Reentry Resource Centers

Preliminary Evaluation

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Criminal Justice Commission

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Summary

The Oregon Criminal Justice Commission provided a Reentry Resource Center Grant to Multnomah, Lane, and Klamath Counties starting January 1st, 2010. This evaluation provides preliminary outcome results of subsequent arrests and charges for the Reentry Center participants and a matched pair control group. For all participants receiving services from the Reentry Centers, there was no significant difference in subsequent arrests or charges from the control group. These results could be expected because a large number of the participants receive minimal services such as a referral or employment search assistance. There was no difference shown, or no effect size, for those participants that received services as compared to the control group. Another evaluation was conducted for the subgroup of those participants that receive the highest level of services, which includes an action plan and full engagement in services available. For this participant group there was a marginally significant difference in the statutory arrest rate as compared to the control group. The treatment group showed a 25% drop in the arrest rate for statutory crimes. There was no significant difference in the total arrest rate. For new charges, the treatment group showed a 31% drop for the overall charge rate and this was statistically significant. Based on a 31% effect size, the subsequent cost benefit analysis showed that for every dollar invested in the program, a benefit of $14.17 is realized in savings from the criminal justice system and avoided victimizations.

Program Description

The Oregon Criminal Justice Commission provided a Reentry Resource Center Grant to Multnomah, Lane, and Klamath Counties starting January 1st, 2010. The grant program goals include reducing new crimes and increasing employment and stable housing for offenders released from prison. The centers provide assessment and planning, service coordination, employment and housing assistance, and financial assistance such as providing bus passes, identification services, or assistance in applying for benefits. The centers provide three different levels or roles of service. The first level is one time use of the center for a referral or information. The second level provides limited resources, such as employment assistance or a resume workshop. The third level is a full level of service including employment and housing assistance with an action plan created for the participant. Referrals to community-based partner organizations are given for needed services such as mental health, parenting, and addiction services to name a few.

Data

Each of the Reentry Centers provided client information from the inception of the grant period. This client information was matched to Oregon Department of Corrections offenders who were released from prison since January 1st, 2008. This provided a treatment group of offenders who received services from one of the Reentry Centers and were released from a state institution (n=673). The Reentry Centers also have clients that have been released from federal

institutions and/or local jails, but these clients were not included in the evaluation. The table below shows the summary statistics for the Reentry Center clients released from state institutions. The majority are male, Caucasian, and have an average age of 37.6 years. The most common crime type is property crimes, followed by person crimes.

Re-entry Center Clients Summary Statistics (n=673)	
Gender: Male	83.8%
Ethnicity: Native American	3.1%
Ethnicity: Asian	0.6%
Ethnicity: Hispanic	1.6%
Ethnicity: African-American	20.2%
Ethnicity: Caucasian	74.4%
Crime Type: Drug	10.1%
Crime Type: Other	11.0%
Crime Type: Person	26.6%
Crime Type: Property	37.7%
Crime Type: Sex	14.6%
Average Age	37.6
Average Length of Stay (days)	1095
PSC score	35.5%

The control group was comprised of offenders released from a state institution from January 1st 2008 to September 1st 2011. Several demographic and criminal history variables were available for both the treatment and control groups including age, gender, ethnicity, crime category, length of stay, and a risk to recidivate score. The Public Safety Checklist (PSC) score was used as the risk to recidivate score.

The arrest outcome data is available from the Law Enforcement Data Systems (LEDS) database and includes arrests where the offender was finger-printed. LEDS is maintained by the Oregon State Police. The charge outcome data is available from the Oregon Judicial Information Network (OJIN) database and includes charges filed in criminal courts.

Control Group

Pair-wise matching was done to match the treatment and control groups. Prior to matching the treatment group contained n=673 clients. The matching algorithm included county, gender, ethnicity, age (within 5 years), release date (within a year), and PSC score (within 5%). The ethnicity variable was coded into three groups including Caucasian, African-American, and all others. This matching algorithm produced n=641 matched pairs on these variables. The table below shows the comparison of several variables between the matched treatment and control groups. There is a significant difference by crime types, with the treatment group comprised of a

higher percentage of sex crime types and a lower percentage of other crime types. There was no significant difference for the other variables available.

