

EVALUATION OF OHIO'S RECLAIM PROGRAMS

Cost Benefit Analysis Supplemental Report

Edward J. Latessa, Ph.D.
Principal Investigator

Brian Lovins, Ph.D.
Project Director

Jennifer Lux, M.S.
Project Manager

University of Cincinnati
School of Criminal Justice
Center for Criminal Justice Research
PO Box 210389
Cincinnati, OH 45221-0389

January 22, 2014

TABLE OF CONTENTS

INTRODUCTION.....	3
METHODS	4
Recidivism.....	4
Juvenile Offenders	4
Costs.....	4
RESULTS	8
SUMMARY AND DISCUSSION.....	15
REFERENCES.....	17
APPENDIX A—CPI INFLATION INDEX.....	18
APPENDIX B—COMMITMENT RATES TO DYS / DRC BY RISK LEVEL AND PLACEMENT TYPE.....	19

INTRODUCTION

In 2013, the University of Cincinnati Corrections Institute (UCCI) conducted an evaluation of Ohio's RECLAIM funded programs, comparing youths' outcomes in those programs with youths who were released from community corrections facilities (CCFs) and Department of Youth Services (DYS) facilities during Fiscal Year (FY) 2011.¹ The results contained in the original report provided significant support for the risk principle, suggesting that low and moderate risk youth are best served in community placements.

The purpose of this current report is to determine the costs associated with each type of placement investigated in the aforementioned outcome study. Specifically, the study will estimate which placement type (RECLAIM, CCF, or DYS facility) is most cost effective, based on costs of future offending. To conduct these analyses, several steps were taken.

First, the costs associated with processing a criminal offense were calculated, as well as victim costs associated with a criminal act. These data were then used to determine the initial costs of processing youth for each placement type. The third step involved using these cost estimates to calculate the expenses of a subsequent criminal offense. Finally, those costs were multiplied by the recidivism rates of each placement type to determine the expected benefits of the different placement types.

The current report will review the outcome measures used, the calculations associated with processing a criminal case, and the final calculation of costs and benefits. The results of the analyses, interpretation of those results, and recommendations are also presented.

¹ For a full description of each placement type, please see <http://www.dys.ohio.gov/DNN/LinkClick.aspx?fileticket=JtVZ6JcbUc4%3D&tabid=131&mid=764>.

METHODS

The issue of whether any correctional program or facility is cost-effective is a complex one. First, it must be determined whether the program or facility is reducing recidivism. Second, the cost of program/facility operations must be estimated. By estimating both a treatment effect and a marginal cost associated with operations, it can be determined whether the program and/or facility sufficiently reduces recidivism to offset the marginalized costs. This section of the report will detail the methods and variables used to assess whether RECLAIM programs, CCFs and DYS facilities are cost-effective. Table 1 presents all of the formulas and variables used to calculate costs for the study.

Recidivism

Recidivism was defined as any subsequent commitment to a DYS or Department of Rehabilitation and Correction (DRC) facility, within two years from program termination or facility release. This measure was chosen since it was the most reliable and consistent measure of recidivism across both juvenile and adult justice systems.

Juvenile Offenders

Youths were included in the study if they were terminated from a RECLAIM program, CCF, or DYS facility during FY2011. In total, 10,679 youths were included in the analyses, with 9,314 youths terminated from a RECLAIM program, 516 youths terminated from a CCF, and 849 youths terminated from a DYS facility.

Costs²

The costs associated with criminal behavior were calculated in various ways. First, county level data were collected to determine the costs associated with processing criminal cases.

² Court, law enforcement, and probation costs were calculated using data for juvenile and adult arrests and criminal cases, as separate budgets for juveniles and adults were not available.

Specifically, each county's annual budget was examined for various agencies to determine court-processing costs. Similar data were collected from DYS and DRC. The costs for each agency, or stage of processing in the criminal justice system, were then calculated and totaled to provide an overall cost for processing criminal cases.³

Law Enforcement and Court Costs. The estimated law enforcement and court costs for these analyses were calculated from the previous RECLAIM Cost Benefit Study.⁴ To calculate the costs associated with 2011 dollars, the total value was adjusted for inflation. The average law enforcement and court costs associated with one criminal case were estimated to be \$6,088.

