

The Annie E. Casey Foundation's Juvenile Detention Alternatives Initiative Data Analysis: Analysis of Outcomes

In March 2008, the Governor's Juvenile Justice Advisory Committee (GJJAC) contracted with the Washington State Center for Court Research (WSCCR), the research section of the Administrative Office of the Courts (AOC), to perform an evaluation, make recommendations, provide technical assistance, and conduct analyses of the Juvenile Detention Alternative Initiative (JDAI) in Washington State. Juvenile courts participating in JDAI are Benton/Franklin, Mason, King, Pierce, Spokane, and Whatcom Counties currently participate in the initiative.¹

This report presents analysis of JDAI program outcomes. The analysis includes evaluations of comparable measures across time and across the JDAI sites. Aggregated results from the active JDAI sites are compared statewide to juvenile courts not participating in JDAI.

This is an extensive study and this report is the last in the series following the Data Capacity Assessment, Recommendation of Standards, and Interim Progress Report.² The Data Capacity report describes the sites' 1) JDAI data collection efforts, 2) analysis of JDAI data, and 3) production of JDAI-related reports. The Standards report details working group recommendations to standardize and reconcile site analysis and reporting practices. The Progress report describes the implementation plan, necessary activities, and site participation towards integrating the standards into analytical and reporting practices.

¹ Mason County formally became a JDAI site in 2009.

² Publications available at <http://www.courts.wa.gov/wscrr/?fa=ccr.publications>

Summary

In March 2008, the Governor's Juvenile Justice Advisory Committee contracted with the Washington State Center for Court Research to 1) perform an evaluation, 2) make recommendations, 3) provide technical assistance, and 4) conduct analyses of the Annie E. Casey Foundation's Juvenile Detention Alternative Initiative in Washington. Juvenile courts in Benton/Franklin, King, Mason, Pierce, Spokane, and Whatcom Counties currently participate in the initiative.

This is the final report in the series, and it describes the analysis of initiative outcomes across time, among JDAI sites, and in comparison statewide between JDAI sites and counties not participating in JDAI. Since implementation of JDAI in 2004:

- Average daily population (ADP) in detention at JDAI counties has decreased by 23.3% as compared to a decrease of 10.8% for counties not participating in JDAI.
- Arrest adjusted ADP has decreased by 19.6% at JDAI counties as compared to an increase of 0.2% at counties not participating in JDAI.
- JDAI counties decreased the average length of stay in detention by 12.6% as compared to a decrease of 5.0% for non-JDAI counties.
- Detention admissions have decreased by 12.3% for JDAI as compared to 6.2% for non-JDAI counties.
- The arrest adjusted rate of detention admissions has decreased by 11.7% for JDAI counties as compared to an increase of 7.2% for non-JDAI counties.
- Measures of Disproportionate Minority Contact improved by about the same amount in both JDAI and non-JDAI counties.

Citation: Valachovic, E. (2009), Juvenile Detention Alternatives Initiative Data Analysis: Analysis of Outcomes. Olympia: Washington State Center for Court Research

Background

The Annie E. Casey Foundation (Casey) pursues a variety of activities intended to more effectively meet the needs of today's vulnerable children and families.³ Launched in 1992, JDAI is a Casey Foundation program that focuses on the detention component of juvenile justice. The objective of JDAI is to reduce the unnecessary detention of juveniles. The goals of the initiative are to:

1. Reduce the reliance on secure confinement
2. Improve public safety
3. Reduce racial disparities and bias
4. Save taxpayers' dollars
5. Stimulate overall juvenile justice reforms

JDAI currently has a national representation of approximately 100 sites across 22 states and the District of Columbia.⁴

GJJAC selected JDAI as a model for best-practices outcomes and, with a grant from the Casey Foundation, King, Pierce, Spokane, Whatcom and Yakima Counties began implementing JDAI in 2004. Yakima ceased being a formal JDAI site in 2007. Benton/Franklin Counties joined the initiative in July 2007 and Mason County recently joined in 2009. These counties represent approximately one-half of Washington State's youth population ages 10-17 and account for approximately one-half of Washington's juvenile referrals.⁵ GJJAC helps administer JDAI in Washington State through a project coordinator. GJJAC sought an agent to evaluate and assist data collection, analysis, and reporting for JDAI in Washington State and contracted with WSCCR in March 2008.