	Control Group (n=641)	Treatment Group (n=641)	p-value
Gender: Male	84.7%	84.7%	--
Ethnicity: Native American	1.4%	2.7%	0.1205
Ethnicity: Asian	0.2%	0.5%	
Ethnicity: Hispanic	2.8%	1.3%	
Ethnicity: African-American	19.5%	19.5%	
Ethnicity: Caucasian	76.1%	76.1%	
Crime Type: Drug	11.5%	10.1%	0.0102
Crime Type: Other	16.7%	11.5%	
Crime Type: Person	27.6%	26.8%	
Crime Type: Property	34.8%	37.3%	
Crime Type: Sex	9.4%	14.0%	
Average Age	37.4	37.6	0.8324
Average Length of Stay (days)	974	1065	0.1863
PSC score	35.5%	35.6%	0.9320

Each matched pair was coded to have the same follow-up period time length for new possible criminal activity. The latest date used for the follow-up period was October 31, 2012. The follow-up period was anywhere from 10 months to 2 years and 7 months depending on the release date from a state institution.

Limitations

Participation in the services available at the Reentry Centers is voluntary. The matching technique above includes data that is available in electronic databases such as demographic and criminal history information. Other dynamic factors of the participants could be important predictors of utilizing the services available, and this information is not available for this evaluation. For example, if an offender released from prison has strong positive social and family support, they may already have stable housing in a drug free environment and employment opportunities. This offender may not utilize the services available at the Reentry Center and still have positive outcomes. Another example is an offender who has strong criminogenic behaviors and does not wish to change. This offender may not utilize the services available at the Reentry Center and have negative outcomes. There is a selection bias in comparing offenders who have received services from the Reentry Centers and those who have not. The matching technique above attempts to match offenders on the data available, but the remaining selection bias effect is unknown.

The follow-up period for measuring recidivism is between 10 months to 2 years and 7 months depending on when the offender was released from prison. A more typical follow-up period would be 36 months for all participants. A final evaluation showing 36 month felony reconviction rates is planned.

Arrest Outcome

This section looks at an arrest in LEDS as an outcome during the time period following release from prison. The treatment group includes all participants in the Reentry Centers released from a state institution. The control group is comprised of pair-wise matches to the treatment group; see matching section above. The length of time to recidivate is unique to each pair. Arrest outcomes for all arrests, person arrests, property arrests, and statutory arrests are shown in the table below. The table shows multivariate-adjusted arrest rates specifically using logistic regression modeling; see appendix for details.

Arrest Outcome	Control Group (n=641)	Treatment Group (n=641)*	p-value	Effect Size
Any Arrest	38.1%	36.0%	0.4594	-5.4%
Person Arrest	16.1%	16.4%	0.8682	2.1%
Property Arrest	15.1%	12.4%	0.1717	-18.0%
Statutory Arrest	33.4%	32.6%	0.7620	-2.4%

*Multivariate-adjusted arrest rate, see appendix for details

These results show there is not a significant difference in the likelihood of an arrest for any crime. There is also not a significant difference in the likelihood of an arrest for the subgroups of a person, property or statutory crime. Over half of the participants in the Reentry Centers received a lower level of services without engagement expected. Because of this a result of no effect could be expected in this evaluation of all participants. See below for the evaluation of the full service participants. There was no statistical difference, or no effect size shown, for the arrest outcomes of the Reentry Center participants as compared to the control group.

Charge Outcome

This section looks at a charge listed in OJIN as an outcome during the time period following release from prison. The table shows charge outcomes for all, misdemeanor, and felony charges. This table shows multivariate-adjusted charge rates specifically using logistic regression modeling; see appendix for details.

Charge Outcome	Control Group (n=641)	Treatment Group (n=641)*	p-value	Effect Size
Any Charge	36.8%	36.6%	0.9488	-0.6%
Misdemeanor Charge	18.9%	19.4%	0.8356	2.8%
Felony Charge	27.9%	28.1%	0.9463	0.6%

*Multivariate-adjusted arrest rate, see appendix for details

These results show there is not a significant difference in the likelihood of a new charge for any crime. There is also not a significant difference in the likelihood of a new charge for the subgroups of a misdemeanor or felony crime. Again, because the majority of participants received a lower level of services these results could be expected. See below for the results of the full service participants. There was no statistical difference, or no effect size shown, for the charge outcomes of the Reentry Center participants as compared to the control group.

