Effects of Functional Family Parole on Re-Arrest and Employment for Youth in Washington State

EXECUTIVE SUMMARY

Barbara A. Lucenko, PhD, Lijian He, PhD, David Mancuso, PhD, and Barbara Felver, MES, MPA

In collaboration with Bob Salsbury, Juvenile Rehabilitation Administration

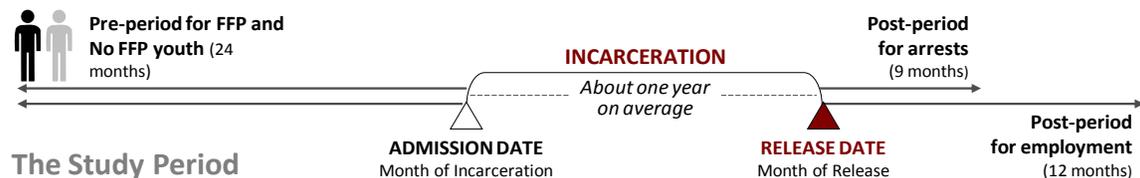**NOTE:** See **Technical Appendix** for Methods and Definitions: http://www.dshs.wa.gov/rda/.

THE JUVENILE REHABILITATION ADMINISTRATION (JRA) implemented a new model of juvenile parole services in 2003, based upon the Blueprints for Violence evidence-based program, Functional Family Therapy (FFT). This new model of parole, Functional Family Parole (FFP), is intended to make families the unit of intervention—not just the youth—and uses family therapy-based approaches to enhance case management outcomes. The new model of parole was implemented in concert with several other evidence-based changes in the JRA residential program. The entire program was called the Integrated Treatment Model. Because all these changes were implemented at the same time, and because almost all JRA youth received both residential and parole treatment, it was initially impossible in practice to separate the effects of the change to Functional Family Parole from the effects of other components.

However, in State Fiscal Year 2009, budget reductions driven by a severe budget crisis led to the elimination of parole for all JRA offenders except high-risk, auto theft offenders, and sex offenders. In an effort to mitigate the impacts of the reduction, JRA re-engineered its pre-release assistance for youth and their families. Targeted areas for pre-release assistance include education, vocation, treatment and mentoring as well as linkages to needed resources during the transition period. However, once released, there was no parole, follow-up or aftercare for those youth. The elimination of parole for a group of JRA youth created a "natural experiment" allowing a test of the impacts of Functional Family Parole upon youth in the period following their release from JRA residential care. Two key areas of outcomes were identified for evaluation: re-arrests and employment. This paper summarizes that outcome evaluation.
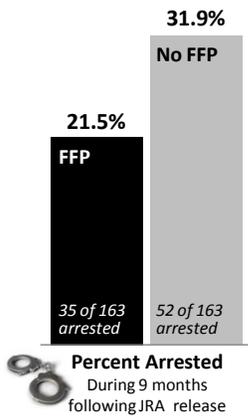
FFP-Group Youth were:

- Less likely to be arrested and had less total arrests during the 9 months following release than those released later without parole.

- More likely to be employed and earned more on the average during the year following release than those released without parole.

Methods. The two cohorts of JRA youth were released prior to and after the elimination of parole. The two groups were defined using a sophisticated, multivariate propensity score matching process to ensure they were closely matched with respect to criminal and employment histories, demographics and other risk factors and characteristics.

