/or discharge type). Information which was not present in the Recovery Services files was gleaned from the Ohio Department Offender Tracking System Portal (DOTS). Cases were cleaned so that all inmates had clear start dates, and as many cases as possible had clear reasons for and dates of unsuccessful discharges. The majority of this data cleaning process took place between February and March 2013. There was some residual clean up in April through June of 2013 to reconcile inconsistent information in a few cases, and to add in program participation data as it was updated in DOTS.

Table 1 shows the loss and addition of cases to the IOP data file for the analyses of overall program completion rates. The initial file of inmates enrolled in the Intensive Outpatient Program (IOP) contained 14422 cases. Of the 14422 cases, 16 were deleted, as inmate identification information was incorrect or missing and could not be ascertained, leaving 14406 cases. For example, a seven-digit ID was mistakenly given and there were multiple inmates with the same last name at the same institution during the same time period; the ID given was not close to matching any of these individuals. There were 1235 duplicate cases deleted from the analyses in which identical information was provided twice

about the same inmate, and another seven cases were also deleted in which inmates were either placed in segregation or transitional control and never began the IOP program, leaving 13164 cases. Initially, some offenders had multiple records in the data file, as they had up to two stints in TRP, four different stints in IOP, and three different stints in RM. The data were restructured such that each offender had only one record in the data file, leaving 12540 cases for analysis. Of this number, 6912 inmates began the most recent IOP treatment stint at or after the start of 2009. An additional 533 inmates who begin TRP after 2009 and who did not yet have data in the IOP file were added into the sample. Of this group, two never began treatment, five had incorrect identification numbers and the correct inmates could not be identified, and four were duplicate cases. This reduced the completion rates sample to 7434 cases. Finally, 167 inmates who began treatment in 2013 or who were part of treatment cohorts at institutions in years where there were fewer than ten starters were also eliminated from analysis. This leaves 7267 inmates for the completion rates analysis.

Within the population of 7267 inmates, there are 4322 inmates who completed Recovery Services programs successfully. In contrast, 1751 were unsuccessfully discharged. Among the 1751 inmates who were unsuccessfully discharged, 213 were discharged from the Treatment Readiness Program phase, 1297 were discharged from the Intensive Outpatient Program phase, and 241 were discharged from the Recovery Maintenance phase. Although not counted in the completion rates, 807 inmates were discharged for administrative, non-disciplinary reasons. An additional 387 inmates did not have updated data in the Recovery Services files or DOTS regarding discharge type or reason for discharge or had completed phase one or phases one and two of treatment but had no information on later phases of treatment. Thus these inmates could not be counted among the completion rates, and were classified as “missing” on completion status.

Table 1. Tracking of Cases Used in Recovery Services Program Completion Rate Analyses

	n
Inmates enrolled in Intensive Outpatient Treatment in Ohio Prisons, 2005-2012	14422
	↓
Inmates with correct and complete ID numbers	14406
	↓
Inmates with non-duplicate information who began IOP program without either being sent to segregation or released prior to treatment start date	13164
	↓
Inmates in treatment after data file was restructured	12540
	↓
Inmates who began most recent IOP stint on or after January 1, 2009 (regardless of release date or release status)	6912
Adding TRP starters from 2011 or later (who are later releases or still incarcerated)	7445 +533 cases (not in original file)
	↓
Inmates who started treatment and who had correct ID numbers and non-duplicate cases	7434
	↓
Inmates who began most recent treatment stint prior to January 1, 2013 who are in treatment cohorts with ten or more cases	7267

Table 2 shows the loss of cases from the IOP file based on various criteria into the final analytic sample (offenders who were released on or prior to December 31, 2011, also referred to as the recidivism sample). The first four steps narrowing down the sample are the same as for the completion rates group above.

Table 2. Tracking of Recovery Services Cases Used Analysis of Discharge Status Predicting Recidivism

	n	% of Original File
Inmates enrolled in Intensive Outpatient Treatment in Ohio Prisons, 2005-2012	14422	100.0
	↓	
Inmates with correct and complete ID numbers	14406	99.9
	↓	
Inmates with non-duplicate information who began IOP program without either being sent to segregation or released prior to treatment start date	13164	91.3
	↓	
Inmates in treatment after data file was restructured	12540	87.0
	↓	
Inmates with release dates on or before December 31, 2011 (12 month follow-up period)	7682	53.3
	↓	
Inmates beginning most recent IOP stint on or after January 1, 2009	2910	20.2
	↓	
Inmates who were successfully or unsuccessfully discharged and have valid data on final completion status	2554	17.7

Of the 12540 cases remaining after the data file was restructured, 1761 offenders were released on January 1, 2012, or later, and 3097 had missing data on the release variable, meaning they were still incarcerated as of March 2013. A total of 7682 inmates had release dates on or before December 31, 2011, and thus remained for evaluation of recidivism at twelve months post-release. Of the 7682 inmates, 2910 began their most recent Intensive Outpatient treatment program on or after January 1, 2009, and were selected for analysis, given that Recovery Services data quality substantially improved

relevant to current operations during this later time period. Twelve inmates were removed from the sample because of a lack of data on the IOP treatment completion status variable. Data were considered "missing" because discharge dates had not been input into DOTS or the Recovery Services database, or reason codes for unsuccessful discharges were either unclear or they had not been input into DOTS or the Recovery Services database. Finally, 344 inmates were removed from the sample because they had neutral (administrative) discharges from Recovery Services programs. This leaves a final analytic sample of 2554 inmates for the prediction of recidivism. Of the 2554 inmates, 1884 were successfully discharged from Recovery Services programs and 670 were unsuccessfully discharged. Examining the unsuccessful discharges, 631 are from the Intensive Outpatient phase, and 39 are from the Recovery Maintenance phase.

The Treatment Readiness Program and Recovery Maintenance files were merged into the IOP file by inmate identification number. This was done for the completion rates and recidivism samples separately. Inmates in the completion rates sample had data on one to three phases of treatment, depending upon during which time period their data was collected. Discharge information from the most recent phase of treatment during the most recent treatment stint was used to determine final completion status. For instance, if an inmate completed IOP successfully in 2009 but then was unsuccessfully discharged from TRP in 2012, they were classified as an unsuccessful discharge.

In the recidivism sample, it was discovered that none of the inmates had valid data on the TRP phase from the three-phase data collection period. For inmates already enrolled in IOP, data were not gathered retrospectively on TRP when the three-phase data collection period went into effect. Additional investigation revealed that all of the inmates who had data on the TRP began the first phase of treatment in late 2011. All were either still incarcerated in March of 2013 or had been released later than December 31, 2011 and thus could not be evaluated for recidivism at the twelve month follow-up

period post-release. However, 224 of the 2554 inmates in the analytic sample had valid data on the Recovery Maintenance phase. This information was used in combination with IOP discharge information to determinate completion status. Discharge information from the most recent phase of treatment during the most recent treatment stint was also used to determine final completion status.

Additional data were accessed from the DOTS warehouse with the assistance of former ODRC Senior Researcher Paul Konicek. The variables obtained were included as control variables in multivariate analyses predicting recidivism. They included release status of Recovery Services participants, recidivism, static risk scores, race/ethnicity of inmate, gender of inmate, mental health classification while incarcerated (severe, non-severe, and/or on general caseload), age at commitment, supervision status post-release, most recent security level while incarcerated, and whether the inmate was incarcerated on any drug-related or any violent offenses. Five additional variables were obtained from the Recovery Services data file, including aftercare status, community referral status, the number of unsuccessful discharges since 2005, the number of unsuccessful discharges since 2005, and length of time in IOP treatment. Time between treatment and release is calculated using the DOTS release date and the most recent Recovery Services IOP end date. The coding and descriptions of variables are presented in more detail in the next section.

Variables and Coding

The key independent variable in the analyses predicting recidivism is *discharge status* (also referred to as "completion status"). Discharges are classified as successful or unsuccessful ("negative"). This classification strategy for completion status (also referred to as "discharge status") is described in more detail in the footnote at the bottom of Table 3 (see page 37). It is coded as successful completion=1 and unsuccessful discharge=0. The dependent variable in the analyses is recidivism. The recidivism variable indicated whether the inmate was reincarcerated, either for a technical violation of

supervision or a new crime, between the date of release and the period ending twelve months after release, as opposed to not reincarcerated. It is coded such that no recidivism=0 and recidivism=1. The remainder of the independent variables, which are the control variables, are described in the paragraphs that follow.

Gender is a dichotomous variable, coded such that female=0 and male=1. *Race/ethnicity* is also dichotomous, coded so that white/Non-Hispanic =0 and Asian, Black, Other Race, or Hispanic=1. Three variables, which are not mutually exclusive, indicate mental health status. *Severe mental illness* indicates whether the inmate has received such a diagnosis (i.e., bipolar disorder, schizophrenia) and is coded no=0 and yes=1. *Non-severe mental illness* provides information as to whether the inmate has received a diagnosis of this type (i.e., anxiety disorder), and is coded no=0 and yes=1. A third variable, *general mental health caseload,* suggests whether an inmate has received mental health services, regardless of diagnosis, and is coded no=0 and yes=1. *Static risk score*, also referred to as risk score or risk level, is an ordinal variable ranging from -1 to 8, and reflects the total RAP assessment score based on an inmate's criminal history. Scores up to five are considered basic risk level, and scores from six to eight are considered intensive risk level (i.e. greater probability of criminal reoffending).

Supervision status indicates whether the offender is under supervision after release, coded as no=0 and yes=1. This includes inmates released under PRC, parole, judicial release, and IPP PRC, as well as one inmate who was released to ITD boot camp and subsequently to IPS Parole, and another inmate who was on TRC and released to a halfway house. *Age at current commitment* is a continuous variable representing how old the offender was at the beginning of the current incarceration. *Most recent security level* represents the security level at which an inmate was classified prior to release. This information, including the date it was collected, is prior to the date of release for most inmates; however, for those who were reincarcerated on a technical violation of parole or who otherwise were

reincarcerated on the same inmate number, it is taken on the date they are reclassified upon return to prison. Thus, for these inmates, date of latest security level is after the release date. For the bivariate analyses, security level is an ordinal variable, coded such that Level 1A=1, Level 1B=2, Level 2=3, Level 3=4, Level 4A=5, Level 4B=6, Level 5B=7. In the multivariate analyses, it is coded with a series of three dummy variables such that no=0 and 1=yes to each of three levels, Level 1, Level 2, or Level 3 and higher. The Level 3 or higher variable is left out of the analysis, and therefore becomes the contrast or comparison category. This allows a finer distinction to be drawn between minimum- and moderate- to high-security inmates. *Drug-related offenses* is coded such that no=0 and 1=yes and indicates whether an inmate has one or more of up to twenty drug-related offenses among all the offenses for which he or she is currently incarcerated. This would include crimes such as drug possession, trafficking in drugs, illegal manufacturing of drugs, and preparing drugs for sale. *Violent offenses* is coded such that no=0 and 1=yes, and suggests whether in inmate has one or more of up to thirty-seven offenses among all the offenses for which he or she is currently incarcerated, any of which are categorized as "offenses of violence" according to the Ohio Revised Code 2901.01(A)(9) (2013). Examples of such crimes include aggravated murder, voluntary manslaughter, felonious assault, and aggravated assault.