³ Information available on May 20, 2008 from <http://www.aecf.org>

⁴ Information available on May 20, 2008 from <http://www.aecf.org/Home/MajorInitiatives/JuvenileDetentionAlternativesInitiative.aspx>

⁵ Information available on May 20, 2008 from <http://www.dshs.wa.gov/ojj/JDAI.shtml>

Study Objectives

This study aims to:

- Assess the current data capacity at each of the five sites with regard to the quality and capability of available data and accuracy of analysis and reporting.
- Recommend a common set of standards in data collection, analysis, and reporting to increase consistency across sites.
- Demonstrate the adopted standards for data collection, analysis, and reporting using data from each site.
- Analyze the outcomes of the JDAI in Washington State.

Research Design

The JDAI data analysis project first involved an assessment of the data, analysis, and reporting from each site. During the spring of 2008, data, documentation, definitions, and calculations were collected from the JDAI sites, the JDAI statewide coordinator, the JDAI Help Desk, and Casey analysts. These materials were reviewed to determine the similarities and differences between JDAI sites, compliance with Casey Foundation reporting requirements and the quality and availability of the data to report JDAI outcomes. It was found that the details of data collection, analysis and reporting differed from site to site, but that sufficient similarities and availability would allow them to be reconciled to produce comparable reports.

The second step in the analysis project was the production of a set of recommended standards. These standards were designed to reconcile the differences in data analysis and reporting across the JDAI sites. These recommendations were created so that the standards are supported by available data from each site and statewide. With the guidance of a JDAI Standards Working Group, standards were developed to resolve discrepancies in definitions among sites and produce conformity in analysis and reporting. These standards will allow direct comparison of JDAI outcomes between sites, across time

and statewide, while continuing to satisfy Casey Foundation requirements.

The Interim Progress Report described the implementation plan, necessary activities, and site participation towards integrating the standards into analytical and reporting practices. The implementation plan was described as a series of activities that fall within several stages including continued data collection, technical assistance, analysis, validation, and process expansion. The report included a status update on the progress each site has made through the process. This process is intended to lead to the development of a data repository that will serve future needs of the JDAI sites and the State in collecting, analyzing and reporting outcomes.

As a final step in the data analysis project, this report presents evaluation of JDAI outcomes in Washington State. The evaluation consists of comparisons of the measures of juvenile detention and Disproportionate Minority Contact (DMC). This type of research and analysis of outcomes has previously not been performed for JDAI in Washington State. The analysis includes comparisons within JDAI counties between the period prior to and the period during JDAI activity at those sites. The evaluation also compares outcomes at JDAI counties with outcomes at counties not participating in JDAI during the period of JDAI activity. These comparisons will help to contrast and isolate changes in the levels of juvenile detention and DMC that are associated with participation in JDAI.

Methods

A reduction in the reliance on secure confinement and a reduction of racial disparities and bias are two of the stated goals of JDAI. To evaluate the effectiveness of JDAI in Washington State, this study aims to make comparisons that highlight and contrast changes in secure confinement and bias occurring simultaneously with participation in JDAI.

Comparisons are made within each JDAI site, contrasting the period prior to participation in JDAI

with the period during JDAI.⁶ Comparisons are then made between JDAI sites in aggregate and the rest of Washington State, contrasting outcomes of JDAI participants and counties not participating in JDAI.

The measures used to quantify the changes in detention and racial disparities are those recommended in prior reports. They are well-recognized and used in Washington State and nationally in detention research. Many are currently required by the Casey Foundation for reporting. Detention admission totals and rates, average length of stay (ALOS) and average daily population (ADP) are measures that summarize secure confinement. DMC is measured with Relative Rate Indices (RRI) and Proportionality. The term minority in this report refers to African-American, Native American, Asian, and Hispanic youth. The measures of DMC will be described in greater detail later.

The research begins by making comparisons within JDAI counties across time and between JDAI and non-JDAI counties with regard to juvenile population and arrests. Though not directly measuring JDAI outcomes, this is done for two primary reasons.

First, characteristics of juvenile population and arrests help us assess the appropriateness of the comparisons between JDAI and non-JDAI counties that will be drawn in this analysis. The greater the similarity in all other regards between sites modeling the effects of JDAI and those that do not, the more appropriate the contrast of changes in detention between JDAI and non-JDAI counties.

Second, juvenile population and arrests provide a context to our analysis of detention. Changes in juvenile population and arrests are important characteristics that define the counties across the state and must be controlled for while analyzing corresponding changes in detention. For example, a 2 per-

⁶ In 1998, King County informally and without AECF funding, but following JDAI strategies learned from the JDAI Pathways Series, began detention reform. Mason County joined JDAI in 2009 and is not included as a JDAI site for the purposes of this analysis.

cent increase in juvenile detention admissions would in fact be a reduction in the arrest adjusted admission rate if arrests had increased by 3% during the same period. For this reason, measures are often represented as relative rates that better describe outcomes than total counts.