Full Level of Service Evaluation

The evaluation above shows no significant difference in the arrest and charge outcomes for offenders who participated in the Reentry Centers available services and those who did not. The majority of the participants in the Reentry Centers services received the first or second level of service, which is a lower level of services without an action plan or engagement. Because of this the results of the above evaluation could be expected. A second evaluation was conducted on the subgroup of the participants who received the third and highest level of services. These participants received the highest level of services on a voluntary basis, so evaluating this subgroup introduces an additional opportunity for selection bias. These results cannot be projected for the entire group of participants. However, the Reentry Resource Centers focus the majority of resources on these participants and they are a subgroup of interest. The matching and outcome techniques were very similar to the above evaluation. The Reentry Centers provided client information for those who received the third level of treatment, and that information was matched to releases from state institutions since January 1, 2008. There were 169 participants who received the highest level of services and were released from a state institution.

The control group was comprised in a similar way as the evaluation above and included offenders released from state institutions since January 1, 2008 to Multnomah, Lane, and Klamath Counties. Instead of using the PSC score as the risk to recidivate score, Ls/CMI (Level of Service/Case Management Inventory) scores were used. The Ls/CMI score includes dynamic factors and provides a risk and needs assessment. Because dynamic factors are included, this score could provide more information for matching purposes. In the above evaluation the majority of offenders did not have an Ls/CMI score available, and the PSC score was used.

The majority of participants who received the highest level of services at the Reentry Centers also had an Ls/CMI score available.

Pair-wise matching was done to match the treatment and control groups. Prior to matching the treatment group contained n=169 clients. The matching algorithm included county, gender, ethnicity, age (within 5 years), release date (within a year), and Ls/CMI score (within 2 points). The ethnicity variable was coded into three groups including Caucasian, African-American, and all others. This matching algorithm produced n=156 matched pairs on these variables. The table below shows the comparison of several variables between the matched treatment and control groups. There is a significant difference by crime types, with the treatment group comprised of a higher percentage of person crime types and a lower percentage of other and drug crime types. There was also a significant difference in the average length of stay in days and no significant difference for the other variables available. The average Ls/CMI scores for both groups are about 23, which corresponds to a high level in terms of risk to recidivate.

	Control Group (n=156)	Treatment Group (n=156)	p-value
Gender: Male	78.2%	78.2%	--
Ethnicity: Native American	1.3%	1.3%	0.8781
Ethnicity: Asian	0.0%	0.6%	
Ethnicity: Hispanic	1.9%	1.3%	
Ethnicity: African-American	21.8%	21.8%	
Ethnicity: Caucasian	75.0%	75.0%	
Crime Type: Drug	14.1%	5.8%	0.0076
Crime Type: Other	18.6%	11.5%	
Crime Type: Person	18.0%	31.4%	
Crime Type: Property	46.8%	48.1%	
Crime Type: Sex	2.6%	3.2%	
Average Age	36.3	36.7	0.6853
Average Length of Stay (days)	660	924	0.0092
Average Ls/CMI score	23.0	22.8	0.7876

The same limitations as above apply to this evaluation as well. The selection bias effect is still unknown, although matching on Ls/CMI scores could account for some of the dynamic factors of the offenders. However, evaluating this subgroup of interest provides another opportunity for selection bias as the participants received the highest level of services on a voluntary basis. The results of evaluating this subgroup cannot be projected for the entire group of participants. The follow up time period is the same and between 10 months and 2 years and 7 months depending on when the offender was released from prison. A final evaluation showing 36 month felony reconviction rates is planned.

Arrest Outcome

This section looks at an arrest in LEDS as an outcome during the time period following release from prison. The treatment group includes all participants in the Reentry Centers who received full services and were released from a state institution. The control group is comprised of pair-wise matches to the treatment group; see matching section above. The length of time to recidivate is unique to each pair. Arrest outcomes for all arrests, person arrests, property arrests, and statutory arrests are shown in the table below. The table shows multivariate-adjusted arrest rates specifically using logistic regression modeling; see appendix for details.