Probation. To calculate the marginal costs of probation supervision, the total probation budgets from each county's Comprehensive Annual Financial Report (CAFR) report were used to predict the total number of probation eligible cases. The cost of one probation case was estimated to be \$736. While this process might underestimate the costs of probation supervision (i.e., not all probation eligible cases receive probation), the estimates do not appear to be outside the estimated costs seen elsewhere (see e.g., Aos et al., 2001).

RECLAIM. The average costs of RECLAIM programming were estimated to be \$3,171. This figure was calculated by dividing the total payments made to the counties by the total number of youth terminated from a RECLAIM program for 2011, yielding the \$3,171 amount presented above. Terminations, rather than number of youth served, were used because many of the low-cost and high-volume programs do not require termination data to be entered into the RECLAIM tracking database. By using terminations, these referrals are excluded from the base number of terminations, giving a more accurate cost per youth served by the program.

³ Note, prior to determining overall costs associated with processing a criminal case, all dollars were adjusted to 2011 using the Consumer Price Index (CPI) Inflation Index (U.S. Department of Labor, 2011). Costs for subsequent arrests were adjusted to 2012 and 2013 dollars.

⁴ The most recent publication for law enforcement and courts was the same CAFR report used in the previous study.

CCF. The cost associated with placement in a CCF was \$35,428 per youth served. This value was calculated by the actual length of stay for all youth in this sample by the average per diem for FY2011 (\$158.47).

DYS. Incarceration in a DYS facility was calculated by multiplying the length of stay for the youth in this sample terminated from DYS by the per diem (\$442.00). This calculation led to incarceration costs of \$159,350.

DRC. The cost of incarceration in a DRC facility was calculated by multiplying the average length of stay (2.4 years) by the per diem rate (\$69.00) for offenders released in 2011. The costs of incarceration associated with each offender released from DRC in 2011 were \$60,159.

Present Costs. To calculate the costs for processing youth terminated from programming in FY2011, dollars were standardized to 2011 values using the Consumer Price Index (CPI) inflation index. The inflation rates for calculating 2011 values from other years are contained in Appendix A. The costs of each placement type were calculated by summing the estimated law enforcement costs, courts costs, and jail costs, plus the costs associated with each type of placement. For probation, the costs of processing a case to disposition were added to the costs of probation. For RECLAIM terminations, the costs of processing a case to disposition were added to the costs of probation (an assumed condition for RECLAIM participants) and the average cost for RECLAIM programming. For CCF placements, the costs of probation and the cost of a typical stay in a CCF were added to the costs of processing a case to disposition. Similarly, DYS costs were calculated by adding the costs of probation and the costs of a typical DYS incarceration sentence, to the costs of processing a case through disposition. Table 1 presents the cumulative costs of processing a single case.

Future Costs. As discussed, recidivism was defined as any commitment to a DYS or DRC facility, for any reason, within two years from program termination or facility release. In order to simplify the analyses, an average cost of any commitment was calculated (including DYS and DRC) for the follow up period. This average cost was based on the per diem for both DYS and DRC times the average number of days a person would stay in the facility. As can be seen from Table 1, the average cost of a recommitment was \$113,166.

Table 1 Cumulative Costs of Processing a Single Case	
	2011
Cost to Disposition	\$6,088
Probation	\$6,824
RECLAIM	\$9,995
CCF	\$42,252
DYS	\$166,174
DRC	\$60,159
Average DYS / DRC Commitment	\$113,166

Calculating Processing Costs and Costs Associated with Recidivism. Once costs associated with placements were calculated, the values were multiplied by 10 to standardize costs across all settings. In order to calculate the future costs associated with recidivism of the youths in each placement type, the incarceration rates for each placement and risk level were multiplied by the costs associated with being placed in DYS/DRC for a new offense. This value was then added to the processing cost of 10 youth to determine the tax costs associated with processing 10 youths.⁵

Two additional analyses were conducted in this study to include the financial costs that a new crime costs a victim. Previous research separates these costs into tangible costs and victim

⁵ See Appendix B for recidivism rates used in this study.

quality of life costs (Miller, Cohen, & Wiersema, 1996). Tangible costs are those directly associated with the cost of a new crime (e.g., replacement costs of items, medical costs), while victim quality of life costs represent the financial costs associated with pain and suffering (e.g., loss of life, fear of crime, counseling costs). While costs differ by type of offense (e.g., murder versus burglary), the data for this study were limited in that we could not determine the reason why the youth went to prison, just that they were incarcerated post-release. In this way, the average cost for all offenses was calculated for this study and then added to the total tax costs (processing + cost of incarceration) for each youth who was subsequently incarcerated.