Pre-period for FFP and No FFP youth (24 months)

INCARCERATION
About one year on average

Post-period for arrests (9 months)

The Study Period

ADMISSION DATE
Month of Incarceration

RELEASE DATE
Month of Release

Post-period for employment (12 months)

ARREST RATES | Youth released without FFP were 48 percent MORE likely to be arrested than those released with parole

31.9%

No FFP

21.5%

FFP

35 of 163 arrested   *52 of 163 arrested*

Percent Arrested
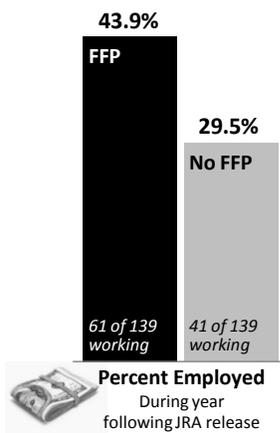During 9 months
following JRA release

Those in the FFP group were 48 percent LESS likely to be arrested during the follow-up period than a matched comparison group of similar youth from the later period who did not get parole. A logistic regression model demonstrated results of a similar magnitude in that that the odds of being arrested in the nine months following release were 70 percent higher for youth released between July and December of 2009, following the elimination of enhanced parole, than the odds for those released between July and December of 2008. This finding was statistically significant ($p < .05$).

- **No FFP:** Youth released from JRA residences July through December 2009 *(n = 163)*
- **FFP:** Similar youth released from JRA residences July through December 2008 *(n = 163)*

NUMBER OF ARRESTS | Youth released without FFP have MORE total arrests following release than those released with FFP

In addition to being more likely to have *any arrest* in the follow-up period, youth released following the discontinuation of FFP also had more *total arrests* during the nine months following release than youth in the FFP group. A regression model controlling for demographics, risk scores, and criminal history demonstrated that those released in the no FFP period (July-December 2009) had more arrests on average in the post period than those released prior to the discontinuation of enhanced parole (July-December 2008). This finding was statistically significant ($p < .05$). The trend towards more total arrests (including felonies, gross misdemeanors, and other charges) following release from incarceration appears to be associated with the discontinuation of funding for the enhanced form of parole (i.e. FFP).

EMPLOYMENT | Youth released with FFP are MORE likely to be employed than those released without FFP

43.9%

FFP

29.5%

No FFP

61 of 139 working   *41 of 139 working*

Percent Employed
During year
following JRA release

FFP youth had a higher rate of employment following release from JRA than a similar group of youth who were released without parole. In addition to the unadjusted differences (49 percent) shown in the chart, a logistic regression model showed that the odds of being employed during the four quarters following release were 55 percent lower for those released after the discontinuation of FFP (July through December 2009) than for those who were released during the enhanced parole period (July through December 2008). This finding was statistically significant ($p = .005$). In addition to the matching process, this analysis controls for pre-existing differences between the groups, such as age, prior employment, earnings, and arrests (see technical appendix).

- **No FFP:** Youth age 17 and older released from JRA residences July through December 2009 *(n = 139)*
- **FFP:** Similar youth age 17 and older released from JRA residences July through December 2008 *(n = 139)*

EARNINGS | Youth released with FFP earn MORE than those released without FFP

Youth released during the no parole period made $237 LESS on average per quarter than youth released with FFP ($p < .05$). In addition to the matching process, this analysis controls for pre-existing differences between groups, such as age, prior employment and average quarterly earnings, and arrests (technical appendix has complete list). The model adjusted average quarterly earnings in the four quarters following release were $467 ($1,868/year) for the parole group and $230 ($920/year) for the no parole group.

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[1] Since 2003, all JRA youth in enhanced parole have been exposed to Functional Family Parole (FFP), a parole aftercare model based on evidence-based Functional Family Therapy (FFT). FFP is a family focused strengths based case management and supervision model that uses evidence-based practice principles to assist youth and families in successful transition, reentry and aftercare in their home communities (Sexton, et al., 2009).

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TECHNICAL APPENDIX

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NOTE: *See the **Executive Summary** for highlights and key findings:* http://www.dshs.wa.gov/rda/.

## STUDY METHOD | Natural experiment using propensity score matching with regression models

METHOD

A quasi-experimental design was used to evaluate the impact of Functional Family Parole (FFP) with respect to criminal justice and employment outcomes. A comparison group was constructed using propensity score matching to identify a set of youth who were as similar as possible with regards to demographics and criminal history to those released after the elimination of enhanced parole. In addition to the matching process, demographics and relevant characteristics and history were also controlled for in the regression models to adjust for any residual pre-existing differences.

