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OUTCOME EVALUATION OF WASHINGTON STATE'S RESEARCH-BASED PROGRAMS FOR JUVENILE OFFENDERS

SECTION I: INTRODUCTION

In 1997, the Washington State Legislature passed the Community Juvenile Accountability Act (CJAA).¹ The primary goal of the CJAA is to reduce juvenile crime, cost effectively, by establishing "research-based" programs in the state's juvenile courts.² The basic idea is straightforward: taxpayers are better off if their dollars fund programs that have been proven to be effective in achieving key policy outcomes, in this case reduced re-offending.

Washington's effort is part of a nationwide trend to use research evidence to inform policy and program choices. The University of Colorado's Center for the Study and Prevention of Violence refers to research-based programs as "Blueprint Programs" when they meet strict scientific standards and have sufficient documentation to permit replication.³

The CJAA represents the nation's first statewide experiment of research-based programs for juvenile justice. Because the selected treatment programs had already been researched and found to be successful elsewhere in the United States, usually as small scale pilot projects, the question here was whether they work statewide in a "real world" setting. This report indicates that the answer to this question is yes—when the programs are competently delivered.

The specific research-based programs implemented in Washington were selected after the Washington State Institute for Public Policy (Institute) reviewed the national research literature.⁴

¹ RCW 13.40.500 - 540

² RCW 13.40.510

³ <www.colorado.edu/cspv>

⁴ S. Aos, P. Phipps, R. Barnoski, and R. Lieb, *The Comparative Costs and Benefits of Programs to Reduce Crime, Version 4.0* (Olympia: Washington State Institute for Public Policy, May 2001).

SUMMARY

In 1997, the Washington State Legislature passed the Community Juvenile Accountability Act (CJAA). The primary goal of the CJAA is to reduce juvenile crime, cost effectively, by establishing "research-based" programs in the state's juvenile courts. The basic idea is straightforward: taxpayers are better off if their dollars fund programs that have been proven to be effective in achieving key policy outcomes, in this case reduced re-offending.

The CJAA funded the nation's first statewide experiment concerning research-based programs for juvenile justice. Because selected treatment programs had already been researched elsewhere in the United States, usually as small scale pilot projects, the question here was whether they work when applied statewide in a "real world" setting. This report indicates that the answer to this question is yes— when the programs are competently delivered.

The basic findings are these:

1. When Functional Family Therapy (FFT) is delivered competently, the program reduces felony recidivism by 38 percent. The cost-benefit analyses find that FFT generates \$2.77 in savings (avoided crime costs) for each taxpayer dollar spent on the program, regardless of therapist competence. For competent FFT therapists, the savings are greater—\$10.69 in benefits for each taxpayer dollar spent.
2. When competently delivered, Aggression Replacement Training (ART) has positive outcomes with estimated reductions in 18-month felony recidivism of 24 percent and a benefit to cost ratio of \$11.66.
3. The Coordination of Services program achieved a decrease in 12-month felony recidivism, and the estimated benefit to cost ratio is \$7.89.
4. Because of problems implementing the Institute's evaluation design, no findings are associated with Multi-Systemic Therapy (MST). If the courts and the state wish to continue funding MST, the Institute recommends re-evaluating the program.

These findings affirm the merit of the legislature's investment in research-based programs for juvenile offenders. The next step is to implement the CJAA quality assurance standards so taxpayers can fully benefit from these programs.

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SECTION IV: AGGRESSION REPLACEMENT TRAINING

What Is Aggression Replacement Training?

Aggression Replacement Training (ART) is a 10-week, 30-hour intervention administered to groups of 8 to 12 juvenile offenders three times per week. The program relies on repetitive learning techniques to teach participants to control impulsiveness and anger and use more appropriate behaviors. In addition, guided group discussion is used to correct anti-social thinking. Although ART does not meet the strict scientific standards required to be a Blueprint Program by the Center for the Study and Prevention of Violence, three research studies support the effectiveness of ART in reducing recidivism.²⁸

The CJAA Committee decided that CJAA funds could be used for ART when court probation staff or private contractors received Washington State ART training. The cost for ART in Washington State is approximately \$745 per youth.