Aftercare status indicates whether the inmate was encouraged to find a follow-up program on his or her own, either in the institution or community after release, to support recovery, and is included in the Recovery Services data file. This includes Narcotics Anonymous, Alcoholics Anonymous, or other related programs, and is coded such that no=0 and yes=1. *Community referral* denotes whether the inmate was referred to substance abuse treatment in which he or she will participate after his or her release, and is also included in the Recovery Services data file. It is coded such that no=0 and yes=1. *Length of time in treatment* is a continuous variable, representing the number of days in treatment, calculated as the end date in the most recent stint in IOP minus the start date of the most recent stint in IOP. *Time between treatment and release* is a continuous variable, in number of days, calculated as the

inmate's release date minus the end date of the most recent stint in the Intensive Outpatient Phase. *Number of successful completions* and *number of unsuccessful discharges* are the sum totals of the number of successful completions and the number of unsuccessful discharges from the IOP phase since 2005, including the current discharge.

Multivariate Analytic Strategy

In the multivariate analyses (Table 5, page 47), discharge status was used to predict recidivism. Analyses were conducted to detect the presence of statistical mediation, which means that all or part of the impact of discharge status from Recovery Services programs on recidivism is explained by other variables. In other words, the impact of discharge status on recidivism is indirect. To formally test mediation, Barron and Kenny's method (1986) was utilized. This process is described in the fourth footnote at the bottom of Table 5.

RESULTS

Completion Rates for Full Sample

Table 3 (beginning on page 37) displays offender completion rates in Recovery Services programs by institution and year, among 7267 inmates beginning their most recent Recovery Services treatment stint between 2009 and 2012. Results are aggregated for treatment participants across all institutions as well as are reported by specific institution. Just over seventy-one percent of inmates (n=4322) who began their most recent treatment stint between 2009 and 2012 completed it successfully. In contrast, just under 29% (n=1751) were discharged because of negative behaviors they exhibited in treatment and/or during incarceration, or because they voluntarily withdrew.

Comparing institutions, it can be seen that completion rates vary greatly both between institutions and within institutions in terms of the year the inmate began their most recent treatment

stint. In Table 3, several institutions have relatively high and stable discharge patterns across time. DCI, FPRC, and MCI all show successful completion rates of well over 80% across all years. More research is needed to determine whether selection processes into treatment, the manner in which counselors carry out the treatment protocol, or other variables account for the high completion rates. Further analyses (not shown) examined the reasons for discharge among all unsuccessful and neutral (administrative) discharges by each institution and year in which the inmate began the most recent stint of treatment. Appendix 1 (beginning on page 48) describes patterns in reasons for unsuccessful discharges, and changes over time in these patterns, by institution.

There are a few cases where there are so few inmates in treatment at an institution in a particular year that they are not shown in Table 3. FMC had just seven inmates in the Intensive Outpatient program, all of whom successfully completed treatment, in 2011. Recovery Services spreadsheets comments indicate that the IOP program was temporarily suspended in 2009 at LeCI, where there were two successful completers and five unsuccessful discharges that year. MEPRC had four successful completers and three unsuccessful discharges in 2009, but no program data after that time. (The institution closed). There was one successful completer at ToCI in 2010 as well, but no unsuccessful discharges.

Bivariate-Level Association Between Discharge Status and Recidivism

Table 4 (page 44) focuses on the analytic sample, and displays the bivariate relationship between discharge status from Recovery Services programs and twelve month recidivism rates. Results are also shown by institution, as well as aggregated across all institutions. Findings should be taken with caution, given the very small sample sizes at many institutions (ten or fewer cases in several cells). With that caution in mind, the overall pattern is that having a successful discharge from Recovery Services is statistically significantly associated with lower recidivism across all Ohio institutions (χ^2=14.073, p=.000).

Looking at the bottom rows of Table 4, it can be seen that whereas 7% of inmates who successfully completed substance abuse treatment engaged in either a new crime or technical violation of supervision leading to reincarceration within one year, nearly 12% of offenders who were unsuccessfully discharged did so. Examining each institution individually, the great majority of program participants released from prison were not reincarcerated during the one-year post-release period (comparing non-recidivists to recidivists in Table 4).

At 26 of the institutions, there was no significant association between discharge status and recidivism. At DCI, there were no unsuccessful discharges among the released offenders, and LorCI and ToCI had no recidivists among the released offenders, so a relationship between discharge and recidivism could not be ascertained. The relationship between discharge status and recidivism was significant at conventional levels at three institutions. LoCI participants in Recovery Services exhibited a significant relationship between discharge status and recidivism (χ^2=4.286, p=.038). Of the 87 inmates who were successfully discharged, 2.3% committed a technical violation or new crime and were reincarcerated, whereas 97.7% did not recidivate. Five of the inmates who were unsuccessfully discharged (10.6%) were reincarcerated, whereas 89.4% (n=42) of the unsuccessfully discharged were not.

Among OSP Recovery Services participants, the relationship between discharge status and recidivism was significant as well (χ^2=6.698, p=.01). Forty six of 53 discharges were successful completions, and none of the successfully discharged offenders was reincarcerated during the year after release. However, 14.3% of the unsuccessfully discharged, or one inmate, was reincarcerated for a technical violation or new crime. The number of unsuccessful discharges at OSP is very small, however (7 of 53 inmates). Additionally, there was a significant association between discharge status and recidivism at TCI (χ^2=5.554, p=.018). Of the successfully discharged program participants, 3.1% was

reincarcerated for a technical violation or new crime, but 16.7% of those in the unsuccessful discharge group were reincarcerated.

A power analysis was conducted to examine whether the individual institutional sample sizes were adequate enough to detect statistically significant differences in the proportions of recidivists among program completers compared to non-completers. This is described in Appendix 2 (page 52). According to this analysis, the institutional sample sizes are not large enough to detect statistically significant effects, and so findings should be treated with great caution. Furthermore, multivariate analyses cannot feasibly be conducted separately for each institution.

Bivariate-Level Comparisons of Recidivists vs. Non-Recidivists

Significant differences between means and percentages on all variables comparing the recidivism and non-recidivism groups are shown in Appendix 3 (beginning on page 53). The two groups differ in several important respects. The non-recidivist group has a significantly higher percentage of successful program completions (and therefore a lower percentage of unsuccessful discharges) relative to the recidivist group. Compared to the recidivists, the non-recidivists also have significantly more successful IOP completions over time, fewer unsuccessful prior IOP discharges over time, lower risk scores, and longer treatment periods in the most recently attended IOP program. The recidivist group has a significantly higher proportion of offenders who are male, are under supervision post-release, have committed violent offenses, were incarcerated at younger ages, and were incarcerated at higher security levels prior to release. Interestingly, the recidivism group also has a significantly lower proportion of offenders who were incarcerated for drug-related offenses.

Bivariate-Level Comparisons of Successful Program Completers vs. Unsuccessful Discharges

Appendix 4 (page 55) examines whether significant differences exist between successfully discharged inmates versus the unsuccessfully discharged. There are considerable differences. Consistent with Appendix 3, the unsuccessfully discharged have a significantly higher rate of recidivism relative to the successfully discharged. Unsuccessfully discharged inmates have significantly fewer days in IOP treatment, are less likely to have had aftercare recommended, and are also less likely to receive a referral for community care after release compared to successful completers. In other words, if inmates drop out or are terminated from Recovery Services programs, they have a much lower likelihood of receiving any further services compared to those who persist with treatment. The unsuccessfully discharged also have significantly fewer total successful discharges and significantly more total unsuccessful discharges since the period beginning in 2005.

Appendix 4 also shows that the unsuccessfully discharged have higher risk scores, are more likely to be male, are more likely to have both severe and non-severe mental illnesses, were incarcerated at younger ages, and are most recently incarcerated at higher security levels relative to the successfully discharged. Thus, the unsuccessfully discharged inmates possess a preponderance of characteristics predictive of recidivism. The successfully discharged are more likely to be supervised after release, and are more likely to have drug-related offenses for which they received their current prison sentence. This might suggest that while the unsuccessfully discharged have greater overall risk of future criminal offending, the successfully discharged have a particular risk given their greater past level of involvement in drug-related crime and greater likelihood of being under supervision.

Multivariate Models—Discharge Status and Control Variables Predicting Recidivism

Table 5 (page 47) shows the results of the logistic regression analyses predicting the odds of recidivism one year after release. Logistic regression is employed given that the dependent variable is dichotomous (i.e., no recidivism vs. recidivism) (DeMaris, 1995). Each coefficient in Table 5 represents

the log odds of recidivism for each one-unit increase in the corresponding independent variable. The exponentiated coefficient, exp(B), is the odds ratio. One can also interpret results such that 100*(exp(B)-1) is the percentage change in the odds of recidivism for each unit increase in the corresponding independent variable (DeMaris, 1995).

A few things must be noted about the analyses presented in Table 5. Model 1 in Table 5 is the "baseline" model where the direct impact of discharge status on recidivism can be observed, controlling for offender risk. Of all the independent variables, inmate risk score is most strongly correlated with recidivism (r=.15, p=.000), and is strongly predictive of recidivism in a logistic regression model (exp(B)=1.28, p=.000). Being successfully discharged from Recovery Services programs is significantly and negatively correlated with recidivism (r= -.074, p=.000). It was decided to include risk level in the baseline model, because if the impact of discharge status is significant while holding risk level constant, this provides stronger evidence that Recovery Services programs have a distinct impact on offender behavior.

For simplicity of presentation, not all the steps of the mediation analyses are shown here. In Model 2 of Table 5, only the variables that were significant during each of the three steps of the mediation test are shown. These include any drug-related offenses, security level, age at commitment, and risk score.

Observing the findings in Table 5, Model 1, the coefficient for discharge status represents the impact on recidivism for those inmates who successfully completed the program relative to those who were unsuccessfully discharged. It reveals that offenders who were successfully discharged from Recovery Services programs have 38% lower odds of recidivism relative to those who were unsuccessfully discharged, at average levels of risk. Each unit increase in an offender's static risk score is associated with a 27% increase in the odds of recidivism.