Count totals for admissions and ADP are commonly reported and cited as measures of JDAI outcomes. While it is true they are valid measures, they are not necessarily the most useful to assess the effectiveness of the initiative. As with the previous example, admission rates relative to population, or better yet, relative to arrests provide a more accurate assessment of what is occurring during the admission intake decision, and what influence JDAI is having. However, given the longstanding practice, this analysis reports both count totals as well as rates.

Additional explanation is often warranted when describing the measures of DMC. This analysis will report Proportionality and a Relative Rate Index.

Proportionality is a ratio that represents the proportion that a group occurs in an event relative to the proportion that the group occurs in the population at risk of that event. An example would be the proportion of total arrests that are Asians relative to the proportion of the general population that are Asians. A ratio greater than one would indicate that Asians are overrepresented in arrests; a ratio less than one, underrepresented; if the ratio is equal to one, then arrests are in proportion with the population.

RRI is a measure of the rate of occurrence of an event for one group relative to the rate of occurrence of that event for a reference group. An example would be the RRI for admissions to detention per

1000 arrests for African Americans relative to admissions to detention per 1000 arrests for Caucasians. A RRI greater than one indicates that African Ameri-

cans are being admitted at a higher rate, less than one, a lower rate, and equal to one, at the same rate as Caucasians. Caucasian Non-Hispanics serve as the reference group throughout this report.

Data

The data used in this study was collected from various county and state sources. Census-based population data including demographic data is from the Office of Financial Management. Arrest data is from annual statistics produced by the Washington Association of Sheriffs and Police Chiefs.⁷ Detention data, including admissions and length of stay, have been supplied by the JDAI counties and the Administrative Office of the Courts.

Population Context

If we control for the years that counties actively participated in JDAI, then from inception in 2004 through 2008, JDAI sites accounted for approximately 52% and non-JDAI sites for 48% of Washington State's juvenile population ages 10-17. The juvenile population is approximately 32% minority for JDAI counties, compared to 23% for the non-JDAI counties.

Both JDAI and non-JDAI counties have experienced similar growth in their youth populations. During the last ten years, this segment of the population has on average experience an annual growth of approximately 0.5% at counties participating in JDAI as compared to 0.8% for non-JDAI counties (Figure 1).

⁷ Starting in 2002 there is significant underreporting of juvenile arrests by law enforcement in Spokane County. Data has been interpolated to compensate for this underreporting.

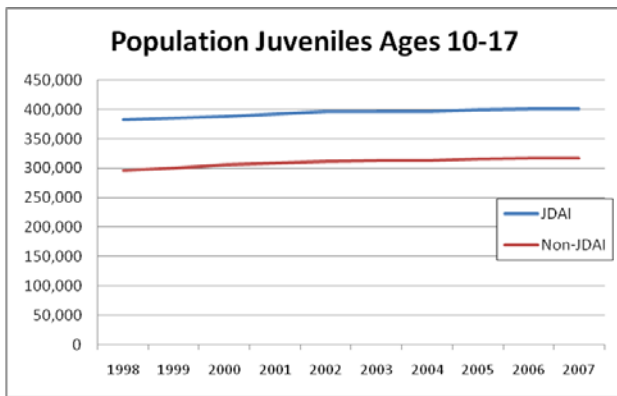


Figure 1

JDAI and non-JDAI counties exhibit similar characteristics with regard to overall juvenile population size, percentage of the total population, demographic composition, and growth within this segment of the population.

Arrests

During this last decade, as the youth population has generally increased in size, the rate of arrests per 1,000 juveniles ages 10-17 has generally decreased. This pattern has been comparatively uniform across the counties participating in JDAI (Table 1). The decrease appears greater in the initial years than in the later years.

Table 1

Arrest Rate per 1000 Population Juveniles Ages 10-17			
Year	1998	2003	2007
B/F	124	114	93
King	54	42	40
Pierce	67	44	43
Spokane	94	93	84
Whatcom	139	67	73
Yakima	109	88	89

A similar description applies to both JDAI and non-JDAI counties, with a general decrease in the arrest rate through 2002 and a leveling thereafter (Figure 2). The patterns of change in arrest rates, if not the magnitude, for the two are similar. Prior to the introduction of JDAI, the average annual change in the arrest rate was a decrease of approximately

7% for JDAI counties, and 9% for non-JDAI counties. Starting in 2004 this decrease was 2% for JDAI counties, and 3% for non-JDAI counties.