RESULTS

Table 2 and Figures 1 through 3 present the tax costs associated with processing 10 youth and recidivism rates. As can be seen, the approximate cost of processing 10 youth through a RECLAIM program is \$99,950. The approximate cost of processing 10 youths through a CCF and DYS facility is \$422,520 and \$1,661,740, respectively.

	Cost to Process 10 youth	Recidivism		
		Low	Moderate	High
RECLAIM	\$99,950	\$11,316	\$22,633	\$113,166
CCF	\$422,520	\$90,532	\$158,432	\$373,448
DYS	\$1,661,740	\$147,115	\$215,015	\$373,448
Recidivism + Initial Processing Costs				
		Low	Moderate	High
RECLAIM		\$111,266	\$122,583	\$213,116
CCF		\$513,052	\$580,952	\$795,968
DYS		\$1,808,855	\$1,876,755	\$2,035,188

The right-hand columns in the top panel of Table 2 present the future costs of incarceration associated with the 10 youths processed through each placement. For example,

low risk youths placed in RECLAIM programs had a recidivism rate of 1 percent. This would equate to .1 commitments to DYS or DRC during the follow up time (1% x 10 youth). Multiplying the number of commitments for the ten low risk youth placed in RECLAIM programs (.1 commitments) by the average cost of a commitment in DYS or DRC (\$113,166) yields a value of \$11,316.

The lower panel of Table 2 presents the costs associated with processing 10 youth through each placement, plus the costs associated with the recidivism rates for each placement type by risk level. For example, if 10 low risk youth are placed in RECLAIM programs, the costs of disposing those original 10 cases, plus the costs of processing future criminal behavior that would lead to a commitment in DYS or DRC, equates to \$111,266 (\$99,950 + 11,316).

These same costs are presented in Figures 1 through 3, where the bottom of the stacked bar represents the initial processing costs (light gray) and the top of the stacked bar represents the costs associated with the recidivism rate of each placement type (dark gray). Above each bar, the overall costs (sum of initial processing costs and recidivism) are presented in thousands of dollars.

Note in Table 2 and in each of the figures, that RECLAIM program costs were less than both CCF and DYS costs initially, as well as after considering costs associated with recidivism rates. This trend was noted across all levels of risk.

