

March 2017

# SAVINGS RATE:

## How Wraparound Advocacy May Reduce the Consequences and Costs of State Commitment for Justice-Involved Youth

by Douglas Evans, Megan O'Toole, and Jeffrey A. Butts  
Research & Evaluation Center, John Jay College of Criminal Justice

### Summary

John Jay College conducted a quasi-experimental evaluation of Youth Advocate Programs, Inc. by comparing justice system outcomes for a sample of Florida youth served by YAP, Inc. with a matched comparison sample of youth supervised by the public juvenile probation department.

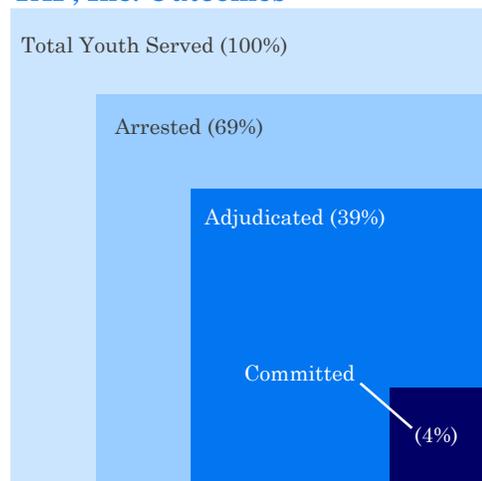
The results indicate that youth served by YAP were somewhat more likely to be re-arrested and adjudicated for misdemeanor offenses—a difference that could be due in part to YAP youth being scrutinized more closely after YAP services. Despite their more frequent justice system contacts, however, YAP youth were significantly less likely within two years of completing services to be committed to the state for placement by the juvenile justice agency.

This finding suggests that YAP services generate considerable savings by reducing the need for commitment and out-of-home placement among court-involved youth. Based on average lengths of stay in out-of-home placements in Florida and the actual placement settings used for committed youth in this study, we estimate that the State of Florida saves more than \$2.7 Million in avoided placement costs for every 1,000 youth referred to YAP rather than DJJ probation.

### Juvenile Probation Outcomes



### YAP, Inc. Outcomes



## Introduction

The John Jay College Research and Evaluation Center (JohnJayREC) evaluated the effectiveness of services provided for justice-involved youth in Orange County Florida by Youth Advocate Programs, Inc. (YAP).

With funding from the Annie E. Casey Foundation and data from the Florida Department of Juvenile Justice (DJJ), researchers compared outcomes for a sample of 249 YAP youth and a matched sample of 249 youth served by juvenile probation. All study youth were involved with the Florida juvenile justice system between 2010 and 2014.

Youth in the YAP sample were matched with youth drawn from a large pool of probation cases using a probabilistic selection routine. Researchers used the method known as “propensity score matching” (PSM) to generate two groups of youth with comparable risk profiles and similar demographic characteristics. In other words, probation cases were matched with YAP cases statistically rather than being chosen by the research team.

The study compared the samples on a number of common indicators for up to two years following their completion of services with YAP or probation. The analysis examined how youth differed in terms of subsequent arrests, court adjudications, detention admissions, commitments to DJJ, and transfers to criminal court. This allowed the study to estimate the relative effects of YAP services and probation supervision for similarly situated youth.

## Method

The study compared former YAP participants with former youth probationers using retrospective data. Researchers began the study by contacting YAP, Inc. to obtain identifying data about several hundred of the program’s former clients. YAP provided data for youth who began and completed an initial period of services any time between 2010 and 2014.

Information about the YAP clients (name, date of birth, home address, agency ID number, etc.) was sent to DJJ data managers who located their own records for those youth and created a de-identified database summarizing all previous and subsequent justice contacts with each youth (arrests, adjudications, risk scores, commitments, etc.).

## Matched Sample Characteristics

	Youth Served by:	
	<u>YAP, Inc.</u>	<u>Probation</u>
Total N	249	249
Male	66%	69%
Female	34	31
Black	57%	65%
White	23	21
Hispanic	20	14
Other	1	
Under Age 16	22%	26%
Age 16 and Older	78	74
Measured Risk Level		
Low	57%	68%
Moderate	21	17
Mod-High	13	9
High	9	6
Initial Service Length		
1-59 Days	8%	8%
60-90 Days	12	8
3-5 Months	38	30
6+ Months	43	54

Note: Retrospective sample of 249 former YAP participants matched statistically with 249 youth on probation. Orange County, Florida data courtesy of the Florida Department of Juvenile Justice (DJJ).

Researchers from DJJ then used the same file format to compile a database with information about 7,338 juveniles probationers who started and completed supervision in Orange County between 2010 and 2014. This second de-identified database provided the pool from which matched cases could be drawn for comparison with YAP cases.