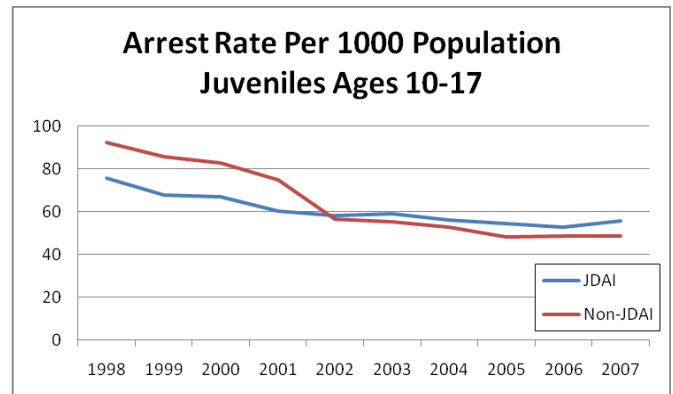


Figure 2

Most notable for the purposes of this research is that starting around 2002 the arrest rates for youth in JDAI counties and non-JDAI counties are approximately equal, in the low 50's per 1000 juveniles ages 10-17.

Results

Admissions

The change in admissions at the JDAI sites prior to JDAI membership ranged from an average annual increase of 5.0% to a decrease of 6.9%. During JDAI the change in admissions ranged from an annual increase of 1.5% to a decrease of 6.1% (Table 2).

Table 2

Juvenile Admissions			
Year	1998	2003	2007
B/F	1,042	1,316	1,474
King	5,899	4,077	3,784
Pierce	4,606	4,127	3,520
Spokane	2,300	2,432	1,901
Whatcom	1,207	1,071	939
Yakima	1,937	1,863	1,439

Prior to the introduction of JDAI in Washington, the counties participating in JDAI experienced a decrease in admissions of 12.4% between 1998 and

2003, an average decrease of 2.6% per year (Figure 3). Subsequently these counties experienced a further decrease of 12.3% between 2003 and 2007, an average decrease of 3.2% per year. To contrast, counties not participating in JDAI experienced a decrease of 6.2% between 2003 and 2007, or 1.5% per year.

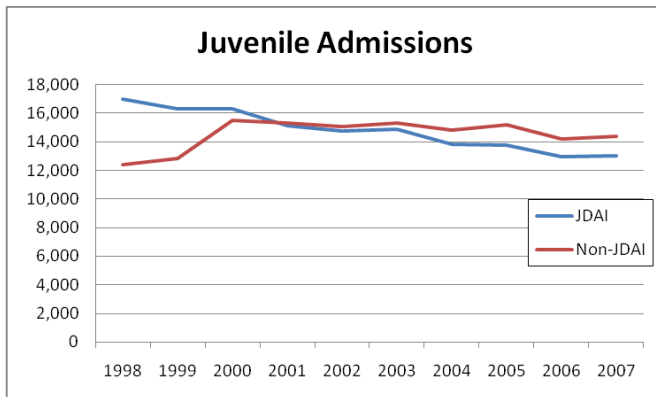


Figure 3

The change in admissions rate per 1000 juvenile arrests at the JDAI sites prior to JDAI membership ranged from an average annual increase of 12.1% to a decrease of 2.6% (Table 3). During JDAI the average annual change in admissions rate was negative across all JDAI sites and ranged from a decrease of 0.2% to 13.0%.

Table 3

Admissions Rate per 1000 Arrests Juveniles Ages 10-17			
Year	1998	2003	2007
B/F	322	402	514
King	627	549	538
Pierce	810	1,037	873
Spokane	492	517	446
Whatcom	472	828	652
Yakima	574	684	532

Prior to the introduction of JDAI in Washington, the counties participating in JDAI experienced an increase in the admissions rate of 8.6% between 1998 and 2003 (Figure 4). Subsequently these counties experienced a decrease of 11.7% between 2003

and 2007 under JDAI (a decrease of 13.0% for Benton/Franklin between 2006 and 2007). To contrast, counties not participating in JDAI experienced an increase of 7.2% between 2003 and 2007.