Group Definitions

Groups were defined based on the JRA residence release date and whether this date fell in the "FFP" or "no FFP" time period. Outcome periods were limited based on the current availability of arrest and wage data.

- **FFP:** Youth with release dates during the timeframe July 1, 2008 through December 2008.
- **No FFP:** Youth with release dates during the timeframe July 1, 2009 through December 2009.
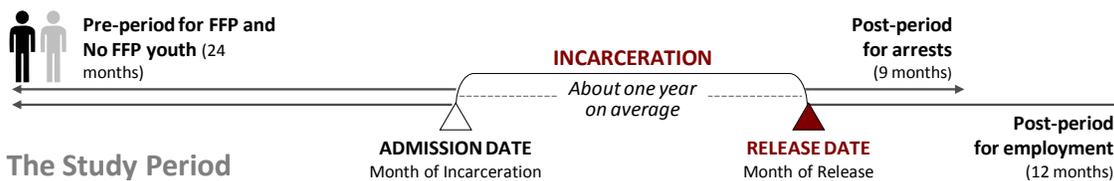
The Study Period

Cases with and without parole in the "no FFP" period were compared on a list of potentially confounding variables. Because some youth who meet specific criteria or who have specific case types are still eligible for specific types of parole, we excluded those from both groups who had:

- Arrests in the follow-up period that could be classified as "violation of parole,"
- Sex offenses listed as most serious offense (rape2, rape of child1, rape of child2, indecent liberties, child molestation1),
- Auto theft as most serious offense (theft of motor vehicle, possession of stolen vehicle).

Other offenses for which there appeared differences between the FFP and no FFP groups were used in the propensity score matching algorithm (see tables on following pages).

ARREST MODELS | **Youth released with FFP are LESS likely to be arrested and have fewer arrests than those released without parole**

Baseline youth characteristics for arrest analysis after propensity-score matching

Matched Sample						
CHARACTERISTICS	FFP n = 163	NO FFP n = 163	**CHARACTERISTICS**	FFP n = 163	NO FFP n = 163
Mean age at release	17.1	17.3	Prior Serious Mental Illness Diagnosis or Medications	13%	14%
White Only (non-Hispanic)	47%	43%	Prior ADHD, Conduct, Impulse Diagnosis or Medications	21%	21%
Black (non-Hispanic)	14%	20%	Prior Substance Abuse Services, Diagnosis or Arrests	45%	46%
Hispanic	29%	29%	ISCA Total Score	33.6	33.3
Other Racial/Ethnic Minority	10%	9%	Prior DSHS Medical, Medicaid Medical Coverage	5.8	5.5
Male	89%	90%	Number of Prior Felony Arrests	1.85	2.02
Prior Arrests	83%	85%	Number of Prior Gross Misdemeanor Arrests	0.74	1.05
Number Arrests Months 13-24 Prior to Admission	0.64	0.83	Most Serious Offense Assault*	20%	20%
Number Arrests Months 7-12 Prior to Admission	0.53	0.63	Most Serious Offense Robbery **	14%	20%
Number Arrests Months 4-6 Prior to Admission	0.31	0.44			
Number Arrests Months 1-3 Prior to Admission	0.61	0.72			

* Includes Assault 1, Assault 2, and Assault 2 Attempt.
** Includes Robbery 1, Robbery 1 Attempt, Robbery 2, Robbery 2 Attempt.