Figure 1
Tax Costs of Processing Low Risk Youth & Recidivism

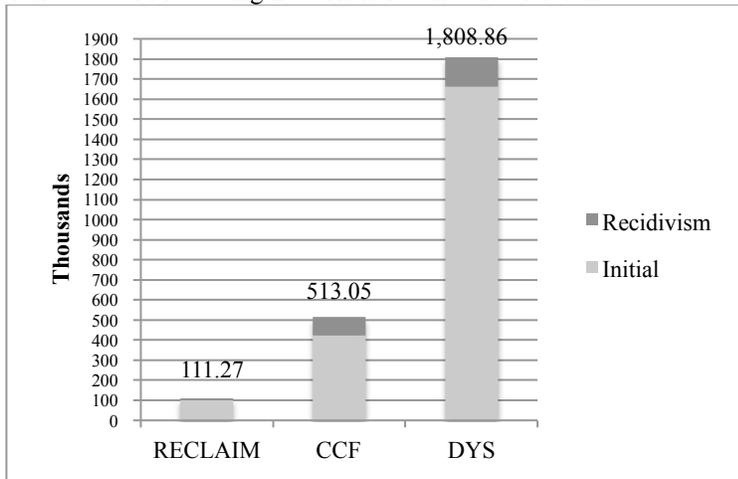


Figure 2
Tax Costs of Processing Moderate Risk Youth & Recidivism

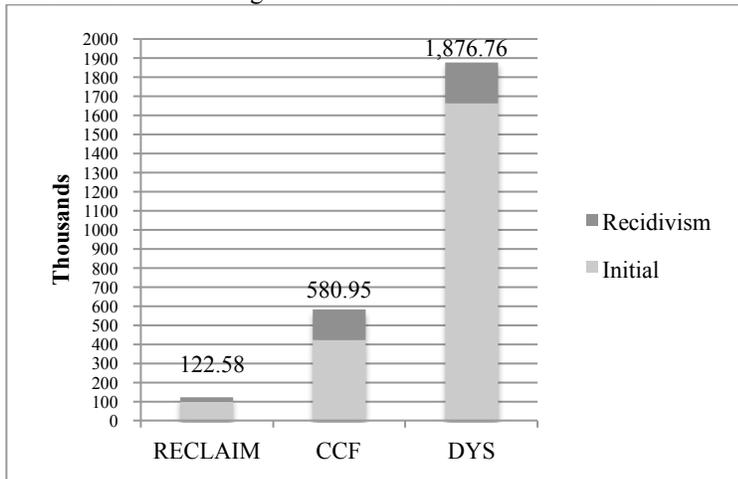
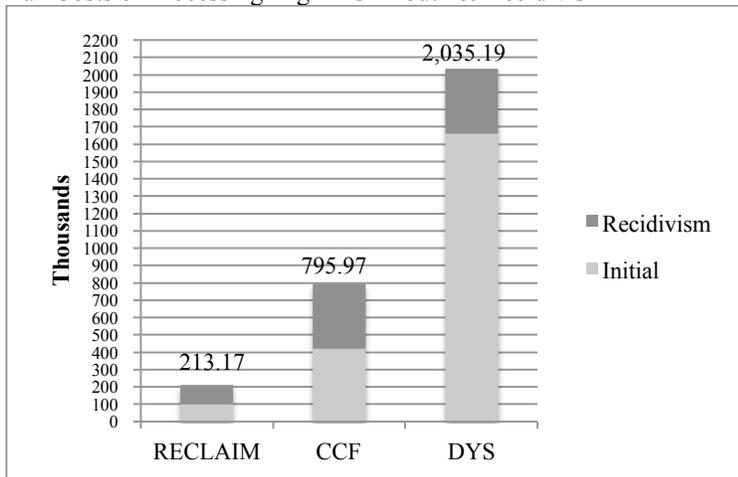


Figure 3
Tax Costs of Processing High Risk Youth & Recidivism



As briefly discussed previously, two additional analyses were conducted to examine the costs incurred by victims of crime. Table 3 presents the tax costs and tangible victim costs associated with processing 10 youths, as well as the recidivism rates for these youth. Although processing costs remained the same, recidivism costs increased because the recidivism costs in Table 3 take into account the tangible costs of crime to the victims. For example, the tax costs, plus the tangible victim costs associated with processing 10 low risk RECLAIM youths was \$11,844. When examining the tax costs and tangible victim costs, plus the costs of processing future criminal behavior that would lead to a commitment in DYS or DRC, the costs for the low risk RECLAIM group would be \$111,839 (\$99,995 + \$11,844). Once again, initial costs (tax costs + tangible victim costs), as well as costs incorporating recidivism costs, remained lower for the RECLAIM group at each level of risk, compared to CCF and DYS costs. Figures 4 through 6 present the data graphically.

	Cost to Process 10 youth	Recidivism		
		Low	Moderate	High
RECLAIM	\$99,950	\$11,844	\$23,689	\$118,446
CCF	\$422,520	\$94,756	\$163,785	\$378,902
DYS	\$1,661,740	\$152,468	\$220,395	\$378,902
Recidivism + Initial Processing Costs				
		Low	Moderate	High
RECLAIM		\$111,794	\$123,639	\$218,396
CCF		\$517,276	\$586,305	\$801,422
DYS		\$1,814,208	\$1,882,135	\$2,040,642

Figure 4
 Tax Costs & Tangible Victim Costs Associated with Processing 10 Low Risk Youth & Recidivism