In Model 2, the inclusion of the mediators diminishes the significance of discharge. Even though the magnitude of discharge status is reduced, it still retains a marginal level of statistical significance (p=.076), and effects a 27% reduction in the odds of recidivism. This suggests that successful substance abuse treatment program completion is related to reducing the likelihood of reincarceration, although much of its impact is transmitted through other inmate characteristics. In Model 2, the effect of risk level remains unchanged, and higher risk scores are associated with increased recidivism. There is a 2% reduction in the odds of recidivism for each year older that an inmate is at the time of incarceration. While inmates who were incarcerated at Level 2 security do not differ relative to Level 3 security in the likelihood of recidivism, those in Level 1 security have 37% lower odds of recidivism relative to those in Level 3 or higher security, which is marginally significantly different. Inmates who are incarcerated for one or more drug-related offenses have 29% lower odds of recidivism compared to inmates who are incarcerated for non-drug related offenses, which is also marginally significant.

Correlations between variables were examined and some additional bivariate analysis were conducted (not shown in the table) to better understand the mediation effects. In Appendix 4 it can be seen that inmates who are successfully discharged from Recovery Services were incarcerated at older ages than inmates who were unsuccessfully discharged, and Table 5 shows that being older at the time of incarceration reduces recidivism. Therefore, program completers are less likely to recidivate in part because they are older. In terms of security level, the average security level of successful completers is lower than that of those who are unsuccessfully discharged.

Further analyses reveal that among successful completers, 62.8% of the inmates were Level 1a or 1b, 31.7% were Level 2, and 5.5% were Level 3 or higher. Among unsuccessful discharges, 46.1% of the inmates were Level 1, 39.3% were Level 2, and 14.6% were Level 3 or higher. Lower security level prior to release is also associated with reduced odds of recidivism, specifically when Level 1 offenders

are compared to Level 3 offenders (although Level 2 and Level 3 are not significantly different from one another in the odds of recidivism). Thus, part of the effect of substance abuse treatment program completion on recidivism is due to incarceration at lower security levels. Appendix 4 also demonstrates that a higher proportion of successful completers have come to prison because of drug related offenses compared to those who are unsuccessfully discharged, and drug-related incarcerations also reduce the likelihood of recidivism. This suggests that successful completers are less likely to recidivate also in part because they have come into prison on drug-related charges.

DISCUSSION AND CONCLUSION

The present study represents the first step toward elucidating the impact of completion of Recovery Services programs in Ohio prisons on the likelihood of recidivism twelve months after release. Results show completion of prison-based outpatient substance abuse treatment is modestly related to a reduction in recidivism. However, particular inmate characteristics are associated with program completion, which are also related to reductions in recidivism.

Overall, outpatient substance abuse treatment program completion rates are high, and right in the target range of 65% to 70% successful completion. Seven out of ten inmates who had non-missing program information and who were not administratively discharged did successfully complete the programs, among inmates beginning treatment between 2009 and 2012. This is true of both the broader population of inmates who started programs, and among those who were released from prison by the end of 2011. Completion rates are highly variable between individual institutions and from year to year. Only a handful of institutions (DCI, FPRC, MaCI, MCI) have successful completion rates that are relatively consistent or consistently high across years.

Despite generally high completion rates, there is a pattern such that the proportion of discharges which are successful decreases between 2009 and 2012, while the proportion of unsuccessful

discharges increases. A general pattern across institutions is that increases in unsuccessful discharges are typically attributable to more voluntary withdrawals and/or terminations for rule violations in a particular year relative to the prior year during the four-year period. Changes in institutional program staffing, administrative leadership, or stricter enforcement of policies leading to punishment for RIB infractions might explain the trend of more inmates being negatively discharged from treatment over time. Further investigation into institutional cultures and policies is needed to understand these fluctuations in completion rates.

Of key importance is the link between program completion and recidivism. The preliminary pattern of findings presented here is that Recovery Services intensive outpatient treatment programs have effects that are statistically significant (across all institutions) but moderate in magnitude. In Table 4, three institutions (LoCI, OSP, TCI) show a statistically significant relationship between successful discharge and recidivism, whereby the rate of recidivism is higher among inmates who are unsuccessfully discharged from programs compared to those who successfully complete them. The relationship is also marginally significant for RiCI (p=.055), and approaches marginal levels of significance at RCI (p=.117) and NCI (p=.133). At many of the institutions, there is no relationship between recidivism and discharge status, because small sample sizes compromise the ability to detect statistically significant findings. In the full analytic sample of 2554 inmates, the relationship between discharge status and recidivism is statistically significant. Among inmates who are unsuccessfully discharged, 11.6% of them recidivate, whereas among inmates who successfully complete outpatient treatment, 7% of them recidivate.

Providing some credence for the efficacy of Recovery Services programs are the multivariate findings in Table 5. Static risk assessment scores, which are strongly correlated with recidivism, are held constant in Model 1 of Table 5, and in this model successful discharge is strongly predictive of lower

recidivism. When variables that affect both completion status and recidivism are held constant in Model 2 of Table 5, successful discharge drops to marginal levels of significance. Therefore, completing Recovery Services programs still has a very modest effect, albeit a weaker one, once inmate characteristics including age at commitment, security level, and drug-related offenses are taken into consideration. This suggests a mediating relationship is occurring, such that intervening variables explain the relationship between the predictor (discharge status) and the outcome (recidivism). In a true mediating relationship, however, discharge status would temporally occur prior to the mediators, and the mediators in turn would occur prior to the outcome variable (recidivism). In the case of these findings, it appears that selection effects are occurring, as age at commitment and drug-related offenses are measured at the beginning of incarceration, prior to beginning treatment. Likewise, for 60% of the inmates whose latest security classification occurred prior to release, security level is measured prior to beginning a treatment program, while for 40% it was measured after completion of treatment.

It is imperative to point out that the findings do not suggest that substance abuse programs in Ohio programs work better for some inmates relative to others. They suggest rather, that inmates with particular characteristics complete programs at higher rates, and these same characteristics are associated with a lower likelihood of being reincarcerated. Being incarcerated in a lower security institution or block is a result of either good behavior in prison and/or the committing of less serious crimes leading to incarceration. Inmates in lower-security populations may be seen as better candidates for treatment and rehabilitation in general, and may even be given greater encouragement to complete treatment. Older inmates may be seen as being more amenable to treatment, and more willing to change negative thought and behavior patterns, and may also be more likely to remain in treatment. Offenders who have come into prison on drug-related charges would be more likely to be targeted for substance abuse treatment. They may also be motivated to complete treatment in order to be considered for various privileges while incarcerated.

The current study is the first iteration of many, and it will be extended in several important ways in the future. As certain types of inmates who are at lower risk of recidivism appear to be selected into treatment completion, future drafts of this project will include propensity score analysis to evaluate selection bias.

There are several notable limitations in the present study. A most crucial limitation is the small sample sizes by institution that severely diminish statistical power and the ability to observe statistically significant relationships between program completion status and recidivism. Analyses should be replicated at future time points to allow for larger sample sizes of offenders who have been released from prison and who have been discharged from Recovery Services programs, either successfully or unsuccessfully. Another limitation is the relatively short follow up time after release from prison (one year), whereas other studies investigate a longer time frame of three to five years (Duwe 2010; Inciardi et al. 2004; Knight et al. 1999). Examining longer post-release follow up durations will also be possible with future replications of the present study.

A third limitation that necessitates future investigation is that only recidivism is examined here. The relationship between prison-based substance abuse programs and substance use/abuse rates after release could also be investigated (Butzin et al. 2002; Pelissier et al. 2001; Staton-Tindall et al. 2009). Released offenders under supervision of Ohio's Adult Parole Authority might potentially have information on substance abuse treatment after release. Further, it is problematic that there is no information on post-release community aftercare completion. A variable measuring referral to aftercare was included in analysis, which was not statistically significant, but this does not indicate whether offenders actually utilized aftercare. Community-based aftercare completion has been demonstrated to have a strong impact on lowering recidivism rates after release (Butzin, et al. 2002; Grella and Rodriguez 2011; Inciardi 1996; Inciardi et al. 1997; Inciardi et al. 2004; Knight, Simpson, and Hiller 1999; Pelissier,

Jones, and Cadigan 2007; Staton-Tindall et al. 2009; Wexler et al. 1999). Studying offenders under APA supervision might allow access to information on community aftercare participation and completion.

In summary, the findings suggest that completion of Ohio's prison-based intensive outpatient substance abuse treatment programs have modest effects on reducing recidivism one year after release. The caveat is that inmates with certain characteristics are more likely to complete programming than others. Future studies should incorporate selection into treatment into the analysis, thus demonstrating with even greater confidence that completing substance abuse treatment in prison is a useful crime prevention strategy for offenders who have been released back into the community.

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Table 3. Recovery Services Completion Status* Among Inmates Who Began Programs in 2009-2012, Full Sample[1] (n=7267)

	Program Starters	Successful Discharge[2]		Unsuccessful Negative Discharge[3]		Neutral Discharges (Admin.) Discharges[4]	Cases with Missing or Incomplete Information[5]	Mean Length of Time in IOP Treatment in Days, n=5883[6] (Std. Dev.) (Both Completion Types)	Range of IOP Treatment Time in Days, n=5883[6] (Both Completion Types)
Most Recent Institution/ Year Began Program	**n**	**n**	**%**	**n**	**%**	**n**	**n**		
AOCI									
2009	21	11	57.9	8	42.1	2	0	97.4 (54.1)	2.0-142.0
2010	122	69	61.1	44	38.9	9	0	100.9 (53.0)	0.0-183.0
2011	60	34	72.3	13	27.7	5	8	126.8 (57.5)	0.0-217.0
2012	63	44	88.0	6	12.0	3	10	90.4 (14.2)	44.0-109.0
Total	**266**	**158**	**69.0**	**71**	**31.0**	**19**	**18**	**103.9 (50.2)**	**0.0-217.0**
BeCI									
2010	59	38	73.1	14	26.9	7	0	73.5 (29.7)	2.0-92.0
2011	51	19	45.2	23	54.8	8	1	63.6 (33.4)	3.0-99.0
2012	149	79	76.0	25	24.0	9	36	85.6 (19.3)	4.0-177.0
Total	**259**	**136**	**68.7**	**62**	**31.3**	**24**	**37**	**77.5 (27.3)**	**2.0-177.0**
CCI									
2009	26	4	22.2	14	77.8	8	0	123.3 (52.1)	42.0-184.0
2010	84	69	93.2	5	6.8	10	0	113.7 (44.5)	0.0-182.0
2011	89	51	76.1	16	23.9	22	0	82.4 (18.8)	4.0-95.0
2012	95	54	76.1	17	23.9	17	7	84.7 (20.1)	11.0-107.0
Total	**294**	**178**	**77.7**	**52**	**22.3**	**57**	**7**	**96.8 (36.7)**	**0.0-184.0**