Arrest Outcome	Control Group (n=156)	Treatment Group (n=156)*	p-value	Effect Size
Any Arrest	48.1%	38.8%	0.1415	-19.3%
Person Arrest	21.2%	17.6%	0.4636	-16.8%
Property Arrest	23.1%	16.4%	0.1599	-28.9%
Statutory Arrest	42.3%	31.9%	0.0875	-24.6%

*Multivariate-adjusted arrest rate, see appendix for details

These results show there is not a significant difference in the likelihood of an arrest for any crime. There is also not a significant difference in the likelihood of an arrest for the subgroups of a person or property crime. There is a significant difference at the 10% level in the likelihood of an arrest for a statutory crime. The treatment group shows a 25% drop in the arrest rate for statutory crimes. The effect sizes for the level three participants are greater than in the evaluation of all participants above. Only the difference in statutory arrests is significant, however the sample size for this group is much smaller.

Charge Outcome

This section looks at a charge listed in OJIN as an outcome during the time period following release from prison. The table shows charge outcomes for all, misdemeanor, and felony charges. This table shows multivariate-adjusted charge rates specifically using logistic regression modeling; see appendix for details.

Charge Outcome	Control Group (n=156)	Treatment Group (n=156)*	p-value	Effect Size
Any Charge	53.2%	36.7%	0.0074	-31.0%
Misdemeanor Charge	25.6%	17.9%	0.1116	-30.2%
Felony Charge	41.0%	32.3%	0.1449	-21.3%

*Multivariate-adjusted arrest rate, see appendix for details

These results show a significant difference in the likelihood of a new charge for any crime. The treatment group is significantly less likely to be charged for any crime. The treatment group shows a 31% drop for the overall charge rate. There is not a significant difference in the likelihood of a new charge for the subgroups of a misdemeanor or felony crime. Again, the effect sizes for the subgroups are greater than in the evaluation of all participants above.

Cost Benefit Analysis

The preliminary findings above show that the Reentry Centers have a positive impact on reducing recidivism for those participants who receive the third level of treatment. By reducing recidivism, the Reentry Centers contribute to a lower re-arrest rate in the area. However, program effectiveness does not equate with cost effectiveness. It is important to know if the tax-payer money funneled to this program is a sound investment, in that the dollars spent translate to either an equivalent or a greater amount of monetized benefits to the taxpayers and society as a whole. The Oregon Criminal Justice Commission uses a cost-benefit model provided by the Results First initiative[1], a joint initiative of the Pew Charitable Trusts and the John D. and Catherine T. MacArthur Foundation. The model, originally developed in Washington State[2], can evaluate the program costs, estimate the effect on recidivism, and determine whether the program is cost effective in Oregon.

Costs for the Reentry Center are measured from the Center's service provision budgets. The CJC received total cost data from Multnomah and Lane counties, as well as the number of participants from each county. There were differences in the cost structures from each county provider, so the average cost per participant consists of an average of the costs from each county, weighted by the number of participants from each county. Multnomah County had an average cost of $1,975.73 per participant, with 61.5% of the participants. Lane County had an average cost of $722.69 with 38.5% of the participants. Thus, the CJC estimates that the average cost per participant is $1,493.31 This does not account for resources used for services to level 1 and 2 participants, and could overestimate the total cost of servicing level 3 participants. Using the estimated effect size of -31% within the cost benefit model, the benefits of the program can be measured against the costs of the program. For this report, the -31% effect size indicates that for every 10 offenders that use level 3 services, there will be 3.1 fewer future charges for new crimes. This reduction cascades into other areas of the criminal justice system, such as arrests, trials, and incarcerations, all of which saves the tax payer money and reallocates existing budgets to more useful applications. These fewer crimes committed also generate savings to society as a whole through *avoided victimization*, wherein less people are victims of crime, and do not have to go through the costs of crime. For the Reentry Centers, the estimated gross benefits (per individual served) in reduced tax payer costs and reduced victimization costs total $21,153. Measured against the cost per participant, the Reentry

[1] http://www.pewstates.org/projects/results-first-328069
[2] WISPP's Benefit-Cost Tool for States: Examining Policy Options in Sentencing and Corrections http://www.wsipp.wa.gov/pub.asp?docid=10-08-1201

Centers generate a benefit of $14.17 for every dollar spent on the program. This is a conservative estimate, as the cost-benefit model does not include any potential savings from avoided misdemeanors, or the savings to other outcomes outside the criminal justice system.