## Results

Comparison of the two samples revealed few significant differences. Youth served by YAP, however, had more mental health diagnoses, more frequent suicidal ideations, and more extensive histories of physical and sexual abuse compared with the probation sample. This may suggest that YAP served a more challenging client population even after matching on demographics and the risk scores used in the juvenile justice system.

When the study examined subsequent justice contacts among both groups, some differences appeared to favor probation. Within the two-year follow-up period, for example, YAP youth were arrested significantly more often than were probation youth. Seven of 10 YAP clients (171 of 249, or 69%) were

arrested at least once in those two years, compared with 144 (58%) probation youth. YAP youth were also significantly more likely to have at least one detention admission during the 2-year follow-up period (46% versus 39%). Other differences, such as subsequent court adjudications—while still favoring probation—were not statistically significant.

The YAP group was more likely to be arrested for misdemeanors (45% versus 30%), but there were no significant group differences in felony arrests. This could suggest that participation in YAP, Inc. increased youths’ exposure to behavioral scrutiny and law enforcement attention. In other words, YAP clients may have been watched more closely than probation clients, which in turn could have led to more frequent arrests for less serious infractions.

The most consequential difference was observed in the rate of subsequent commitments. When youth are committed to a state agency following an appearance in juvenile court, they are under the legal custody of state authorities and may be removed from their homes and placed in a range of residential settings, including potentially expensive secure facilities.

## Justice System Contacts within Two Years of Discharge from YAP or Probation

	Percentage of Youth Having Each Type of Contact	
	YAP, Inc.	Probation
<i>Statistically Significant Differences</i>		
Misdemeanor Arrest*	45%	30%
Detention Admission*	46%	39%
State Commitment*	4%	21%
<i>Non-Significant Differences</i>		
Felony Arrest	37%	29%
Court Adjudication	39%	27%
Order of Probation	39%	33%
Criminal Court Transfer	1%	3%

\* Difference between YAP participants and probationers is statistically significant ( $p < .05$ ).

During the two-year follow-up period, probation youth were significantly more likely to experience a state commitment than were YAP youth (21% versus 4%). In other words, probation clients were *five times more likely* to be committed within two years after receiving services.

### Sample Matching Process

Propensity score matching (PSM) is used by researchers to estimate the probability of an individual being assigned to a treatment (YAP) or control condition (probation) by considering a range of covariates (e.g., age, race, offense severity, risk score) that may be associated with treatment assignment. PSM corrects for selection bias and ensures that two samples are as similar as possible, which allows a study to infer that differences in outcome could be due to the intervention (Rosenbaum and Rubin 1984).

Of course, PSM is not as robust as random assignment. PSM also depends on matching variables being recorded for both groups. Any possible participant differences that are not recorded cannot be used in matching. PSM provides an overall probability score for each individual youth, but it does not necessarily match every youth on every covariate. For example, a 14-year-old youth may be matched to a 16-year-old if both

youth have the same overall propensity score, which is calculated after accounting for all other variables that predict assignment to treatment or non-treatment.

To create propensity scores in this study, researchers used demographic variables and DJJ risk scores as predictors in a stepwise regression model that predicted the likelihood of being assigned to either YAP or probation. Other predictive variables included “concentrated disadvantage” (an index based on rates of poverty, female headed households, public assistance households, unemployment, high school graduation, and median family income), as well as a youth’s sex, age, race, and age at first offense. The matching process resulted in final samples of 249 YAP cases and 249 probation cases. After matching, PSM tests revealed no significant differences on matching variables between the treatment and comparison groups.

## Cost Implications

The different rate of post-supervision commitment may have considerable cost implications. According to Florida’s DJJ, committed youth are most often placed either in “secure” or “non-secure” programs and facilities. Based on the per diem cost and average length of stay in both placement types, the cost of one juvenile commitment ranges from \$43,625 to \$77,071 with most of the difference being due to varying lengths of stay. Researchers used the expected daily costs of secure versus non-secure placement (\$197 and \$194) and the average length of stay in each setting (392 days and 225 days, respectively) to calculate the costs of commitment. Eleven YAP clients were committed at an estimated cost of \$546,769 while fifty-two probation youth were committed at a cost of \$2,335,405.

The difference across youth samples suggests that subsequent commitments of YAP clients may have cost \$1,788,636 less than commitments of probation youth (or \$2,335,405 – \$546,769). Even if the annual cost of YAP’s county contract (\$1,095,000) is subtracted from these savings, it appears that Orange County may have saved the State \$693,636 (or \$1,788,636 – \$1,095,000) by serving 249 youth through YAP, Inc. instead of probation.