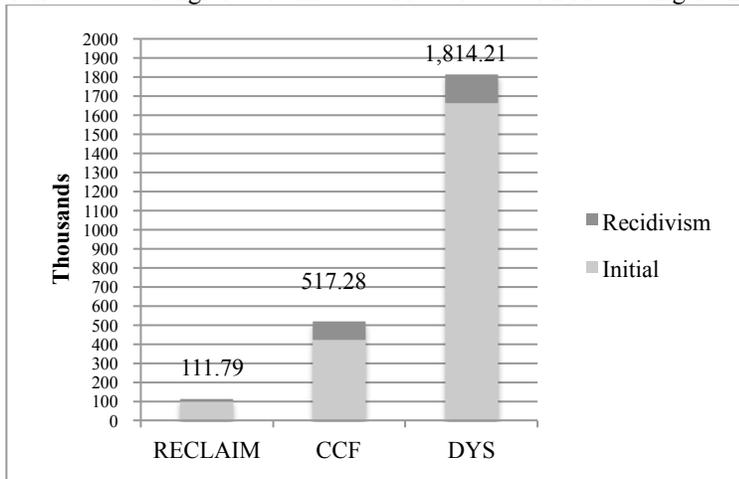


Figure 5
 Tax Costs & Tangible Victim Costs Associated with Processing 10 Moderate Risk Youth & Recidivism

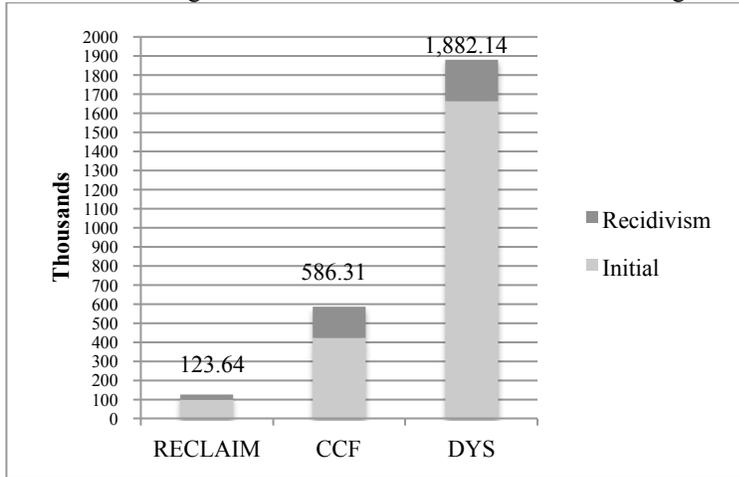


Figure 6
 Tax Costs & Tangible Victim Costs Associated with Processing 10 High Risk Youth & Recidivism

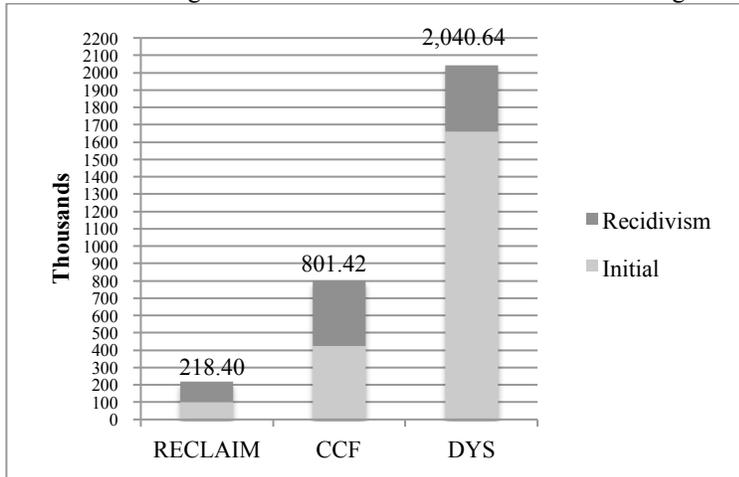


Table 4 presents the tax costs and total victim costs (tangible + quality of life) associated with processing 10 youth, as well as the recidivism rates for processing 10 youth. Once again, the cost to process 10 youth stayed the same, however, recidivism costs are slightly different because total victim costs were incorporated into the expenses. Once again, the results presented in Table 4 show that RECLAIM costs were considerably lower, compared to CCF and DYS costs. Figures 7 through 9 display these results graphically.