The CJAA Committee established the eligibility criteria for ART. Eligible youth must have at least a moderate risk level. In addition, the youth must have a problem with aggression, pro-social attitudes, or pro-social skills as indicated by relevant scores on the WSJCA scales.²⁹

ART was the most widely implemented CJAA program, with 26 juvenile courts participating and more than 100 instructors. During the first year, courts were sending new instructors to training, replacing existing instructors, and changing instructional teams. Information identifying individual ART instructors was not recorded by the courts, so it was not possible to know the level of instructor expertise for individual youth.

Because of this flux in instructors during the first year, questions emerged about the quality of the program's delivery during 1999, the first year of implementation. A multivariate analysis of 18-month felony recidivism³⁰ revealed that, compared with control group youth, youth receiving ART during 2000 had significantly better results than

²⁸ Aos, et al., *The Comparative Costs and Benefits of Programs to Reduce Crime*.

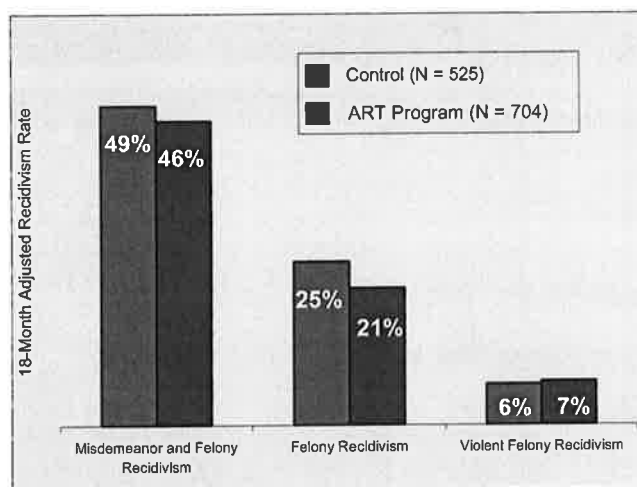
²⁹ A score of at least one for a weapon, violent misdemeanor, or felony conviction or a dynamic risk factor score of at least 2 out of 13 on aggression; dynamic risk factor score of at least 7 out of 28 on attitudes/behavior or a dynamic risk factor score of at least 9 out of 36 on skills.

³⁰ Logistic regression was used with an interaction term accounting for the study year and study group (ART vs. control). The interaction term was statistically significant ($p < .07$) and indicated better outcomes in the year 2000.

youth receiving ART during 1999. To allow for the courts to gain sufficient experience and stability in the delivery of ART, this study excludes youth assigned to ART and the control groups during 1999 and only includes youth assigned during 2000.

ART Results: Exhibit 10 shows the three adjusted recidivism rates of youth in the control group versus the ART group for 2000.³¹ The 18-month adjusted felony recidivism rate for the control group is 25 percent compared with 21 percent for ART (a 16 percent reduction in felony recidivism rates). The finding for felony recidivism is statistically significant at the $p = .125$ probability level. There are no statistically significant differences in misdemeanor and felony recidivism and violent felony recidivism rates. As with FFT, we now examine how competent delivery affects these results.

Exhibit 10
Adjusted 18-Month Recidivism Rates
Control vs. ART Groups During 2000



Instructional Team Adherence to ART: Unlike Functional Family Therapy and Multi-Systemic Therapy, no national organization provides training and consultation for ART. Although Barry Glick, an expert from New York State, provided the initial training in Washington State, the juvenile courts and JRA had to develop the quality assurance capacity for this program. Fortunately, the state already had a well respected expert in ART, Chris Hayes from Snohomish County Juvenile Court. Mr. Hayes worked with JRA on a half-time basis to train CJAA-funded ART instructors, establish a quality assurance process and a training curriculum, as well as a procedures manual.

³¹ The calculations for the adjusted recidivism rates from the logistic models are given in *Outcome Evaluation Appendix*, Exhibit B-1.

When analyzing data for the Institute's preliminary report, we found the effectiveness of ART in reducing recidivism varied from court to court.³² In response, the Institute asked Mr. Hayes to rate various attributes of ART delivery in each court. Because he was not able to observe every instructional team, Mr. Hayes could only provide information for each court as a whole. The ratings would have been more accurate if they were applied to each instructional team. Despite this shortcoming, the preliminary report found that the courts judged to be competently delivering ART had significantly reduced 12-month felony recidivism ($p=.05$). Mr. Hayes' ratings are used in this report.