Applying this estimate to a larger population, the analysis suggests that Florida may save \$2.7 Million in commitment costs for every 1,000 youth referred to YAP, Inc. instead of probation. A more complete estimate, of course, would have to account for other factors. Clients of YAP, Inc. are more likely to be arrested for minor offenses. These costs would have to be subtracted from the estimated savings. The use of probation, however, also generates costs. If all costs of providing services through YAP, Inc. are included in an economic analysis, the full costs of probation would have to be included as well.

## Conclusion

Despite their greater service needs and more frequent justice contact, YAP youth were significantly less likely than probation youth to be committed to the state juvenile justice agency within two years of completing services. This study suggests that YAP, Inc. not only prevents court-involved youth from experiencing out-of-home placements, but a period of YAP services may generate considerable savings as well.

## What About Risk Scores?

This study compares matched samples. Propensity score matching suggests that the samples should always be compared in whole, but the two groups in this analysis varied on DJJ risk scores. If we examine outcomes for each sample within risk categories (i.e., low risk vs. moderate/high), we see key differences. Detention admissions and felony arrests, for instance, are similar in the low risk category. Yet, the basic conclusions of the study are unchanged. Even controlling for risk level, probation youth were far more likely than YAP youth to experience subsequent state commitment.

	ARRESTED			DETAINED	COMMITTED
	Misd.	Felony			
LOW RISK					
YAP, Inc.	39%	25%	28%		2%
Probation	24%	26%	30%		15%
MOD/HIGH RISK					
YAP, Inc.	54%	52%	70%		7%
Probation	43%	36%	58%		34%

## Youth Advocate Programs, Inc.

YAP, Inc. offers programs in virtually every region of the United States and works with more than 12,000 young people each year, including those involved in juvenile justice, foster care, and the mental health system. Florida’s Orlando YAP (OYAP) provides services to youth ages 12 and older, including those involved in the juvenile justice system (charged, adjudicated, on probation, etc.). OYAP provides youth with well trained and paid mentors from the same communities as their clients. Mentors connect youth and families with positive community resources. YAP, Inc. services address a variety of needs, such as situational stressors, difficult family relations, mental health issues, and behavioral challenges.

YAP workers may also arrange supplemental services, such as transportation assistance, recreational services, parenting skills training, substance abuse services, crisis intervention, money management, pregnancy and health supports. Community Based Care of Central Florida (CBC) screens all referrals to YAP. Youth not referred to YAP may go to foster care, detention, or be referred to another community-based agency.

## References

Cook, Thomas D. and Donald T. Campbell (1979). **Quasi-experimentation: Design & analysis issues for field settings**. New York, NY: Houghton Mifflin.

Florida Department of Juvenile Justice (2016). Probation and community intervention. Tallahassee, FL: Author.

Lum, Cynthia and Yang, Sue-Ming (2005). **Why do evaluation researchers in crime and justice choose non-experimental methods?** Journal of Experimental Criminology, 1(2), 191-213.

Rosenbaum, Paul R. and Donald B. Rubin (1984). **Reducing bias in observational studies using subclassification on the propensity score**. Journal of the American statistical Association, 79(387), 516-524.

Weisburd, David (2010). **Justifying the use of non-experimental methods and disqualifying the use of randomized controlled trials: Challenging folklore in evaluation research in crime and justice**. Journal of Experimental Criminology, 6(2), 209-227.

This study was supported by a grant from the Annie E. Casey Foundation of Baltimore, Maryland. Any points of view expressed in this document are those of the authors and do not necessarily represent the official positions or policies of the Foundation, the Florida Department of Juvenile Justice, John Jay College of Criminal Justice, or the City University of New York.

### RECOMMENDED CITATION

Evans, Douglas, Megan O'Toole and Jeffrey A. Butts (2016). *Savings Rate: How Wraparound Advocacy May Reduce the Consequences and Costs of State Commitment for Justice-Involved Youth*. New York, NY: Research & Evaluation Center, John Jay College of Criminal Justice, City University of New York.

Research & Evaluation Center  
524 W. 59th Street, Suite BMW605  
New York, NY 10019  
(212) 237-8302

### AUTHORS

Douglas Evans is associate professor at Mercy College in New York as well as a visiting scholar and project director with the John Jay College Research and Evaluation Center.

Megan O'Toole is a Ph.D. student in the Graduate Center, City University of New York and a research fellow with the John Jay College Research and Evaluation Center.

Jeffrey A. Butts is director of the John Jay College Research and Evaluation Center.

[www.JohnJayREC.nyc](http://www.JohnJayREC.nyc)