	Program Starters	Successful Discharge[2]		Unsuccessful Negative Discharge[3]		Neutral Discharges (Admin.) Discharges [4]	Cases with Missing or Incomplete Information[5]	Mean Length of Time in IOP Treatment in Days, n=5883[6] (Std. Dev.) (Both Completion Types)	Range of IOP Treatment Time in Days, n=5883[6] (Both Completion Types)
	n	n	%	n	%	n	n		
CRC									
2009	35	26	81.3	6	18.8	3	0	70.5 (19.6)	15.0-84.0
2010	28	21	80.8	5	19.2	1	1	79.0 (17.0)	34.0-93.0
2011	27	15	83.3	3	16.7	7	2	74.3 (19.1)	2.0-92.0
2012	27	16	66.7	8	33.3	2	1	77.6 (31.6)	4.0-96.0
Total	**117**	**78**	**78.0**	**22**	**22.0**	**13**	**4**	**75.0 (22.0)**	**2.0-96.0**
DCI									
2009	21	18	100.00	0	0.0	3	0	83.0 (0.0)	83.0-83.0
2010	141	127	99.2	1	0.8	13	0	88.7 (4.1)	57.0-92.0
2011	107	100	99.0	1	1.0	6	0	90.0 (4.4)	49.0-92.0
2012	100	75	96.2	3	3.8	8	14	87.5 (13.3)	13.0-101.0
Total	**369**	**320**	**98.5**	**5**	**1.5**	**30**	**14**	**88.5 (7.6)**	**13.0-101.0**
FPRC									
2009	67	54	91.5	5	8.5	8	0	85.6 (15.8)	13.0-91.0
2010	40	34	89.5	4	10.5	2	0	85.9 (15.9)	19.0-90.0
2011	48	36	97.3	1	2.7	11	0	87.7 (14.2)	4.0-92.0
Total	**155**	**124**	**92.5**	**10**	**7.5**	**21**	**0**	**86.3 (15.3)**	**4.0-92.0**
FMC									
2012	56	37	78.7	10	21.3	5	4	75.9 (22.8)	8.0-94.0
Total	**56**	**37**	**78.7**	**10**	**21.3**	**5**	**4**	**75.9 (22.8)**	**8.0-94.0**
GCI/GCC									
2009	22	20	95.2	1	4.8	1	0	96.6 (17.3)	42.0-113.0
2010	61	55	91.7	5	8.3	1	0	86.2 (19.8)	1.0-113.0
2011	57	39	70.9	16	29.1	2	0	74.9 (33.4)	0.0-114.0
2012	73	20	64.5	11	35.5	11	31	86.3 (29.2)	4.0-126.0
Total	**213**	**134**	**80.2**	**33**	**19.8**	**15**	**31**	**83.8 (27.3)**	**0.0-126.0**
HCF									
2009	20	16	84.2	3	15.8	1	0	112.7 (29.3)	24.0-135.0
2010	18	16	88.9	2	11.1	0	0	111.4 (34.5)	0.0-128.0
2011	17	8	61.5	5	38.5	4	0	90.8 (36.4)	0.0-119.0
2012	18	12	92.3	1	7.7	4	1	92.2 (5.9)	79.0-98.0
Total	**73**	**52**	**82.5**	**11**	**17.5**	**9**	**1**	**103.6 (30.7)**	**0.0-135.0**

	Program Starters	Successful Discharge[2]		Unsuccessful Negative Discharge[3]		Neutral Discharges (Admin.) Discharges[4]	Cases with Missing or Incomplete Information[5]	Mean Length of Time in IOP Treatment in Days, n=5883[6] (Std. Dev.) (Both Completion Types)	Range of IOP Treatment Time in Days, n=5883[6] (Both Completion Types)
	n	n	%	n	%	n	n		
LaECI									
2009	61	42	77.8	12	22.2	7	0	85.1 (24.0)	2.0-105.0
2010	79	59	85.5	10	14.5	10	0	84.0 (20.1)	3.0-98.0
2011	51	38	79.2	10	20.8	3	0	77.0 (24.7)	9.0-91.0
2012	71	24	47.1	27	52.9	12	8	75.2 (26.9)	7.0-93.0
Total	**262**	**163**	**73.4**	**59**	**26.6**	**32**	**8**	**81.1 (23.7)**	**2.0-105.0**
LeCI									
2010	53	25	50.0	25	50.0	3	0	60.1 (34.4)	0.0-93.0
2011	99	43	53.1	38	46.9	13	5	70.9 (31.8)	0.0-137.0
2012	57	14	31.1	31	68.9	6	6	70.8 (43.6)	0.0-126.0
Total	**209**	**82**	**46.6**	**94**	**53.4**	**22**	**11**	**67.4 (35.6)**	**0.0-137.0**
LoCI									
2009	97	61	69.3	27	30.7	9	0	76.4 (21.8)	14.0-98.0
2010	92	52	67.5	25	32.5	10	5	73.4 (29.3)	3.0-92.0
2011	85	54	73.0	20	27.0	6	5	83.5 (20.1)	1.0-92.0
2012	65	28	59.6	19	40.4	4	14	72.1 (25.1)	0.0-92.0
Total	**339**	**195**	**68.2**	**91**	**31.8**	**29**	**24**	**76.6 (24.5)**	**0.0-98.0**
LorCI									
2009	21	17	85.0	3	15.0	1	0	110.0 (57.9)	8.0-191.0
2010	31	25	80.6	6	19.4	0	0	75.0 (34.0)	1.0-105.0
2011	38	31	83.8	6	16.2	1	0	75.2 (18.7)	3.0-87.0
2012	58	23	50.0	23	50.0	3	9	85.0 (40.5)	0.0-133.0
Total	**148**	**96**	**71.6**	**38**	**28.4**	**5**	**9**	**83.7 (39.2)**	**0.0-191.0**
MaCI									
2009	35	20	60.6	13	39.4	2	0	67.3 (31.1)	8.0-93.0
2010	45	25	61.0	16	39.0	4	0	68.3 (30.7)	4.0-90.0
2011	70	37	62.7	22	37.3	11	0	71.4 (29.6)	7.0-112.0
2012	66	28	60.9	18	39.1	10	10	77.4 (19.9)	15.0-107.0
Total	**216**	**110**	**61.5**	**69**	**38.5**	**27**	**10**	**71.2 (28.4)**	**4.0-112.0**
ManCI									
2009	42	34	87.2	5	12.8	3	0	90.9 (19.8)	15.0-108.0
2010	90	60	74.1	21	25.9	9	0	75.8 (26.6)	14.0-124.0
2011	74	50	69.4	22	30.6	0	2	83.7 (23.8)	12.0-140.0
2012	116	50	64.1	28	35.9	11	27	87.4 (25.7)	6.0-153.0
Total	**322**	**194**	**71.9**	**76**	**28.1**	**23**	**29**	**83.3 (25.2)**	**6.0-153.0**

	Program Starters	Successful Discharge[2]		Unsuccessful Negative Discharge[3]		Neutral Discharges (Admin.) Discharges[4]	Cases with Missing or Incomplete Information[5]	Mean Length of Time in IOP Treatment in Days, n=5883[6] (Std. Dev.) (Both Completion Types)	Range of IOP Treatment Time in Days, n=5883[6] (Both Completion Types)
	n	n	%	n	%	n	n		
MCI									
2009	71	67	95.7	3	4.3	1	0	94.2 (18.4)	11.0-119.0
2010	94	67	82.7	14	17.3	13	0	88.3 (24.5)	13.0-114.0
2011	82	50	84.7	9	15.3	21	2	86.1 (17.4)	2.0-112.0
2012	43	25	86.2	4	13.8	8	6	86.2 (10.2)	50.0-99.0
Total	**290**	**209**	**87.4**	**30**	**12.6**	**43**	**8**	**89.3 (20.0)**	**2.0-119.0**
NCCI									
2009	127	82	73.9	29	26.1	16	0	85.6 (30.0)	1.0-131.0
2010	112	67	69.8	29	30.2	16	0	82.1 (30.0)	8.0-119.0
2011	106	57	66.3	29	33.7	20	0	82.4 (32.9)	0.0-109.0
2012	117	13	24.1	41	75.9	24	39	64.9 (32.7)	3.0-92.0
Total	**462**	**219**	**63.1**	**128**	**36.9**	**76**	**39**	**81.8 (31.4)**	**0.0-131.0**
NCCTF									
2009	53	43	89.6	5	10.4	5	0	86.3 (11.0)	23.0-90.0
2010	77	47	78.3	13	21.7	17	0	78.6 (21.2)	21.0-88.0
2011	94	61	76.3	19	23.8	14	0	76.2 (22.7)	10.0-107.0
Total	**224**	**151**	**80.3**	**37**	**19.7**	**36**	**0**	**79.5 (20.2)**	**10.0-107.0**
NCI									
2009	24	18	78.3	5	21.7	1	0	84.2 (15.0)	20.0-92.0
2010	102	48	54.5	40	45.5	12	2	62.1 (33.3)	0.0-97.0
2011	144	83	63.4	46	35.7	14	1	69.1 (30.1)	0.0-107.0
2012	105	43	50.6	42	49.4	11	9	76.7 (29.9)	2.0-104.0
Total	**375**	**192**	**59.1**	**133**	**40.9**	**38**	**12**	**70.1 (30.8)**	**0.0-107.0**
NEPRC									
2009	90	61	76.3	19	23.8	10	0	69.1 (22.6)	0.0-95.0
2010	83	60	75.0	20	25.0	3	0	69.9 (21.7)	13.0-87.0
2011	81	41	63.1	24	36.9	16	0	67.9 (24.2)	2.0-95.0
2012	80	20	62.5	12	37.5	37	11	76.7 (23.1)	10.0-95.0
Total	**334**	**182**	**70.8**	**75**	**29.2**	**66**	**11**	**69.9 (22.8)**	**0.0-95.0**
ORW									
2009	15	12	85.7	2	14.3	1	0	70.0 (16.2)	30.0-78.0
2010	138	106	82.2	23	17.8	9	0	89.1 (20.7)	8.0-113.0
2011	118	63	67.7	30	32.3	21	4	74.3 (26.5)	0.0-92.0
2012	81	42	89.4	5	10.6	10	24	96.6 (17.9)	33.0-124.0
Total	**352**	**223**	**78.8**	**60**	**21.2**	**41**	**28**	**84.4 (23.8)**	**0.0-124.0**