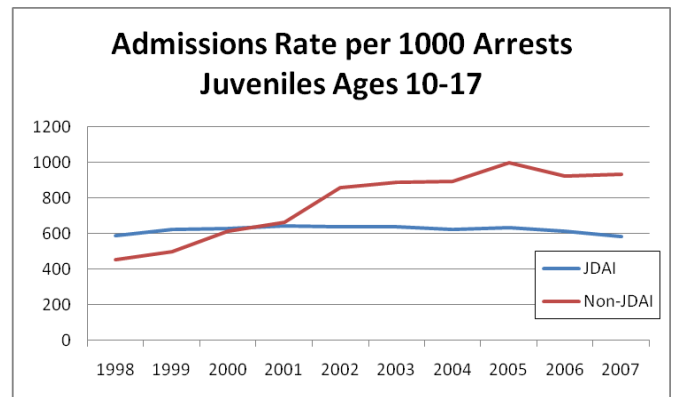


Figure 4

Average Daily Population (ADP)

The change in average daily population of juveniles ages 10-17 at JDAI sites prior to participation ranged from an average annual decrease of 0.4% to a decrease of 9.9%. During JDAI the change in ADP ranged from an annual decrease of 2.9% to a decrease of 11.2% (Table 4).

Table 4

Average Daily Population			
Year	1998	2003	2007
B/F	50	46	36
King	194	114	101
Pierce	164	126	76
Spokane	72	72	64
Whatcom	31	27	18
Yakima	63	56	44

Prior to JDAI, the participating counties experienced a decrease in ADP of 23.1% between 1998 and 2003, an average decrease of 5.1% per year (Figure 5). During JDAI these counties experienced a further decrease of 23.3% between 2003 and 2007, an average decrease of 6.3% per year. To contrast, counties not participating in JDAI experienced a decrease of 10.8% between 2003 and 2007, or 2.6% per year.

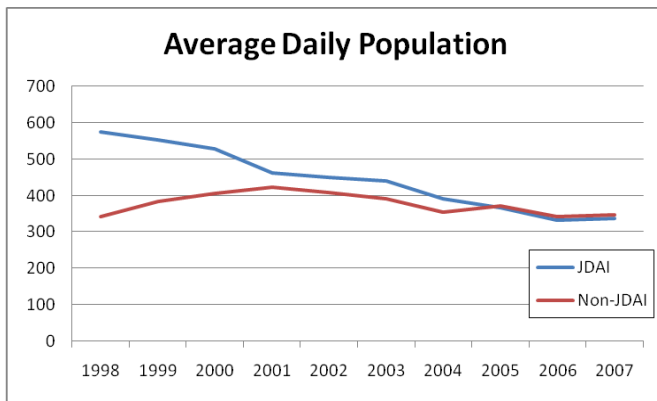


Figure 5

The ADP per 1000 juvenile arrests illustrates changes at the JDAI sites prior to and during JDAI (Table 5). The differences between 1998 and 2003 correspond to average annual changes that range from an increase of 12.0% to a decrease of 5.5%. During JDAI the average annual change in ADP rate was negative across all JDAI sites and ranged from a decrease of 0.5% to 12.1% per year.

Table 5

Average Daily Population per 1000 Arrests Juveniles Ages 10-17			
Year	1998	2003	2007
B/F	15.5	14.0	12.7
King	20.6	15.3	14.3
Pierce	28.8	31.7	18.8
Spokane	15.4	15.3	14.9
Whatcom	12.0	20.7	12.2
Yakima	18.7	20.5	16.2

The difference in ADP between JDAI and non-JDAI sites is clear when we look at the the arrest adjusted ADP rather than the ADP count total. In the years prior to JDAI, the counties participating in JDAI experienced a decrease in the ADP rate of 5.0% between 1998 and 2003 (Figure 6). Under JDAI these counties experienced a decrease of 19.6% between 2003 and 2007 (a decrease of 23.9% for Benton/Franklin between 2006 and 2007). To contrast, counties not participating in JDAI experienced an increase of 0.2% between 2003 and 2007.

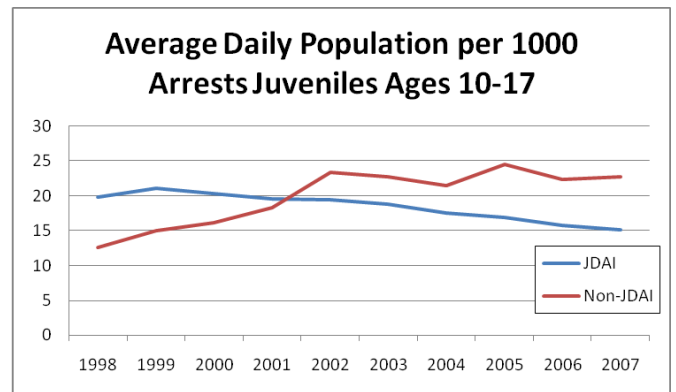


Figure 6

Average Length of Stay (ALOS)

The average length of stay of juveniles ages 10-17 further illustrates changes at the JDAI sites prior to and during JDAI (Table 6). The changes in ALOS between 1998 and 2003 correspond to an average annual decrease ranging from 0.2% to a decrease of 6.0%. During JDAI the change in ALOS ranged from an annual increase of 3.2% to a decrease of 8.0%.