Table 4 Tax Costs and Total Victim Costs Associated with Processing 10 youth and Recidivism				
	Cost to Process 10 youth	Recidivism		
		Low	Moderate	High
RECLAIM	\$99,950	\$15,682	\$31,365	\$156,828
CCF	\$422,520	\$125,461	\$202,677	\$418,550
DYS	\$1,661,740	\$191,348	\$220,395	\$418,550
Recidivism + Initial Processing Costs				
		Low	Moderate	High
RECLAIM		\$115,632	\$131,315	\$256,778
CCF		\$547,981	\$625,197	\$841,070
DYS		\$1,853,088	\$1,882,135	\$2,080,290

Figure 7
 Tax Costs & Total Victim Costs Associated with Processing 10 Low Risk Youth & Recidivism

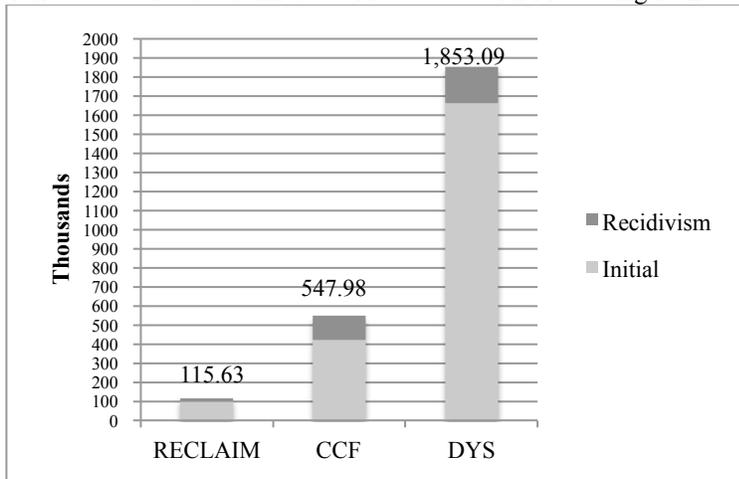


Figure 8
 Tax Costs & Total Victim Costs Associated with Processing 10 Moderate Risk Youth & Recidivism

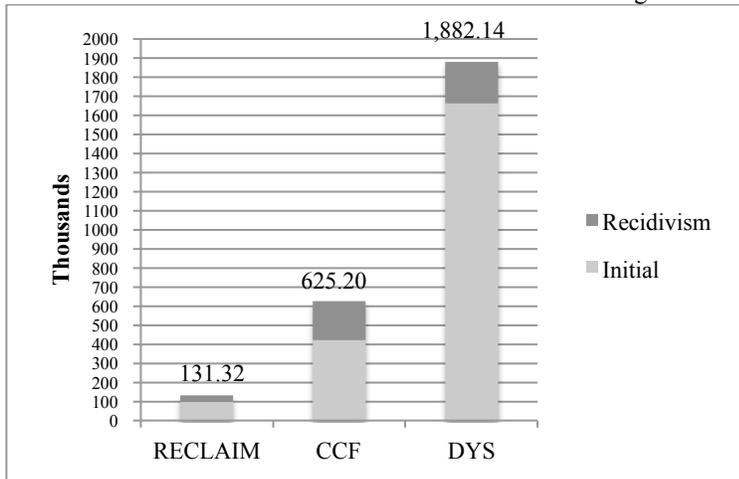
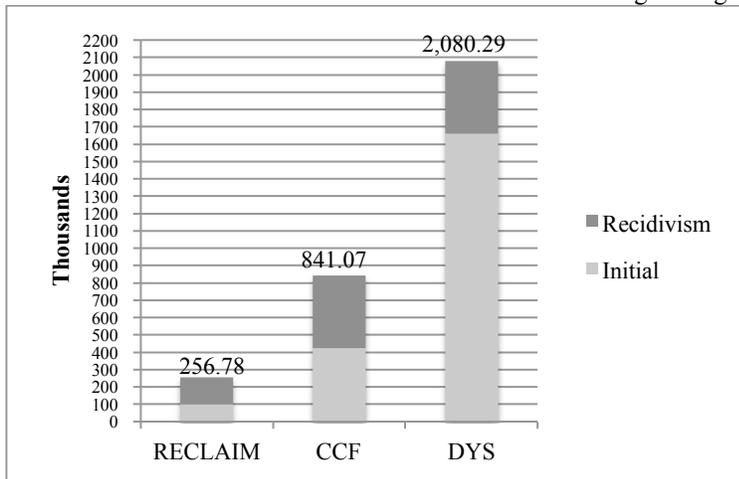