Cost Benefit Analysis of Reentry Centers	
Benefits of Reduced Recidivism	
Criminal Justice Tax Payer Cost Avoided per Participant	$6,303
Avoided Crime Victimization per Participant	$14,850
Total Crime-Related Costs Avoided per Participant	**$21,153**
Cost of Reentry Program	$1,493
Net Benefit per Participant	$19,660
Gross Benefit to Cost Ratio	$14.17

Appendix

Multivariate Models

Logistic regression analysis was used to calculate the model-adjusted arrest rates. The models for any person, property and statutory arrests are shown below, as well as models for any misdemeanor and felony charges. The regression coefficient was used to adjust the arrest rate for the treatment group. Using the arrest rate of the comparison group (abbreviated as ‘c’) and the regression coefficient for the group variable (abbreviated as ‘a’) the adjusted arrest rate for the treatment group was calculated as follows:

$$\frac{(\frac{c}{1-c}) * \exp(-a)}{1 + \left(\frac{c}{1-c}\right) * \exp(-a)}$$

All participants:

	Any Arrest		Person Arrest	
Variable	Parameter Estimate	p-value	Parameter Estimate	p-value
Group	0.0902	0.4594	-0.0264	0.8682
Intercept	-2.2700	<.0001	-2.1466	0.0013
Klamath County	-0.0499	0.8565	0.1816	0.6117
Lane County	0.1035	0.4601	0.3003	0.1040
Gender	-0.4261	0.0178	-1.3590	<.0001
Caucasian	0.1059	0.7397	0.1351	0.7452
Black	0.4902	0.1502	0.5182	0.2410
Drug Crime Category	0.3397	0.2740	0.1156	0.7967
Other Crime Category	0.5996	0.0397	1.2664	0.0008
Person Crime Category	0.5564	0.0278	0.7831	0.0198
Property Crime Category	0.5994	0.0303	0.6416	0.0877
Length of Stay (Days)	0.0000	0.8913	0.0002	0.0213
Age	-0.0095	0.1734	-0.0323	0.0005
PSC Risk Score	0.0376	<.0001	0.0164	0.0265

	Property Arrest		Statutory Arrest	
Variable	Parameter Estimate	p-value	Parameter Estimate	p-value
Group	0.2329	0.1717	0.0375	0.7620
Intercept	-6.1051	<.0001	-1.7449	0.0006
Klamath County	-0.2737	0.5115	0.2243	0.4049
Lane County	-0.3115	0.1059	-0.0024	0.9868
Gender	-0.4120	0.1088	-0.3766	0.0405
Caucasian	0.5303	0.3356	-0.0365	0.9075
Black	0.2558	0.6616	0.1447	0.6685
Drug Crime Category	1.5510	0.1559	0.2166	0.4873
Other Crime Category	2.5532	0.0146	0.3416	0.2461
Person Crime Category	2.6653	0.0091	0.3109	0.2233
Property Crime Category	3.0873	0.0028	0.4098	0.1416
Length of Stay (Days)	0.0000	0.8325	-0.0001	0.2623
Age	-0.0009	0.9287	-0.0105	0.1386
PSC Risk Score	0.0332	<.0001	0.0326	<.0001

	Any Charge		Misdemeanor Charge		Felony Charge	
Variable	Parameter Estimate	p-value	Parameter Estimate	p-value	Parameter Estimate	p-value
Group	0.0078	0.9488	-0.0308	0.8356	-0.0088	0.9463
Intercept	1.9279	0.0002	-2.4403	<.0001	-2.5434	<.0001
Klamath County	-0.2549	0.3480	0.0672	0.8221	-0.5950	0.0734
Lane County	-0.5215	0.0002	-0.9395	<.0001	-0.3586	0.0178
Gender	-0.3825	0.0329	-0.3027	0.1769	-0.5655	0.0048
Caucasian	0.2362	0.4620	-0.2783	0.4276	0.8233	0.0534
Black	0.7962	0.0196	0.2110	0.5692	1.3575	0.0021
Drug Crime Category	0.2466	0.4178	0.0560	0.8897	0.3410	0.3042
Other Crime Category	0.4911	0.0854	0.6724	0.0680	0.4358	0.1653
Person Crime Category	0.3661	0.1356	0.7251	0.0248	0.1472	0.5920
Property Crime Category	0.3424	0.2063	0.2792	0.4344	0.4275	0.1514
Length of Stay (Days)	0.0000	0.7120	-0.0001	0.3637	0.0000	0.7580
Age	-0.0048	0.4910	0.0060	0.4714	-0.0126	0.0944
PSC Risk Score	0.0323	<.0001	0.0248	0.0004	0.0301	<.0001