Table 6

Average Length of Stay			
Year	1998	2003	2007
BF	17.6	12.7	9.0
King	12.0	10.2	9.7
Pierce	13.0	11.2	7.8
Spokane	11.4	10.8	12.2
Whatcom	9.2	9.1	6.8
Yakima	11.9	10.9	11.2

Prior to JDAI, the counties participating in JDAI experienced a decrease in ALOS of 12.3% between 1998 and 2003, an average decrease of 2.6% per year (Figure 7). During JDAI these counties experienced a further decrease of 12.6% between 2003 and 2007, an average decrease of 3.3% per year. To contrast, counties not participating in JDAI experienced a decrease of 5.0% between 2003 and 2007, or 1.2% per year.

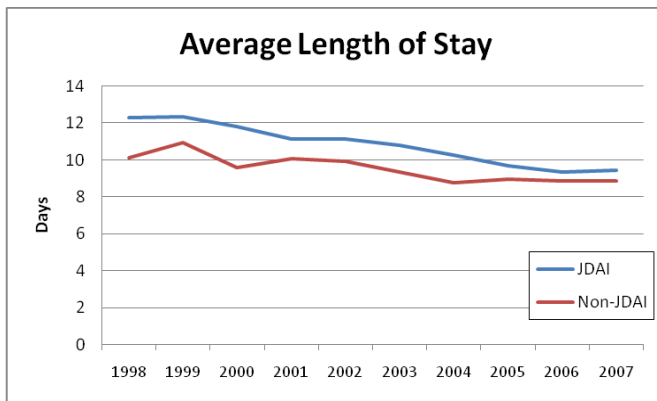


Figure 7

Disproportionate Minority Contact (DMC)

In addition to the evaluation of general effectiveness above, it is important to analyze the impact of JDAI on Disproportionate Minority Contact [DMC], the overrepresentation of minorities in the juvenile justice system. DMC is a well-documented and pervasive issue. An unintended consequence of reform initiatives can often be the unequal benefit to different demographic groups

Washington State Association of Sheriff and Police Chiefs arrest data includes identifiers for the race of arrested youth, but ethnicity is not available. Consequently, counties in Washington State include a significant population of Hispanic youth identified with each race. It is problematic to compare detention rates with arrest rates for youth when ethnicity is excluded. Likewise, it is not possible to determine the proportion of arrests for which certain races and ethnicities account.

Census-based population data, for which race and ethnicity are available, is used as a proxy. This removes the arrest event as a decision point when calculating RRI and Proportionality. Therefore, any overrepresentation or underrepresentation that should properly belong to the arrest decision point will accumulate at the detention admission decision point. Values reported below are affected by unknown levels of overrepresentation or underrepresentation arising from two sources, arrests and admissions.

Despite data limitations, it is still possible to contrast relative changes occurring at JDAI and non-JDAI counties during the period of JDAI activity.

Admissions

Between 2003 and 2007 the population adjusted admissions rate for Caucasian Non-Hispanics at JDAI sites decreased 3.7%, equal to non-JDAI sites (Figure 8). During that same period the population-adjusted admissions rate for Minorities at JDAI sites decreased 11.6% as compared to 6.9% for non-JDAI sites.

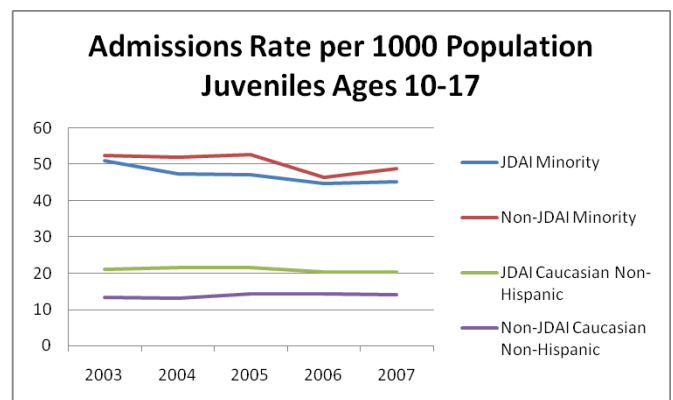


Figure 8

Average Daily Population⁸ (ADP)

Between 2003 and 2007 the population-adjusted average daily population for Caucasian Non-Hispanics at JDAI sites decreased 23.4%, as compared to 4.3% at non-JDAI sites (Figure 9). During that same period the population-adjusted ADP for Minorities at JDAI sites decreased 25.5% as compared to 10.4% for non-JDAI sites.