Arrest rates for FFP and No FFP Groups
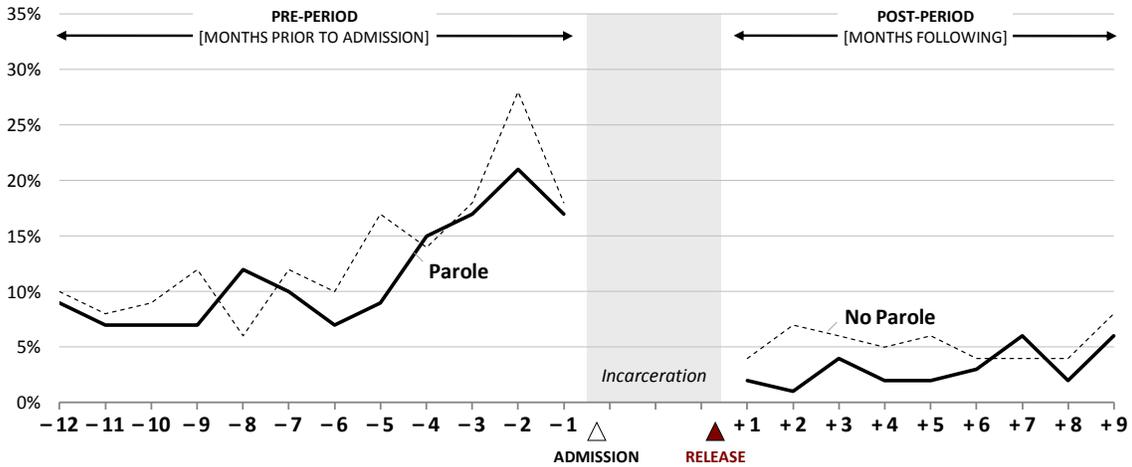
Logistic Regression for Any Arrest in the Post Period

| Parameter	Parameter Estimate	Odds Ratio	p-value
No FFP[1]	0.534	**1.706**	**0.0475**
White	-0.2973	0.743	0.2929
Male	0.0372	1.038	0.938
Age at Release	-0.139	0.87	0.1844
ISCA Score	0.0281	1.029	0.1425
Prior Arrest (any class)	1.0823	2.951	0.0632
Number of Prior Felony Arrests	0.1818	1.199	0.0126
Number of Prior Gross Misdemeanor Arrests	0.0831	1.087	0.292
Number of Prior Other Arrests	0.0552	1.057	0.4674
Most Serious Offense Assault[2]	-0.1119	0.894	0.7659
Most Serious Offense Robbery[3]	-0.2979	0.742	0.4291

[1]Reference group is FFP.   [2]Includes Assault 1, Assault 2, and Assault 2 Attempt.
[3]Includes Robbery 1, Robbery 1 Attempt, Robbery 2, Robbery 2 Attempt.

Matched Sample Regression table for Total Arrests

Variable	Parameter Estimate	Standard Error	p value
No FFP[1]	0.17536	0.08635	**0.0431**
White	-0.04823	0.09029	0.5936
Male	0.02999	0.14344	0.8345
Age at Release	0.00298	0.03325	0.9286
ISCA	0.01233	0.00563	0.0291
Prior Quarterly Earnings	0.07553	0.13644	0.5802
Prior Arrest (any class)	0.09397	0.02574	0.0003
Number of Prior Felony Arrests	-0.00383	0.02779	0.8905
Number of Prior Gross Misdemeanor Arrests	0.02944	0.02686	0.2738
Most Serious Offense Assault[2]	0.08054	0.11772	0.4944
Most Serious Offense Robbery[3]	0.01055	0.12074	0.9304

[1]Reference group is FFP.   [2]Includes Assault 1, Assault 2, and Assault 2 Attempt.
[3]Includes Robbery 1, Robbery 1 Attempt, Robbery 2, Robbery 2 Attempt.