Full Level of Service Participants:

	Any Arrest		Person Arrest	
Variable	Parameter Estimate	p-value	Parameter Estimate	p-value
Group	0.3775	0.1415	0.2306	0.4636
Intercept	-0.5414	0.6522	-0.5398	0.6990
Lane County	0.2930	0.3509	0.3015	0.4395
Gender	-1.5244	<.0001	-2.3237	0.0019
Caucasian	0.0587	0.9356	-0.6316	0.4184
Black	-0.0498	0.9463	-0.7139	0.3754
Drug Crime Category	-0.0821	0.9214	-0.0466	0.9628
Other Crime Category	0.3786	0.6336	0.7947	0.3952
Person Crime Category	-0.3229	0.6734	-0.2824	0.7588
Property Crime Category	0.6265	0.4064	0.1951	0.8296
Length of Stay (Days)	0.0003	0.0955	0.0003	0.1115
Age	-0.0482	0.0016	-0.0511	0.0075
Ls/CMI Score	0.0661	0.0017	0.0494	0.0518

	Property Arrest		Statutory Arrest	
Variable	Parameter Estimate	p-value	Parameter Estimate	p-value
Group	0.4271	0.1599	0.4471	0.0875
Intercept	-1.6007	0.2744	-0.4829	0.6952
Lane County	0.1079	0.7675	0.3816	0.2272
Gender	-1.3156	0.0063	-1.4150	0.0002
Caucasian	0.0328	0.9704	-0.2080	0.5547
Black	-0.1251	0.8906	-0.9054	0.2196
Drug Crime Category	-0.5814	0.5687	-0.2210	0.7998
Other Crime Category	-0.3183	0.7389	0.4417	0.5924
Person Crime Category	-0.6998	0.4452	0.0274	0.9726
Property Crime Category	0.7123	0.4195	0.9568	0.2238
Length of Stay (Days)	0.0003	0.1510	0.0001	0.4431
Age	-0.0563	0.1420	-0.0380	0.0143
Ls/CMI Score	0.0328	0.1793	0.0486	0.0220

	Any Charge		Misdemeanor Charge		Felony Charge	
Variable	Parameter Estimate	p-value	Parameter Estimate	p-value	Parameter Estimate	p-value
Group	0.6741	0.0074	0.4574	0.1116	0.3784	0.1449
Intercept	0.5112	0.6730	-0.0100	0.9938	-1.4410	0.2685
Lane County	-0.3571	0.2559	-0.4814	0.1910	-0.1149	0.7193
Gender	-1.1242	0.0008	-0.3228	0.3886	-1.5925	<.0001
Caucasian	0.4312	0.5582	-0.6003	0.4122	1.3006	0.1334
Black	0.4822	0.5191	-0.2511	0.7345	1.3702	0.1191
Drug Crime Category	-1.5282	0.0725	-1.3129	0.1625	-1.0592	0.2087
Other Crime Category	-0.5894	0.4649	-0.3159	0.7045	-0.3594	0.6496
Person Crime Category	-1.4601	0.0632	-0.8616	0.2834	-0.9466	0.2168
Property Crime Category	-0.5455	0.4781	-0.4974	0.5289	-0.0642	0.9316
Length of Stay (Days)	0.0003	0.0622	0.0002	0.3636	0.0000	0.7743
Age	-0.0481	0.0012	-0.0175	0.2859	-0.0388	0.0110
Ls/CMI Score	0.0564	0.0065	0.0155	0.5060	0.0669	0.0018