⁸ JDAI data for minority admissions and average length of stay excludes data for King County.

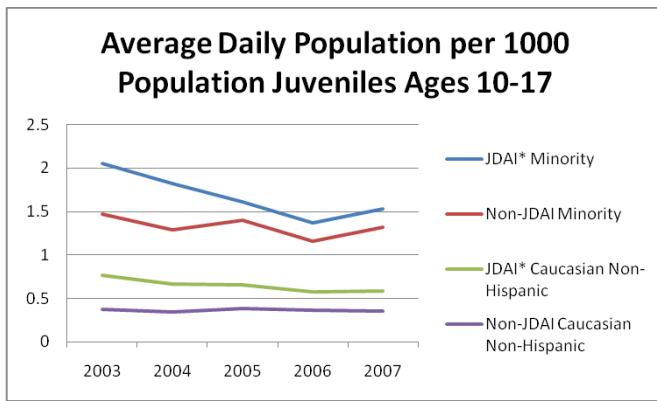


Figure 9

Average Length of Stay

Between 2003 and 2007 the average length of stay for Caucasian Non-Hispanics at JDAI sites decreased 26.2%, as compared to 7.7% at JDAI sites (Figure 10). During that same period the population-adjusted admissions rate for Minorities at JDAI sites decreased 9.6% as compared to 3.7% for Non-JDAI sites.

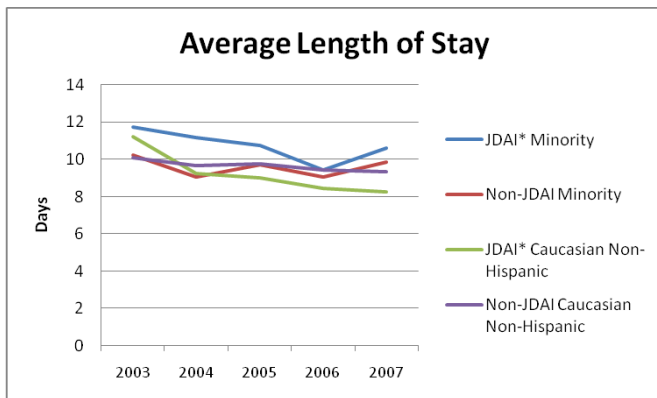


Figure 10

Relative Rate Index

In 2003, sites not participating in JDAI had a RRI of 3.90 (Figure 11). This implies that minority youth were admitted to detention 3.9 times the rate that Caucasian Non-Hispanic youth were admitted to detention. In 2003, future JDAI sites had a RRI of 2.41, admitting Minority youth to detention at a rate 2.41 times that of Caucasian Non-Hispanic youth.

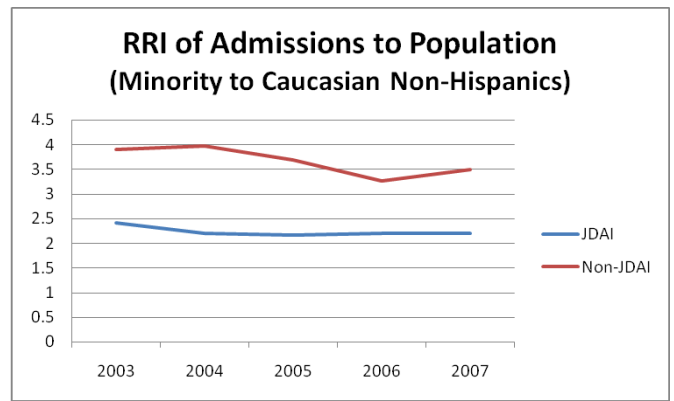


Figure 11

By 2007, sites not participating in JDAI had reduced the RRI to 3.50. JDAI sites during the same time had reduced the RRI to 2.21. Both JDAI and non-JDAI sites reduced the RRI during the period of JDAI activity, and although the non-JDAI sites experienced twice the reduction, their level of overrepresentation began the period 1.62 times higher.

Proportionality

In 2003, the proportion of Caucasian Non-Hispanics in admissions was 0.62 times their proportion in the general population at sites not participating in JDAI. Any value less than 1 indicates underrepresentation. The proportion at JDAI sites was 0.69 times their proportion in the general population (Figure 12).