	Program Starters	Successful Discharge[2]		Unsuccessful Negative Discharge[3]		Neutral Discharges (Admin.) Discharges [4]	Cases with Missing or Incomplete Information[5]	Mean Length of Time in IOP Treatment in Days, n=5883[6] (Std. Dev.) (Both Completion Types)	Range of IOP Treatment Time in Days, n=5883[6] (Both Completion Types)
	n	n	%	n	%	n	n		
OSP									
2009	10	8	100.00	0	0.0	2	0	78.6 (1.1)	76.0-79.0
2010	34	28	84.8	5	15.2	1	0	68.8 (20.0)	0.0-79.0
2011	30	26	89.7	3	10.3	1	0	70.6 (19.0)	8.0-87.0
2012	26	10	62.5	6	37.5	2	8	79.1 (13.6)	42.0-101.0
Total	**100**	**72**	**83.7**	**14**	**16.3**	**6**	**8**	**72.1 (17.9)**	**0.0-101.0**
PCI									
2009	29	20	80.0	5	20.0	4	0	73.4 (27.1)	0.0-87.0
2010	58	43	84.3	8	15.7	6	1	79.4 (18.4)	2.0-100.0
2011	72	43	66.2	22	33.8	7	0	73.0 (25.0)	0.0-119.0
2012	36	16	72.7	6	27.3	7	7	73.5 (20.5)	10.0-86.0
Total	**195**	**122**	**74.8**	**41**	**25.2**	**24**	**8**	**75.1 (22.9)**	**0.0-119.0**
RCI									
2009	44	34	79.1	9	20.9	1	0	81.9 (24.2)	0.0-92.0
2010	64	47	79.7	12	20.3	5	0	78.4 (26.4)	2.0-92.0
2011	88	59	72.0	23	28.0	6	0	83.9 (21.9)	3.0-98.0
2012	78	40	60.6	26	39.4	8	4	80.3 (28.0)	1.0-120.0
Total	**274**	**180**	**72.0**	**70**	**28.0**	**20**	**4**	**81.3 (24.9)**	**0.0-120.0**
RiCI									
2009	95	64	74.4	22	25.6	9	0	87.9 (34.3)	0.0-111.0
2010	68	45	80.4	11	19.6	12	0	91.8 (34.1)	0.0-110.0
2011	55	42	84.0	8	16.0	4	1	87.0 (19.6)	16.0-110.0
2012	56	14	51.9	13	48.1	1	28	75.9 (37.7)	0.0-108.0
Total	**274**	**165**	**75.3**	**54**	**24.7**	**26**	**29**	**87.6 (31.9)**	**0.0-111.0**
SCI									
2009	32	25	80.6	6	19.4	0	1	79.7 (23.0)	25.0-91.0
2010	91	66	80.5	16	19.5	9	0	81.6 (24.0)	2.0-101.0
2011	55	39	78.0	11	22.0	5	0	89.4 (24.3)	4.0-101.0
2012	44	22	56.4	17	43.6	4	1	80.9 (36.0)	3.0-128.0
Total	**222**	**152**	**75.2**	**50**	**24.8**	**18**	**2**	**83.1 (26.5)**	**2.0-128.0**

	Program Starters	Successful Discharge[2]		Unsuccessful Negative Discharge[3]		Neutral Discharges (Admin.) Discharges[4]	Cases with Missing or Incomplete Information[5]	Mean Length of Time in IOP Treatment in Days, n=5883[6] (Std. Dev.) (Both Completion Types)	Range of IOP Treatment Time in Days, n=5883[6] (Both Completion Types)
	n	n	%	n	%	n	n		
SOCF									
2009	21	13	92.9	1	7.1	7	0	166.6 (3.1)	156.0-168.0
2010	29	10	47.6	11	52.4	8	0	78.0 (63.6)	1.0-168.0
2011	88	22	31.0	49	69.0	17	0	78.7 (49.2)	2.0-156.0
2012	51	4	16.7	20	83.3	13	14	105.8 (56.9)	12.0-162.0
Total	**189**	**49**	**37.7**	**81**	**62.3**	**45**	**14**	**92.7 (57.3)**	**1.0-168.0**
ToCI									
2011	88	48	57.1	36	42.9	4	0	58.9 (32.1)	1.0-124.0
2012	68	24	41.4	34	58.6	7	3	71.9 (28.3)	0.0-162.0
Total	**156**	**72**	**50.7**	**70**	**49.3**	**11**	**3**	**63.6 (31.3)**	**0.0-162.0**
TCI									
2009	50	35	76.1	11	23.9	4	0	84.1 (32.0)	8.0-161.0
2010	83	55	69.6	24	30.4	3	1	75.8 (33.2)	0.0-112.0
2011	91	32	37.2	54	62.5	5	0	56.5 (38.3)	0.0-121.0
2012	50	21	44.7	26	55.3	1	2	94.4 (37.7)	0.0-126.0
Total	**274**	**143**	**55.4**	**115**	**44.6**	**13**	**3**	**73.2 (37.8)**	**0.0-161.0**
WCI									
2009	34	24	77.4	7	22.6	3	0	99.0 (10.8)	65.0-107.0
2010	83	49	60.5	32	39.5	1	1	78.6 (24.3)	0.0-95.0
2011	86	43	53.1	38	46.9	4	1	82.5 (22.4)	11.0-136.0
2012	45	18	58.1	13	41.9	5	9	88.7 (34.1)	0.0-123.0
	248	**134**	**59.8**	**90**	**40.2**	**13**	**11**	**84.2 (24.5)**	**0.0-136.0**
Total Across Institutions--2009	**1163**	**829**	**79.0**	**221**	**21.0**	**112**	**1**	**86.0 (29.8)**	**0.0-191.0**
Total Across Institutions--2010	**2059**	**1413**	**76.2**	**441**	**23.8**	**194**	**11**	**82.1 (31.6)**	**0.0-183.0**

Total Across Institutions--2011	**2151**	**1264**	**67.9**	**597**	**32.1**	**258**	**33**	**77.9 (30.7)**	**0.0-217.0**
Total Across Institutions--2012	**1894**	**816**	**62.4**	**492**	**37.6**	**243**	**343**	**82.2 (28.1)**	**0.0-177.0**
Total Across Institutions—All Years	**7267**	**4322**	**71.2**	**1750**	**28.8**	**807**	**387**	**81.5 (30.4)**	**0.0-217.0**

[1]*Row* percentages add to 100. [2]Successful discharges are those with a clear discharge date of completion. Inmates who had data collected during the one-phase data collection period and who had a successful IOP discharge, or inmates who were part of the multi-phase data collection and had successful discharges on either both IOP and RM or TRP, IOP, and RM were classified as successful discharges. [3]Unsuccessful negative discharges are those which could be attributed to the inmate's behavior, and led to a discharge from any of the three phases of treatment during the most recent treatment stint. Reasons include violations of program or institutional rules which may have included RIB penalties, further substance use (positive urinalysis, possession of drugs, tickets or segregation specifically for drug and alcohol violations), lack of attendance or absences at program sessions or excessive tardiness, voluntary termination or withdrawal prior to end of program, withdrawal against medical advice or failure to attend any treatment sessions (includes quitting, dropping, dropping out, declining treatment, signing out, not wishing to move to begin or continue treatment), those listed as involuntary withdrawal/termination/ dropping of inmate by staff (reasons of which are not defined on the Recovery Services spreadsheet or in DOTS), and various negative behaviors by inmates in programs leading to involuntary termination by staff (i.e., failure to participate or cooperate, sabotaging group goals, disruptive, disinterested, etc.), inmates placed in segregation (went to hole, D/C, S/C, L/C), those who refuse to lock, and those subject to new charges and PC investigations. [4]Neutral or administrative discharges are those in which inmates did not complete the program for reasons beyond their immediate control, or discharges not owing to the inmate's own negative behavior, and could be from any of the three phases of treatment during the most recent treatment stint. These include release to a detainer, transfers/moves within or between institutions, changes in security level or reclassification, release (end of definite sentence, end of stated term, expiration of sentence with or without parole or PRC, transitional control, educational or vocational furlough), excused absences (AWL, Out to Court, new charges pending, or too many additional programs to participate in treatment), medical or mental health issues or treatment that precludes participation in intensive outpatient treatment, educational participation that precludes participation in treatment (vocational, GED, college), other legal matters inhibiting participating in intensive outpatient treatment (mandating participation in Intensive Program Prison, or judicial denial/removal/disapproval), entrance into protective custody, other reasons not previously specified (job change, institutional need, treatment program suspended, hold over of inmate for pre-treatment, other security reasons, counselor out on disability, jail time credit, counselor transfer to another institution, ODRC legal, separation, inmate later deemed ineligible for treatment, other programming conflict, inmate went offsite, or inmate is to complete treatment at another time). [5]Inmates with missing or incomplete information are those who have successfully completed the first or first and second phases of treatment but not the remainder of treatment ("in-progress"), or the information is incomplete or not listed in either DOTA or the Recovery Services database for the most recent phase of the most recent stint of treatment (there is a start date but no end date, or there is an end date but no reason for discharge). [6]Means and ranges of IOP treatment time exclude those inmates who have not yet completed the IOP phase of treatment.

Table 4. Bivariate Relationship Between Discharge Status and Recidivism, One-Year Follow Up[1]

(n=2554)

	No Recidivism		Recidivism		χ^2	Degrees of freedom	p-value
	n	%	n	%			
AOCI					.030	1	.863
Successful Discharge	22	91.7	2	8.3			
Unsuccessful Negative Discharge	28	90.3	3	9.7			
BeCI					1.455	1	.228
Successful Discharge	30	90.9	3	9.1			
Unsuccessful Negative Discharge	15	100.0	0	0.0			
CCI					1.078	1	.299
Successful Discharge	66	94.3	4	5.7			
Unsuccessful Negative Discharge	18	100.0	0	0.0			
CRC					.193	1	.661
Successful Discharge	28	93.3	2	6.7			
Unsuccessful Negative Discharge	8	88.9	1	11.1			
DCI					--	--	--
Successful Discharge	123	93.9	8	6.1			
FPRC					.329	1	.566
Successful Discharge	109	96.5	4	3.5			
Unsuccessful Negative Discharge	9	100.0	0	0.0			
GCI/GCC					.273	1	.601
Successful Discharge	51	96.2	2	3.8			
Unsuccessful Negative Discharge	7	100.0	0	0.0			
HCF					.268	1	.605
Successful Discharge	11	91.7	1	8.3			
Unsuccessful Negative Discharge	3	100.0	0	0.0			
LaECI					.988	1	.320
Successful Discharge	77	89.5	9	10.5			
Unsuccessful Negative Discharge	24	96.0	1	4.0			
LeCI					.788	1	.375
Successful Discharge	24	88.9	3	11.1			
Unsuccessful Negative Discharge	20	80.0	5	20.0			