## Number of arrests for FFP and No FFP Groups
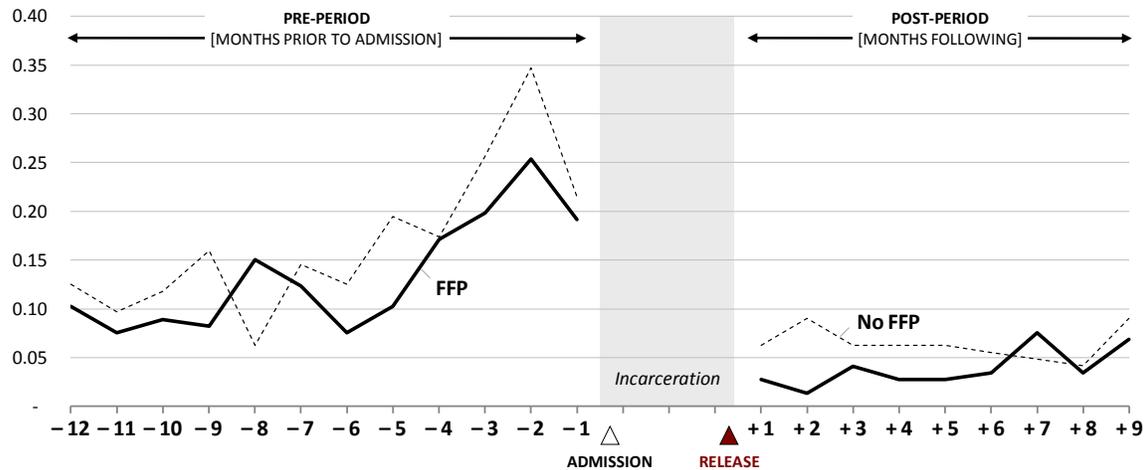
EMPLOYMENT MODELS | Youth released with FFP are MORE likely to be employed than those released without FFP

Baseline youth characteristics for employment analysis after propensity-score matching

Matched Sample						
CHARACTERISTICS	FFP n = 139	NO FFP n = 139	**CHARACTERISTICS**	FFP n = 139	NO FFP n = 139
Age at Release	17.8	17.8	Prior Serious Mental Illness Diagnosis or Medications	9%	12%
White Only (non-Hispanic)	50%	45%	Prior ADHD, Conduct, Impulse Diagnosis or Medications	12%	17%
Racial/Ethnic Minority			Prior Substance Abuse Services, Diagnosis or Arrests	55%	50%
Male	92%	93%	ISCA Total Score	32.8	33.0
Prior Employment	32%	33%	Prior DSHS Medical, Medicaid Medical Coverage	5.5	5.0
Average Earnings 4 to 7 Quarters Prior to Admission	$216	$188			
Average Earnings Quarters 2 and 3 Prior to Admission	$280	$284	Number of Prior Felony Arrests	2.4	2.1
Average Earnings in Quarter 1 Prior to Admission	$282	$259	Number of Prior Gross Misdemeanor Arrests	0.9	1.2
			Most Serious Offense Assault*	18%	21%
Average Earnings in Admission Quarter	$167	$148	Most Serious Offense Robbery **	16%	17%

* Includes Assault 1, Assault 2, and Assault 2 Attempt.   ** Includes Robbery 1, Robbery 1 Attempt, Robbery 2, Robbery 2 Attempt.