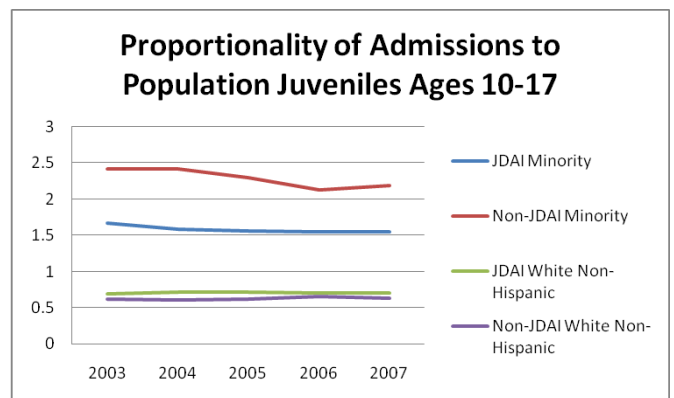


Figure 12

By 2007, sites not participating in JDAI had the proportion of Caucasian Non-Hispanics in admissions remain at 0.62 times their proportion in the general population. JDAI sites during the same time

increased the proportion in admissions to 0.70 times their proportion in the general population, a marginal change toward proportional representation.

In 2003, the proportion of Minorities in admissions was 2.41 times their proportion in the general population at sites not participating in JDAI. Any value greater than 1 indicates overrepresentation. The proportion of Minorities in admissions at JDAI sites was 1.66 times their proportion in the general population.

By 2007, sites not participating in JDAI had reduced the proportion of Minorities in admissions to 2.18 times their proportion in the general population. JDAI sites during the same time reduced the proportion of Minorities in admissions to 1.55 times their proportion in the general population.

Similar to the results for RRI, both JDAI and non-JDAI sites reduced the proportion of Minorities in admissions relative to their proportions in the general population. These reductions were similar at JDAI and non-JDAI sites.

Further analysis indicates that during the period of JDAI activity, Minority youth experienced a greater reduction in the admissions rate, but a smaller reduction in the average length of stay than Caucasian Non-Hispanics in JDAI counties. Minorities experienced a greater reduction in the admissions rate, ADP and ALOS in JDAI counties than in non-JDAI counties.

Conclusions

The results from the analysis of population and arrests indicate that JDAI and non-JDAI counties are reasonably well matched for an evaluation of the outcomes of JDAI in Washington State. With regard to juvenile population size, growth, demographics and arrests rates the JDAI sites as a whole is comparable to non-JDAI sites. Measuring results as rates relative to population or arrests should compensate where differences occur.

The results of the analysis indicate that JDAI is associated with a large reduction in the arrest-adjusted detention admissions rates and ADP. During the same period, counties not participating in JDAI saw an increasing rate of detention admissions and ADP relative to arrests.

Counties participating in the JDAI reform initiative experienced a substantially greater decrease (12.6%) in the average length of stay in detention than counties not using JDAI (5.0%).

JDAI and non-JDAI counties experienced decreases in the measures of DMC. These improvements were similar between JDAI and non-JDAI counties. While there is no evidence to conclude that the use of JDAI is associated with the decrease in DMC experienced by the JDAI sites, we can conclude that the use of JDAI does not appear associated with any increase, or negative impact, in DMC.

Next Steps

The research and analysis contained within this report constitute only preliminary results and general program outcomes. With the continued integration of data sources, improvement in the detail and accuracy of data available, and the extension of analysis, further research will provide greater insights into program outcomes.

With the conclusion of this project, the research, recommendations, data sharing relationships and plan will be in place to continue with implementation of the recommendations. This work will facilitate integration at the local level as JDAI spreads to new counties and at a State level. This project was only the first stage of what should become ongoing commitments of evaluation, recommendations, improvements, technical assistance, and analysis of JDAI program outcomes and effectiveness.

Already, the recommendations produced to help guide analysis and reporting provide the basis to continue beyond the conclusion of the project. Proposals are under development and technical details are being discussed to seamlessly integrate the

data analysis procedures with report production. The programming already under development for importation, formatting, analysis and reporting will create the foundation for a centralized “data mart”

for JDAI data. This data repository will combine county and state resources to further the support and development of JDAI in Washington State.

WSSCR is the research arm of the AOC and was established in 2004 by order of the Washington State Supreme Court. WSSCR conducts research to improve the understanding of the courts, help guide judicial policy, and improve the functioning of the judicial system.