	No Recidivism		Recidivism		χ^2	Degrees of freedom	p-value
	n	%	n	%			
LoCI					4.286	1	.038*
Successful Discharge	85	97.7	2	2.3			
Unsuccessful Negative Discharge	42	89.4	5	10.6			
LorCI					--	--	--
Successful Discharge	5	100.00	0	0.0			
Unsuccessful Negative Discharge	2	100.00	0	0.0			
MaCI					.196	1	.658
Successful Discharge	38	88.4	5	11.6			
Unsuccessful Negative Discharge	32	91.4	3	8.6			
ManCI					.023	1	.880
Successful Discharge	47	92.2	4	7.8			
Unsuccessful Negative Discharge	14	93.3	1	6.7			
MCI					.171	1	.679
Successful Discharge	98	91.6	9	8.4			
Unsuccessful Negative Discharge	17	94.4	1	5.6			
NCCI					.839	1	.360
Successful Discharge	150	89.3	18	10.7			
Unsuccessful Negative Discharge	63	85.1	11	14.9			
NCCTF					.986	1	.321
Successful Discharge	129	97.0	4	3.0			
Unsuccessful Negative Discharge	32	100.0	0	0.0			
NCI					2.256	1	.133
Successful Discharge	83	93.3	6	6.7			
Unsuccessful Negative Discharge	55	85.9	9	14.1			
NEPRC					.060	1	.806
Successful Discharge	142	94.0	9	6.0			
Unsuccessful Negative Discharge	56	94.9	3	5.1			
ORW					.263	1	.608
Successful Discharge	82	95.3	4	4.7			
Unsuccessful Negative Discharge	26	92.9	2	7.1			

	No Recidivism		Recidivism		χ^2	Degrees of freedom	p-value
	n	%	n	%			
OSP					6.698	1	.010*
Successful Discharge	46	100.0	0	0.0			
Unsuccessful Negative Discharge	6	85.7	1	14.3			
PCI					1.727	1	.189
Successful Discharge	53	93.0	4	7.0			
Unsuccessful Negative Discharge	14	82.4	3	17.6			
RCI					2.459	1	.117
Successful Discharge	33	80.5	8	19.5			
Unsuccessful Negative Discharge	9	60.0	6	40.0			
RiCI					3.691	1	.055
Successful Discharge	61	91.0	6	9.0			
Unsuccessful Negative Discharge	23	76.7	7	23.3			
SCI					1.995	1	.158
Successful Discharge	48	85.7	8	14.3			
Unsuccessful Negative Discharge	9	69.2	4	30.8			
SOCF					.047	1	.829
Successful Discharge	6	85.7	1	14.3			
Unsuccessful Negative Discharge	9	81.8	2	18.2			
ToCI					--	--	--
Successful Discharge	4	100.0	0	0.0			
Unsuccessful Negative Discharge	2	100.0	0	0.0			
TCI					5.554	1	.018*
Successful Discharge	63	96.9	2	3.1			
Unsuccessful Negative Discharge	25	83.3	5	16.7			
WCI					.923	1	.337
Successful Discharge	38	90.5	4	9.5			
Unsuccessful Negative Discharge	24	82.8	5	17.2			
Total Across Institutions					**14.073*** **	**1**	**.000*** **
Successful Discharge	**1752**	**93.0**	**132**	**7.0**			
Unsuccessful Negative Discharge	**592**	**88.4**	**78**	**11.6**			

[1] Row percentages add to 100.

*Denotes significance at the p < .05 level. **Denotes significance at the p < .01 level. ***Denotes significance at the p < .001 level.

Table 5. Logistic Regression Predicting Recidivism[1]

	Model 1 (n=2537)		Model 2[2, 3, 4] (n=2470)	
	B (Std. Error)	**Exp (B)**	**B (Std. Error)**	**Exp (B)**
Successful discharge (Unsuccessful discharge)	-0.49** (0.15)	0.62	-0.32† (0.18)	0.73
Static risk score	0.24*** (0.03)	1.27	0.23*** (0.04)	1.26
Age at commitment			-0.02* (0.01)	0.98
Security Level 1a/1b (Level 3 or higher)			-0.47† (0.29)	0.63
Security level 2 (Level 3 or higher)			0.08 (0.27)	1.08
Any drug-related offenses (No)			-0.35† (0.19)	0.71
Constant	-2.77 (0.17)	0.06	-2.06*** (0.37)	0.13
Model Chi-Square	61.23***		72.10***	

[1]Contrast or omitted categories for each variable in the analysis are indicated in parentheses.

[2]Eighty four of the inmates had security classifications that were recorded during reincarceration (mostly due to technical violations) and were thus collected after their release date, instead of prior to it. Therefore, Model 2 in Table 5 was run excluding these inmates.

[3]Supplementary models were run (not shown) to examine interactions between discharge status and risk level, discharge status and security level, and security level and risk level. In other words, it was ascertained whether the impact of discharge status on recidivism varied by the inmate's level of risk, whether the impact of discharge status on recidivism varied by security level, and whether the impact of security level on recidivism varied by inmate risk score. None of these interaction terms were significant at conventional levels (p=.05).

[4] The three-step mediation analysis (not shown) proceeded as follows. First, analyses were run to determine whether discharge status has a significant impact on each of the control variables (potential mediators). Second, the direct effect of discharge status on recidivism was assessed, as was the impact of each of the control variables by themselves on recidivism. A significant relationship between discharge status and recidivism suggests there is a relationship which could be mediated. Third, it was examined whether the impact of discharge status on recidivism was diminished once each of the control variables was included in the analyses predicting recidivism. This indicates the presence of mediating effects.

†Denotes significance at the p < .10 level.

*Denotes significance at the p < .05 level.

**Denotes significance at the p < .01 level.

***Denotes significance at the p < .001 level.

Appendix 1. Changes in Recovery Services Programs Discharge Rates and Reasons, 2009-2012

Institution	Key Patterns in Discharges
AOCI	▪ The rate of successful discharges increased while unsuccessful discharges decreased over time, most notably between 2011-2012. Nearly double the number of inmates began treatment in 2010 relative to 2011 and 2012. ▪ Withdrawals account for the greatest proportion of unsuccessful discharges in 2010 (47.9%), followed by rule violations (39.6%). ▪ Rule violations account for the greatest proportion of unsuccessful discharges in 2011 (42.9%), as is the case in 2012 (42.9%), but the raw number of discharges owing to rule violations is higher in 2011 (n=7) than it is in 2012 (n=3). ▪ Better identification of inmates who are amenable to treatment may account for increasing success rates over time; more research is needed to clarify this.
BeCI	▪ The successful completion rate was substantially higher in 2010 (73.1%) compared to 2011 (45.2%). In 2010, those inmates who were unsuccessfully discharged from treatment programs did so largely because of absences (64.3% of discharges), with the second most common reason being voluntarily withdrawing from the program (21.4% of discharges). ▪ In 2011, voluntary withdrawals replaced absences as the most common reason for discharge (41.3% of unsuccessful discharges), with absences comprising 34.5% of unsuccessful discharges. Placement in segregation accounted for another 17.2% of unsuccessful discharges in 2011. ▪ Potential institutional changes such as changes in staffing or treatment curricula, may have affected overall Recovery Services completion rates in 2011. ▪ By 2012, successful completion rates increased once again, as did the number of inmates beginning the treatment program. ▪ This might suggest increasing selection of inmates who are amenable to treatment into the program during this latter period, but further research is needed to verify this.
CCI	▪ A major increase in successful completions occurred at CCI between 2009 and 2010, followed by a notable drop in 2011. ▪ In both 2009 and 2010, inmates being terminated or dropped from substance abuse treatment programs was the most common reason for unsuccessful discharges (73.3% of unsuccessful discharges in 2009 and 80% of unsuccessful discharges in 2010), although a more specific reason is not given explaining why the inmate was terminated. ▪ Completion rates of 76% remain consistent from 2011-2012, and during this latter time period, the predominant mode of unsuccessful discharge (70.6% to 80% of discharges) from treatment shifts to program and institutional rule violations. ▪ It is unclear why the successful completion rate rises dramatically from 2009 to 2010. Changes in treatment program staffing or curricula may account for this, and/or better identification of inmates who are suitable candidates for treatment, although further research is needed.
CRC	▪ Exhibits high rates of successful completion (over 80%) until 2012, when there was an increase in the number of unsuccessful discharges. ▪ In 2009 and 2010, rule violations accounted for 50% and 100% (respectively) of unsuccessful negative discharges. ▪ In 2012, 2/3 of the unsuccessful discharges were because of rule violations, whereas 37.5% was because of withdrawals.
DCI	▪ Shows successful completion rates of well over 80% across all years. ▪ More inmates are classified as neutral (administrative) discharges, typically because of release or institutional transfer, than are unsuccessfully discharged. ▪ The few inmates who are unsuccessfully discharged are because of absences, terminations, and rule violations. ▪ More research is needed to determine whether selection processes into treatment, the manner in which counselors carry out the treatment protocol, or other variables account for the high completion rates.
FPRC	▪ Shows successful completion rates of well over 80% across all years. ▪ No clear pattern of types of unsuccessful discharges—due to absences, withdrawal, and rule violations. ▪ More research is needed to determine whether selection processes into treatment, the manner in which counselors carry out the treatment protocol, or other variables account for the high completion rates
FMC	▪ For the one year for which is inmate data, completion rates are high (almost 80%). ▪ 80% of the unsuccessful discharges are a result of voluntary withdrawal.
GCI/GCC	▪ Experienced increases in the number of unsuccessful discharges from 2010 to 2011. The successful