In addition, Mr. Hayes identified two courts that consistently delivered ART with the highest degree of fidelity to the model: Okanogan and Pierce. The ratings of competent and highly competent ART courts are comparable to the ratings of competent and highly competent FFT therapists.

Exhibit 11 presents the number of courts and youth involved in the ART evaluation during 2000. Five courts were rated as not delivering ART competently; 108 youth were in the control group and 203 in ART. Twenty-one courts were judged as delivering ART competently to 501 youth. The two highly competent courts provided ART to 99 youth.

Exhibit 11
ART Evaluation Study Groups in 2000

ART GROUP	NUMBER OF COURTS	NUMBER OF YOUTH		
		Control	ART	Total
Not Competent	5	108	203	311
Competent	19	299	402	701
Highly Competent	2	118	99	217
Total Competent	21	417	501	918
Total	26	525	704	1,229

The characteristics of the control and ART groups in the year 2000 are compared in Exhibit 12.

Exhibit 12
Comparison of Characteristics Between Control Group and ART Groups in 2000 for Competent and Not Competent Delivery of ART Courts

VARIABLE	ALL ART COURTS		COMPETENT ART DELIVERY		NOT COMPETENT ART DELIVERY	
	CONTROL	ART	CONTROL	ART	CONTROL	ART
Number of Youth	525	704	417	501	108	203
Male	81%	80%	81%	81%	81%	79%
Age at Adjudication	15.5	15.2**	15.4	15.1**	15.6	15.4
Criminal History	8.1	8.3	7.7	7.9	9.5	9.4
Social History	8.6	8.1**	8.6	8.2*	8.4	7.9
Aggression	2.1	2.3	2.1	2.2	2.1	2.3
Drug/Alcohol	5.2	4.5**	5.1	4.5**	5.5	4.5*
Employment (Protective)	1.4	1.0**	1.4	1.0**	1.5	0.9**
Family	9.0	9.1	9.3	9.7	8.0	7.4
Free-Time	1.7	1.6	1.7	1.6	1.9	1.7
Mental Health	2.2	2.1	2.3	2.2	1.9	1.8
Prior Family	12.8	12.1	13.4	12.8	10.7	10.3
Relationship	9.8	9.1	10.0	9.6	8.8	7.8
School	11.5	10.6**	11.7	10.8*	10.9	10.1
Skill	17.8	17.7	18.4	18.8	15.2	14.9
Attitude	7.5	7.5	7.7	7.8	6.6	6.7

* Statistically significant difference at the .05 probability level.

**Statistically significant difference at the .01 probability level.

All ART Courts: For ART and control group youth in all courts, five variables have statistically significant differences between the groups: age, social history risk, drug/alcohol risk, employment (protective), and school risk. For example, the average age of ART youth is 15.2, while the average age of control group youth is 15.5. Lower age indicates increased risk.

Competent ART Delivery: For the courts judged competent, significant differences exist between the control and ART group youth on five variables. The competent ART group has lower risk scores than the control group on social history, drug/alcohol, and school risk, but a lower protective factor score for employment. The average age of ART youth is 15.1, while the average age of control group youth is 15.4.

Not Competent ART Delivery: For the courts judged not competent, statistically significant differences also exist between the ART and control groups; in this case for two variables: drug/alcohol risk and employment. The ART group has a lower drug/alcohol risk but a lower protective factor score for employment.

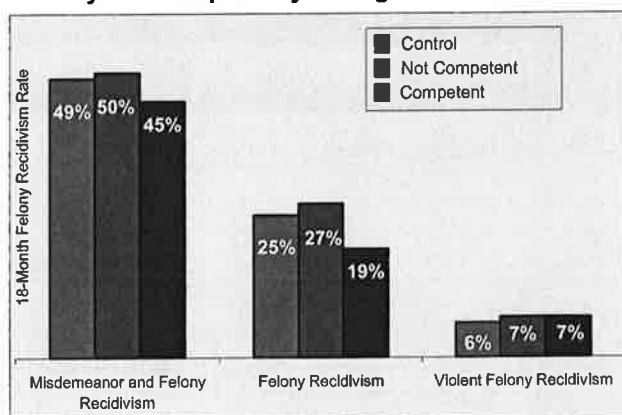
³² Barnoski, *Washington State's Implementation of Aggression Replacement Training for Juvenile Offenders*.