Figure 9
 Tax Costs & Total Victim Costs Associated with Processing 10 High Risk Youth & Recidivism



In summary, the results presented above indicate that RECLAIM funded programs are the least expensive option, compared to placing youth in a CCF or DYS facility. The processing and service costs (initial) are the least expensive for RECLAIM programs for all levels of risk. Even after incorporating the costs of recidivism for 10 youths into the analyses, RECLAIM expenses continued to remain the least expensive option. As would be expected, DYS expenses consistently remained the most expensive option across risk levels and each permutation of recidivism costs.

SUMMARY AND DISCUSSION

The results of the analyses included in this report build on the findings of the RECLAIM Evaluation study conducted in 2013. The current study used data on all RECLAIM participants terminated from programming during FY2011, as well as youths terminated from CCFs and DYS facilities during FY2011.

The results indicate that across levels of risk, RECLAIM programs appear to be the most cost effective option both initially, as well as after recidivism costs are incorporated into the calculations. One final analysis was conducted to examine the dollars saved per dollar spent on RECLAIM programs. The results of this analysis are presented in Table 5.

First, it should be noted that the data in Table 5 were calculated using the initial costs of programming and the recidivism figures that included total victim costs. To arrive at these numbers, initial and recidivism costs for RECLAIM were subtracted from the initial and recidivism costs for CCFs and DYS facilities. The difference was then divided by the initial costs of RELCAIM programming. As can be seen from Table 5, the long-term savings are substantial and range anywhere from \$13.60 to \$57.51 for every dollar spent on RECLAIM programming instead of a placement in a CCF or DYS facility.

Table 5

Dollars saved per dollar spent on RECLAIM

	Low	Moderate	High
CCF	\$13.60	\$15.57	\$18.42
DYS	\$54.79	\$55.21	\$57.51

*Figures based on recidivism costs with total victim costs

Taken together, the results from the present study, as well as the positive results found in the 2013 RECLAIM evaluation study, indicate that RECLAIM programs are a cost effective community alternative to CCF or DYS placement. Compared to placement in a CCF or DYS facility, youth referred to RECLAIM programs have lower recidivism rates and RECLAIM program costs are considerably lower.

REFERENCES

- Aos, S., Phipps, P., Barnoski, R., & Lieb, R. (2001). The comparative costs and benefits of programs to reduce recidivism. Olympia, WA: Washington State Institute for Public Policy.
- Janes, L. S., & Hunyadi, E. (2009). Ohio Department of rehabilitation and correction: Bureau of adult detention annual jail report, 2007. Available from the Ohio Department of Rehabilitation and Correction Web site, <http://www.drc.ohio.gov/web/reports/BAD/Annual%20Report%202007.pdf>
- Justice Research and Statistics Association. (1997). Juvenile accountability blocks grant program, 1997 [Data file]. Available from Justice Research and Statistics Association Web site, http://www.jrsa.org/jabg/state_data2/ohio/oh97_e.xls
- Miller, T. R., Cohen, M. A., & Wiersema, B. (1996). Victim costs and consequences: A new Look. Research Report. Washington D.C.: National Institute of Justice.
- United States Department of Labor (2011). Consumer Price Index—All Urban Consumers. Washington, D.C.: U.S. Department of Labor.

APPENDIX A—CONSUMER PRICE INDEX (CPI)

Year	% Increase from Previous Year
1997	2.3
1998	1.6
1999	2.2
2000	3.4
2001	2.8
2002	1.6
2003	2.3
2004	2.7
2005	3.4
2006	3.2
2007	2.8
2008	3.8
2009	-0.4
2010	1.6
2011	3.2
2012	2.7
2013	1.5

**APPENDIX B—COMMITMENT RATES TO DYS / DRC
BY RISK LEVEL AND PLACEMENT TYPE**

	% Low	% Moderate	% High
RECLAIM	1	2	10
CCF	8	14	33
DYS	13	19	33