Employment Rates of FFP and No FFP Groups
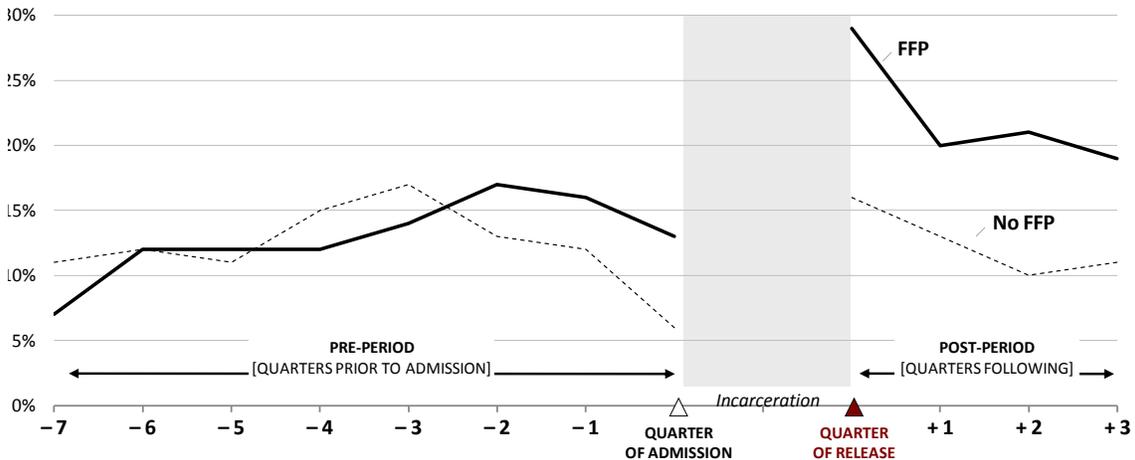
Matched Sample Regression table for Any Employment

Variable	Parameter Estimate	Odds Ratio	p value
No FFP	-0.7967	**0.451**	**0.0052**
White	-0.8035	0.448	0.0067
Male	0.3603	1.434	0.5186
Age at Release	0.7167	2.048	<.0001
ISCA Total Score	-0.0004	1.000	0.9814
Prior Employment	1.1396	3.126	0.0001
Number of Prior Felony Arrests	-0.1488	0.862	0.0372
Number of Prior Gross Misdemeanor Arrests	-0.1308	0.877	0.1777
Most Serious Offense Assault[2]	0.0869	1.091	0.8124
Most Serious Offense Robbery[3]	-0.3297	0.719	0.4115

[1]Reference group is FFP.   [2]Includes Assault 1, Assault 2, and Assault 2 Attempt.
[3]Includes Robbery 1, Robbery 1 Attempt, Robbery 2, Robbery 2 Attempt.

Matched Sample Regression table for Earnings

Variable	Parameter Estimate	Standard Error	p value
No FFP[1]	-236.49931	100.05583	0.0188
White	-325.89348	104.31098	0.002
Male	180.9237	190.1361	0.3422
Age at Release	210.34804	60.1183	0.0005
ISCA	0.45701	6.25875	0.9418
Prior Quarterly Earnings	0.69769	0.0496	<.0001
Prior Employment	-92.25323	114.61422	0.4216
Number of Prior Felony Arrests	-33.34588	19.72112	0.092
Number of Prior Gross Misdemeanor Arrests	7.67085	28.22321	0.786
Most Serious Offense Assault[2]	-283.59417	135.73584	0.0376
Most Serious Offense Robbery[3]	-99.29899	144.61446	0.4929

[1]Reference group is FFP.   [2]Includes Assault 1, Assault 2, and Assault 2 Attempt.
[3]Includes Robbery 1, Robbery 1 Attempt, Robbery 2, Robbery 2 Attempt.