	completion rate dropped from over 90% in 2009-2010 to just under 71% in 2011. ▪ The growth in unsuccessful discharges was in the number of voluntary withdrawals from treatment, and an increase in withdrawals as a proportion of all discharges relative to the prior year, but reasons for withdrawals are unclear. ▪ In 2010, 40% of unsuccessful discharges were withdrawals, whereas withdrawals constituted 55.6% of unsuccessful discharges in 2011 and 72.7% of unsuccessful discharges in 2012. ▪ The increase in withdrawals may be attributable to changes in staffing or programming, but more research is needed.
HCF	▪ Experienced increases in the number of unsuccessful discharges from 2010 to 2011, with a concomitant drop in successful discharge rate from over 80% in 2009-2010 to 61.5% in 2011. ▪ The growth in unsuccessful discharges was in the number of voluntary withdrawals from treatment, and an increase in withdrawals as a proportion of all discharges relative to the prior year, but reasons for withdrawals are unclear. ▪ All unsuccessful discharges from 2009-2011 are voluntary withdrawals. ▪ Overall small number of program participants in each year, so small fluctuations in number of unsuccessful discharges can greatly affect discharge rates.
LaECI	▪ Experienced increases in the number of unsuccessful discharges from 2011 to 2012. ▪ The growth in unsuccessful discharges was in the number of voluntary withdrawals from treatment, and an increase in withdrawals as a proportion of all discharges relative to the prior year, but reasons for withdrawals are unclear. 65.5% of unsuccessful discharges were voluntary withdrawals in 2012, with termination being the next most common reason for negative discharges (17.2%). ▪ Withdrawals also included inmates who declined the program because they did not wish to move within the institution, or who dropped out on the first day of the program.
LeCI	▪ Inmate data from 2009 is not presented because IOP program was temporarily suspended during this year, per Recovery Services data spreadsheets. ▪ Experienced increases in the number of unsuccessful discharges from 2011 to 2012, although successful completion rates are low in every year (slightly over 50% or less). ▪ The growth in unsuccessful discharges was in the number of voluntary withdrawals from treatment, and an increase in withdrawals as a proportion of all discharges relative to the prior year (particularly in 2010 and 2012). ▪ In 2010, most common reasons for unsuccessful discharge are segregation (32.1%), withdrawal (28.6%), and absences (21.4%). The most common reasons for unsuccessful discharge in 2011 are because of absences (57.1%), and segregation (16.6%). In 2012, the most common discharge reasons are withdrawal (45.9%) and inmate behavior during treatment (18.9%).
LoCI	▪ Successful completion rates are close to 70% or above until 2012, when they drop to just under 60%. ▪ A variety of reasons for unsuccessful discharge are given each year, with no clear pattern of increase or decrease in specific reasons. ▪ The number of unsuccessful discharges is relatively consistent from year to year, but fewer program starters in 2012 creates a scenario where unsuccessful discharges are a greater proportion of all program exits than in prior years.
LorCI	▪ Successful completion rates are high and stable (over 80%) until 2012. ▪ Experienced increases in the number of unsuccessful discharges from 2011 to 2012. ▪ The growth in unsuccessful discharges was in the number of voluntary withdrawals from treatment, and an increase in withdrawals as a proportion of all discharges relative to the prior year. Withdrawals are the most commonly occurring discharge reason in all years. ▪ In addition to the increased number of withdrawals, there was an increase in the variety of reasons for unsuccessful discharge in 2012 as well. In this year, withdrawals constituted 59.3% of negative discharges, terminations constituted 22.2% of negative discharges, and absences constituted 14.8% of negative discharges.
MaCI	▪ Completion and unsuccessful discharge rates are more consistent across years relative to other institutions. ▪ Most frequently occurring reasons for unsuccessful discharge from year to year are rule violations (53.8%) and withdrawal (30.8%) in 2009, rule violations (75%) in 2010, inmate behavior (69.6%) in 2011, and split between rule violations (31.6%), withdrawal (31.6%), and inmate behavior (26.3%) in 2012.
ManCI	▪ Experienced increases in the number of unsuccessful discharges from 2009 to 2010. ▪ Withdrawals increase in number and constitute an increasing proportion of unsuccessful discharges—none in 2009, but 54.5% in 2010, 45.5% in 2011, 34.5% in 2012. The same is true for absences, which are the most common reason for unsuccessful discharge in 2009 and 2012, and the second most common reason in 2011.
MCI	▪ Shows successful completion rates of well over 80% across all years.

	▪ Increase in the number and variety of unsuccessful discharges from 2009-2010, with rule violations and withdrawal accounting for the largest proportions of unsuccessful discharges (28.6% each) in 2010. ▪ Withdrawal and inmate behavior accounted for the most frequently occurring reasons for unsuccessful discharge (36.4% each) in 2011, and withdrawals were 50% of unsuccessful discharges in 2012. ▪ More research is needed to determine whether selection processes into treatment, the manner in which counselors carry out the treatment protocol, or other variables account for the high completion rates.
NCCI	▪ Experienced increases in the number of unsuccessful discharges from 2011 to 2012. ▪ The growth in unsuccessful discharges was in the number of voluntary withdrawals from treatment, and an increase in withdrawals as a proportion of all discharges relative to the prior year, particularly notably in 2012 relative to 2011. ▪ Withdrawal is the most common reason for unsuccessful discharge in all years, and absence is the second most common reason in 2010-2012. Segregation is the second most common reason for unsuccessful discharge in 2009.
NCCTF	▪ Experienced increases in the number of unsuccessful discharges from 2009 to 2010, and a drop in successful discharge rates, although completion rates are still well above 75% in all three years shown. ▪ The growth in unsuccessful discharges was in the number of voluntary withdrawals from treatment, and the number of terminations. Withdrawals constituted 40% of unsuccessful discharges in 2009, 46.2% in 2010, and 33.3% in 2011. ▪ There was also an increase in the variety of reasons for unsuccessful withdrawal, with five different reasons given in 2011 (withdrawal, termination, inmate behavior, segregation, and absences), but only two in 2009 (withdrawal and inmate behavior).
NCI	▪ Rates of successful completion were well above 75% in 2009, but dropped to nearly 55% in 2010. Rates of successful discharge then increased in 2011, but fell again in 2012. ▪ Withdrawal is the most common reason for unsuccessful discharge during all four years at NCI, comprising all unsuccessful discharges in 2009 (of which there were only five), and 52.3% of unsuccessful discharges in 2012. ▪ Over time, there is growth in the number of discharges owing to rule violations, suggesting potential institutional policy changes and/or greater enforcement of punishment for rule violations in more recent years. ▪ There are also increasing numbers of inmates beginning Recovery Services programs.
NEPRC	▪ Drop in successful completion rates between 2010 and 2011. Rule violations are the most commonly occurring reason for unsuccessful discharges in all years, but in 2011 there is an increase in the number of withdrawals. While rule violations are 78.9% of unsuccessful discharges in 2009 and 85% of unsuccessful discharges in 2010, they are 50% in 2011, with withdrawals accounting for 45.8% of unsuccessful discharges in that same year. ▪ In 2012, rule violations are 53% of unsuccessful discharges, while absences are 38.5%.
ORW	▪ Rule violations compose the majority of unsuccessful discharges in 2010 (56.5%). They account for a significant proportion of all unsuccessful discharges in 2011 (31.3%) in 2011. Withdrawals are 34.4% of unsuccessful discharges in 2011. ▪ There is a major jump in reported number of offenders beginning treatment in 2010 at ORW. ▪ In 2011, there is an upsurge in the number of neutral (administrative) discharges at ORW, primarily because of releases and transfers. ▪ Findings might suggest that with a growth in enrollments in ORW Recovery Services participation, there may have been a growth in participants who were not a good fit for treatment or the institution. This could explain the increase in transfers and withdrawals, and the decrease in successful program completion from 2010 to 2011, and needs further investigation.
OSP	▪ Experienced increases in the number of unsuccessful discharges from 2011 to 2012. ▪ In 2012, there are slightly more withdrawals, which constitute 83.3% of unsuccessful discharges that year. ▪ Given that there are low numbers of program starters to begin with, the decline in successful completion in 2012 is also attributable to the larger number of cases with missing data.
PCI	▪ Experienced increases in the number of unsuccessful discharges from 2010 to 2011. ▪ The growth in unsuccessful discharges was in the number of voluntary withdrawals from treatment in 2011, although withdrawal is the most common reasons for unsuccessful discharge in 2009-2011. ▪ Unsuccessful discharges drop again in 2012, and in that year rule violations are the most common reason (50%), followed by withdrawal (33.3%).
RCI	▪ Experienced increases in the number of unsuccessful discharges from 2011 to 2012. ▪ Rule violations are the most frequently reported reason for unsuccessful discharge in 2009 (77.8%) and 2010 (66.7%). ▪ In 2011, the most common reason for unsuccessful discharge become absences (38.5%), followed by rule

	violations (23.1%) and withdrawal (23.1%). In 2012, the primary reason for unsuccessful discharge is withdrawal (48.1%) and rule violations (33.3%).
RiCI	▪ Experienced increases in the number of successful completions from 2009 to 2011, followed by a decrease from 2011 to 2012. ▪ The most common reasons for unsuccessful discharge was voluntary withdrawals in 2009 and 2010. In 2011, inmate behavior and withdrawal accounted for the same proportion of unsuccessful discharges (37.5%). ▪ Withdrawals also account for the largest proportion of unsuccessful discharges in 2012 (53.8%), during which time the overall number of unsuccessful discharges increased. ▪ Lower successful completion rates are also attributable to substantial growth in cases with missing data in 2012 relative to the smaller numbers of program starters relative to the 2009-2010 period.
SCI	▪ General pattern of decline in successful program completion over time. ▪ The chief reason for unsuccessful discharge is withdrawal in 2009, but the most common reason for unsuccessful discharges are for rule violations in 2010 (61%), 2011 (36.4%) and 2012 (56.5%). The proportion of all discharges which are composed of rule violations increases over time as well. This might be explained by institutional policy changes or stricter enforcement of rule violations. ▪ The number of withdrawals increases in 2012, along with a smaller number of offenders beginning programs.
SOCF	▪ Major pattern of decline in successful program completion over time from 2010 on, with a particularly large increase in the number of unsuccessful discharges in 2011. ▪ The majority of unsuccessful discharges are for rule violations, and the proportion of all discharges which are composed of rule violations increases over time as well. ▪ In 2011, 53.4% of unsuccessful discharges are for rule violations, and 42.1% are for withdrawals, with another 8.6% for inmate behavior in treatment. In 2012, 50% of withdrawals are for rule violations and 13.6% are withdrawals, with absences, drug-relation violations, and client behavior accounted for 9% of withdrawals, respectively. ▪ Patterns might represent stricter enforcement of punishments for rule violations; more research is needed to clarify this.
ToCI	▪ Successful completion rates in all years are well below average (less than 60%), with a drop in successful discharges between 2011 and 2012. ▪ In 2011, absences made up the bulk of unsuccessful discharges (44.4%), followed by withdrawals (28.9%) and rule violations (17.8%). ▪ 2012 data shows that most unsuccessful discharges were attributable to absences (37%), rule violations (34.8%), and withdrawals (23.9%).
TCI	▪ Experienced increases in the number of unsuccessful discharges from 2010 to 2011. ▪ The growth in unsuccessful discharges was in the number of voluntary withdrawals from treatment, and an increase in withdrawals as a proportion of all discharges relative to the prior year. ▪ In both 2009 and 2010, rule violations account for the largest proportion of unsuccessful discharges (54.5% and 55.6%, respectively). ▪ In 2011, there was a shift to withdrawals becoming the most frequently occurring reason for unsuccessful discharge. 2012 data show withdrawals make up 55.6% of unsuccessful discharges and rule violations constitute 36.5% of unsuccessful discharges. In 2012, 41.2% of unsuccessful discharges are a result of rule violations, while 58.8% of discharges are due to voluntary withdrawals.
WCI	▪ General patterns of decline in successful program completion over time. ▪ Segregation placements account for the majority of unsuccessful discharges in 2009 (71.4%) and 2010 (56.9%). There is a rise in the raw number of segregations among treatment participants in 2010. ▪ In 2011 and 2012, unsuccessful discharges were attributable to a variety of reasons beyond segregation, including absences from treatment, rule violations, drug-related violations, withdrawal, and inmate behavior in treatment. ▪ These findings might imply that the completion rates are exhibiting the effects of greater enforcement of punishment for rule violations and inappropriate behavior in treatment. More research is needed to establish this.