In conclusion, there are some differences between the youth in ART and those in the control group. Multivariate statistical analyses are, therefore, used next to adjust for these systematic differences.

ART Court Competency Ratings and Felony Recidivism: Exhibit 13 displays the adjusted felony recidivism rates by court competency ratings. Exhibit 14 presents the same data by the more detailed rating of competence.³³ The exhibits illustrated these findings:

- For the five courts rated as not competent, the adjusted 18-month felony recidivism rate is 27 percent compared with 25 percent for the control group. This difference is not statistically significant.
- For the 21 courts rated as either competent or highly competent, the 18-month felony recidivism rate is 19 percent. This is a 24 percent reduction in felony recidivism compared with the control group, which is statistically significant.
- The two highly competent courts have statistically significant reductions in both misdemeanor and felony recidivism and felony recidivism, but not violent felony recidivism.

Exhibit 13
Reductions in 18-Month Felony Recidivism By the Competency Ratings of the Courts



These findings are similar to those in the preliminary report which were based on 12-month recidivism rates and included youth in the study during 1999. The competency ratings continue to influence the results for ART on felony recidivism during its second year. The next step is to see how well these results hold up over time.

³³ The calculations for the adjusted recidivism rates from the logistic models are given in *Outcome Evaluation Appendix*, Exhibit B-2.

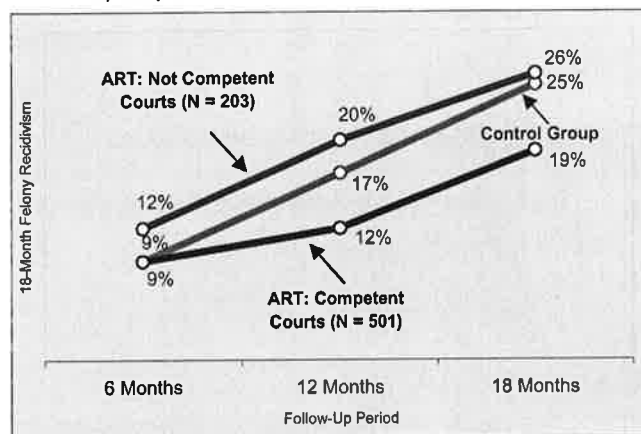
Exhibit 14
Adjusted 18-Month Recidivism Rates Control vs. ART Groups in 2000

STUDY GROUP	YOUTH	MISDEMEANOR AND FELONY	FELONY	VIOLENT FELONY
Control	525	48.6%	24.8%	6.2%
Not Competent	203	50.4%	26.5%	6.8%
Competent	402	47.0%	20.3%	6.6%
Highly Competent	99	36.4%*	12.9%*	6.4%
Total Competent	501	44.9%*	18.8%*	6.6%
All ART Youth	704	46.3%	20.8%	6.6%

* Statistically significant at the .05 probability level.

In Exhibit 15, the 6-month, 12-month, and 18-month adjusted felony recidivism rates are displayed for the control group and the competent and not competent ART court groups during 2000.³⁴ The exhibit illustrates that the differences between the control and competent ART court groups first appear at the 12-month follow-up period and continue to the 18-month period. Conversely, the difference that existed at 6-months between the control and not competent ART court groups disappeared by the 18-month period.

Exhibit 15
Adjusted Felony Recidivism Rates 6-, 12-, and 18-Month Follow-up Periods



ART Cost-Benefit Analysis: The cost-benefit analysis, described in Section VII, determines whether Washington citizens receive a positive return on their dollars spent on ART. These analyses find that ART generates \$6.71 in benefits (avoided crime costs) for each taxpayer dollar spent on the program. For courts where ART was competently delivered, the savings are greater—\$11.66 in benefits for each dollar spent on the program.

³⁴ The calculations for adjusted recidivism rates from the logistic models are given in *Outcome Evaluation Appendix*, Exhibit B-3.