Average Quarterly Earnings for FFP and No FFP Groups
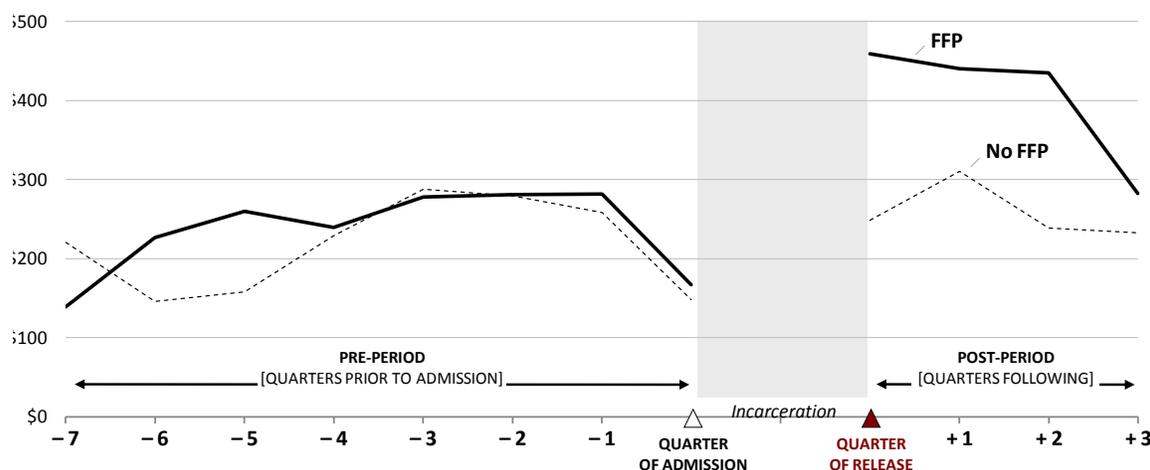
Data Sources

The primary sources of data for this report were: (1) the RDA Integrated Client Database and (2) JRA program data. The integrated database includes information on DSHS services received, client characteristics, and outcomes such as employment and wages from the Employment Security unemployment insurance (UI) wage data and arrests from the Washington State Patrol. JRA provided a file to RDA that contained specific information such as admission and release dates, most serious offenses, and risk assessment (ISCA) scores for youth released from residences during between July 2008 and December2009.

Data Notes and Definitions

- Clients with no information in the UI wage file for the outcome period were determined to have earnings of $0.
- Prior employment, arrests, and other history were measured for the 24-month period prior to JRA residence admission.
- The index date for outcome analyses was the date of release from JRA residence. For the arrest analyses, the index month was the month of release. For the employment analyses, the index was the quarter of release.

JRA residences – Includes institutions/schools, youth camps, and group homes run by the Department of Social and Health Services Juvenile Rehabilitation Administration (JRA).

Age at Release—Calculated based on date of birth and release date.

Prior Arrests—Any felony, gross misdemeanor, or other arrest type recorded in the Washington State Patrol database in the 24 months prior to JRA admission.

Number of Arrests—The total count of any felony, gross misdemeanor, or other arrest type recorded in the Washington State Patrol database in the 24 months prior to JRA admission or the 9 months following release.

Prior Employment—Any wages recorded in the UI wage file during the in the 24 months prior to JRA admission.

Average Earnings—Average quarterly earnings for group in the specified quarter or quarters prior to admission or following release from JRA residence.

Prior Serious Mental Illness Diagnosis or Medications—Washington State public mental health system Access to Care Standards Category A diagnosis such as schizophrenia, bipolar disorder or major depressive disorder, or antipsychotic/antimania medications recorded in medical records during the in the 24 months prior to JRA admission.

Prior ADHD, Conduct, Impulse Diagnosis or ADHD Medications—Pertinent diagnosis in the recorded in medical records during the 24 months prior to JRA admission.

Prior Substance Abuse Services, Diagnosis or Arrests—Substance related diagnosis or procedure recorded in medical records, publicly funded chemical dependency services, or substance-related arrests recorded by Washington State Patrol during the 24 months prior to JRA admission.

ISCA Total Score—The Initial Security Classification Assessment is a risk assessment tool used at the time of JRA admission to determine the risk to public safety.

Prior DSHS Medical, Medicaid Medical Coverage—Medical eligibility for the children's medical, GAU, TANF, ADATSA, CHIP, and state only CHP categories.

Most serious offense—As recorded in the JRA database.

Propensity Scores

To develop the best possible comparison, we started with the No FFP group and developed a matched comparison based on a composite summary or propensity score that weights the contributing factors according to the likelihood of being in a particular group. The variables listed in the tables for the arrest and employment models were used to creating the matched groups through the use of the propensity scores.