Appendix 2. Power Analysis

What is it? Why is it needed?	▪ Statistical power is the ability to detect a true relationship between variables. ▪ For example, employing a power level of 0.8 implies that 80% of the time, one would get a statistically significant difference in the proportion of offenders who successfully complete substance abuse treatment and recidivate compared to the proportion of offenders who are unsuccessfully discharged and recidivate, when analyzing multiple samples over time. Conversely, 20% of the time, a statistically significant difference between the groups will not be found, even though one actually exists (UCLA Statistical Consulting Group 2013c). ▪ Small sample sizes lessen the ability to detect statistically significant relationships among variables (UCLA Statistical Consulting Group 2013a; 2013b; 2013c). ▪ Power analysis software provides a calculation of the number of subjects needed per group to obtain a significant difference between proportions for two independent groups (UCLA Statistical Consulting Group 2013a).
Software utilized	▪ GPower Version 3.1. It is available online through the University of Dusseldorf Institute for Experimental Psychology (Faul, Erdfelder, Buchner, and Lang 2009; Faul, Erdfelder, Lang, and Buchner 2007). ▪ The program allows the user to specify various criteria for the power calculation.
Power analyses used in current project (as related to Table 4)	▪ Using GPower, it was estimated how many subjects would be needed to test a difference in proportions with a power level of 0.8 and an alpha (significance) level of .05, when the proportion of recidivists among the successfully discharged is expected to be 0.07, and the proportion of recidivists among the unsucessfully discharged is 0.12 (as is the case for the full analytic sample in Table 4). ▪ It was also tested how many subject would be needed to test a difference in proportions with a more modest power level of 0.6 and an alpha (significance) level of .05, when the proportion of recidivists among the successfully discharged is expected to be 0.07, and the proportion of recidivists among the unsucessfully discharged is 0.12
Key results	▪ The analysis reveals that one would need a minimum sample size of 539 successful completers and 539 unsucessful discharges (1078 offenders total) per institution to achieve a power level of 0.8. ▪ For a power level of 0.6, a minimum sample size of 337 successful completers and 337 unsuccessful discharges (674 offenders total) per institution is needed. ▪ None of the institutions provide 1078 offenders for analysis, or even 674 offenders, and the Chi-Square tests presented have very low statistical power.
Main conclusion	▪ Bivariate results indicate modest effects of Recovery Services program completion on recidivism among more recent cohorts of inmates, but stronger conclusions cannot be drawn in the absence of larger sample sizes of at least 1078 offenders per institution for a higher power level, and 674 offenders per institution for a more modest power level.

Appendix 3. Descriptive Characteristics of Control Variables in Multivariate Analyses of Recovery Services Completion Status Predicting Recidivism—Comparison of Recidivism and Non-Recidivism Groups[1, 2]

(n=2554)

	No Recidivism (n=2344)				Recidivism (n=210)			
	Mean (Std. Dev.)	%	Valid n	Range	Mean (Std. Dev.)	%	Valid n	Range
Discharge Type								
Successful Discharge	--	74.70[a]	1752	0 – 1	--	62.9[b]	132	0 – 1
Unsuccessful Negative Discharge	--	25.30[a]	592	0 – 1	--	37.1[b]	78	0 – 1
Total # of successful IOP discharges since 2005	0.77 [a] (0.44)	--	2344	0 – 2	0.64 [b] (0.48)	--	210	0 – 1
Total # of unsuccessful IOP discharges since 2005	0.27 [a] (0.47)	--	2344	0 – 3	0.40[b] (0.57)	--	210	0 – 1
Static risk score (most recent)	2.38[a] (2.06)	--	2329	-1 – 8	3.49[b] (2.23)	--	208	0 – 8
Time in IOP treatment (# Days)	79.68[a] (29.64)	--	2344	0 – 227	74.67[b] (31.42)	--	210	0 – 156
Time between end date of IOP treatment and release (# Days)	179.33[a] (161.68)	--	2344	1 – 911	189.69[a] (176.92)	--	210	2 – 911
Race/ethnicity								
Asian, Black, Other Race, or Hispanic	--	39.20[a]	919	0 – 1	--	40.00[a]	84	0 – 1
White Non-Hispanic	--	60.80[a]	1425	0 – 1	--	60.00[a]	126	0 – 1
Gender								
Male	--	79.30[a]	1858	0 – 1	--	88.60[b]	186	0 – 1
Female	--	20.70[a]	486	0 – 1	--	11.40[b]	24	0 – 1
Severe mental illness								
Yes	--	13.60[a]	318	0 – 1	--	13.80[a]	29	0 – 1
No	--	86.40[a]	2026	0 – 1	--	86.20[a]	181	0 – 1
Non-severe mental illness								

Yes	--	22.40[a]	525	0 – 1	--	25.70[a]	54	0 – 1
No	--	77.60[a]	1819	0 – 1	--	74.30[a]	156	0 – 1
On general mental health caseload								
Yes	--	4.30[a]	101	0 – 1	--	5.20[a]	11	0 – 1
No	--	95.70[a]	2243	0 – 1	--	94.80[a]	199	0 – 1
Age at current commitment	33.37[a] (9.57)	--	2344	15 – 74	31.46[b] (8.28)	--	210	18 – 58
Supervised post-release								
Yes	--	43.70[a]	971	0 – 1	--	54.90[b]	112	0 – 1
No	--	56.30[a]	1249	0 – 1	--	45.10[b]	92	0 – 1
Security level (most recent)	2.39[a] (0.80)	--	2344	1 – 6	2.77[b] (0.83)	--	210	1 – 6
Any violent offenses								
Yes	--	41.90[a]	983	0 – 1	--	50.00[b]	105	0 – 1
No	--	58.10[a]	1361	0 – 1	--	50.00[b]	105	0 – 1
Any drug-related offenses								
Yes	--	39.60[a]	928	0 – 1		27.10[b]	57	0 – 1
No	--	60.40[a]	1416	0 – 1		72.90[b]	153	0 – 1
Community referral after release								
Yes	--	30.70[a]	599	0 – 1	--	28.6[a]	48	0 – 1
No	--	69.30[a]	1355	0 – 1	--	71.4[a]	120	0 – 1
Aftercare recommended								
Yes	--	61.30[a]	1314	0 – 1	--	54.70[a]	98	0 – 1
No	--	38.70[a]	828	0 – 1	--	45.30[a]	81	0 – 1

[1] Means or percentages which are significantly different between the no recidivism and recidivism groups are indicated by different letters; those which are not significantly different have the same letters.

[2] *Column* percentages add to 100.

Appendix 4. Descriptive Characteristics of Control Variables in Multivariate Analyses of Recovery Services Completion Status Predicting Recidivism—Comparison of Successful Discharges to Unsuccessful Discharges[1, 2]

(n=2554)

	Successful Discharges (n=1884)				Unsuccessful Discharges (n=670)			
	Mean (Std. Dev.)	%	Valid n	Range	Mean (Std. Dev.)	%	Valid n	Range
Recidivism	--	7.00[a]	132	0 – 1	--	11.60[b]	78	0 – 1
No recidivism	--	93.00[a]	1752	0 – 1	--	88.40[b]	592	0 – 1
Total # of successful IOP discharges since 2005	1.01[a] (0.10)	--	1884	1 – 2	.06[b] (.23)	--	670	0 – 1
Total # of unsuccessful IOP discharges since 2005	.03[a] (.17)	--	1884	0 – 2	.99[b] (.32)	--	670	0 – 3
Static risk score (most recent)	2.40[a] (2.06)	--	1878	-1 – 8	2.66[b] (2.19)	--	659	-1 – 8
Time in IOP treatment (# Days)	92.37[a] (15.53)	--	1884	28-227	42.42[b] (29.50)	--	670	0 – 177
Time between end date of IOP treatment and release (# Days)	179.72[a] (168.21)	--	1884	1 – 911	181.46[a] (147.37)	--	670	1 – 868
Race/ethnicity								
Asian, Black, Other Race, or Hispanic	--	38.20[a]	719	0 – 1	--	42.40[a]	284	0 – 1
White Non-Hispanic	--	61.80[a]	1165	0 – 1	--	57.60[a]	386	0 – 1
Gender								
Male	--	78.80[a]	1484	0 – 1	--	83.60[b]	560	0 – 1
Female	--	21.20[a]	400	0 – 1	--	16.40[b]	110	0 – 1
Severe mental illness								
Yes	--	11.30[a]	213	0 – 1	--	20.00[b]	134	0 – 1
No	--	88.70[a]	1671	0 – 1	--	80.00[b]	536	0 – 1
Non-severe mental illness								
Yes	--	21.50[a]	406	0 – 1	--	25.80[b]	173	0 – 1

No	--	78.50[a]	1478	0 – 1	--	74.20[b]	497	0 – 1
On general mental health caseload								
Yes	--	4.70[a]	88	0 – 1	--	3.60[a]	24	0 – 1
No	--	95.30[a]	1796	0 – 1	--	96.40[a]	646	0 – 1
Age at current commitment	33.93[a] (9.53)	--	1884	15-74	31.19[b] (9.07)	--	670	16-63
Supervised post-release								
Yes	--	46.00[a]	809	0 – 1	--	41.10[b]	274	0 – 1
No	--	54.00[a]	949	0 – 1	--	58.90[b]	392	0 – 1
Security level (most recent)	2.33[a] (0.77)	--	1884	1 – 6	2.69[b] (0.84)	--	670	1 – 6
Any violent offenses								
Yes	--	41.90[a]	790	0 – 1	--	44.50[a]	298	0 – 1
No	--	58.10[a]	1094	0 – 1	--	55.50[a]	372	0 – 1
Any drug-related offenses								
Yes	--	40.60[a]	765	0 – 1	--	32.80[b]	220	0 – 1
No	--	59.40[a]	1119	0 – 1	--	67.20[b]	450	0 – 1
Community referral after release								
Yes	--	37.70[a]	588	0 – 1	--	10.50[b]	59	0 – 1
No	--	62.30[a]	973	0 – 1	--	89.50[b]	502	0 – 1
Aftercare recommended								
Yes	--	78.30[a]	1360	0 – 1	--	8.90[b]	52	0 – 1
No	--	21.70[a]	378	0 – 1	--	91.10[b]	531	0 – 1

[1] Means or percentages which are significantly different between the successfully discharged and unsuccessfully discharged groups are indicated by different letters; those which are not significantly different have the same letters.

[2] *Column* percentages add to 100.