

## Drug Court Outcomes

### *Outcomes of Adult Defendants Admitted to Drug Courts Funded by the Washington State Criminal Justice Treatment Account*

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THE DEPARTMENT OF SOCIAL AND HEALTH SERVICES' Research and Data Analysis Division is conducting a series of analyses for the Division of Behavioral Health and Recovery (DBHR) examining the experiences of recipients of treatment funded by the Criminal Justice Treatment Account (CJTA). The CJTA pays for chemical dependency (CD) treatment for offenders who are chemically dependent or have a substance abuse problem that could, if untreated, lead to addiction.<sup>1,2</sup> This report describes the criminal and CD treatment participation outcomes of 1,671 adults charged with felonies who were eligible for treatment, primarily funded through CJTA, and who were admitted to formally established drug courts.<sup>3</sup> Three-year outcomes are compared to a statistically matched comparison group of 1,671 adults charged with similar felonies in the same jurisdictions and two-year time period (July 2007 through June 2009), but who were not admitted to a drug court. Arrests, incarceration rates, and treatment participation over a three-year follow-up period are examined, as are net benefits associated with reductions in crime.

### Key Findings

- Over the three-year follow-up period, drug court participants were less likely to be incarcerated during the follow-up period than individuals in the comparison group (17 versus 23 percent).
- Controlling for other factors leading to arrest, drug court participants were twice as likely to remain free of arrest as those in the comparison group (30 versus 15 percent).
- Nearly universal participation in chemical dependency treatment was obtained by drug court participants (97 percent compared to 46 percent in the comparison group).
- Drug court participants were over 3 times more likely to enter treatment within 90 days and 4 times more likely to be in treatment—primarily outpatient—for 90 or more days.
- The reductions in crime observed in this analysis translate into a net benefit to tax payers and society of approximately \$22,000 per participant—or about \$4.02 in benefits per dollar spent.

<sup>1</sup> (RCW) 70.96A.350(1).

<sup>2</sup> The Washington Legislature intended that the CJTA “. . . increase the use of effective substance abuse treatment for defendants and offenders in Washington in order to make frugal use of state and local resources, thus reducing recidivism and increasing the likelihood that defendants and offenders will become productive and law-abiding persons.” RCW 9.94A.517, “Intent – 202 c 290.”

<sup>3</sup> Revised Code of Washington (RCW) 2.28.170.



## STUDY POPULATION | Selection criteria

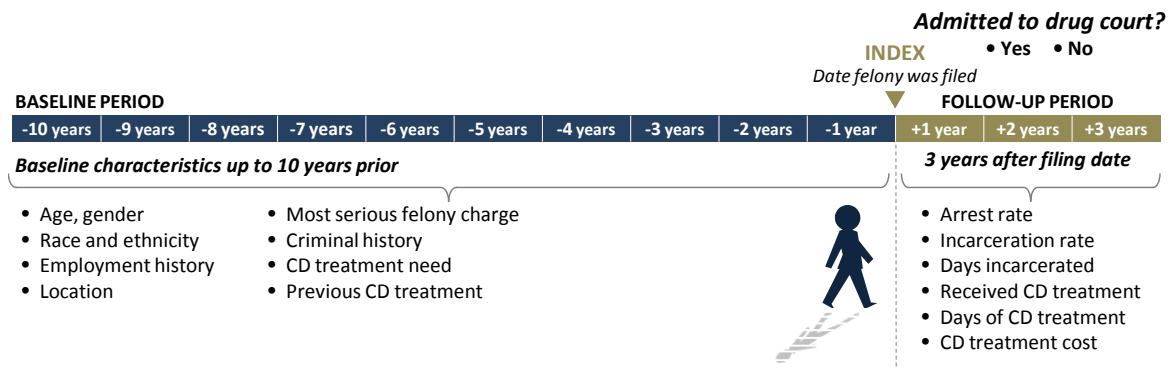
More than 6,600 clients entered CJTA-funded CD treatment in SFY 2008 – 2009.<sup>4</sup> Of those, about 2,400 (37 percent) were enrolled in a drug court program.<sup>5</sup> To focus specifically on the experiences of drug court participants, we identified 1,811 adults who were admitted to and did not opt-out of a Washington State drug court in SFY 2008 – 2009. Using an intent-to-treat analysis approach, these individuals were considered drug court participants whether or not they completed or *graduated* from the program. Of these, we excluded from the analysis 140 persons for the following reasons: missing data; no evidence of a recent felony charge; age 64 and older; or charged with felonies (e.g. violent crime or sex crime) that normally disqualify individuals from participation in most drug courts (see Figure 11, *Technical Notes*).

The date of the most serious felony charge associated with admission to drug court was chosen as the *index event*, the starting point of the three-year follow-up period used in this analysis (Figure 1). This approach was also used to identify comparable index events for a potential comparison group of individuals who were not admitted to a drug court. A similar non-drug court comparison group is necessary to estimate outcomes that may be attributable to drug court participation.

FIGURE 1.

### Study timeline: Prior baseline period, index event, and three-year follow-up period

*Drug court and non-drug court clients with charges filed in State Fiscal Years 2008 and 2009*



To construct our comparison group, we identified adults from the same counties who were charged with felonies in SFY 2008-2009 but who did not participate in drug court and who demonstrated a need for CD treatment based on prior treatment and detox history, CD-related medical conditions and prescriptions, and drug-related charges and arrests. We further refined the comparison group using a procedure known as propensity score matching. This process successfully identified a comparison group statistically identical to drug court participants with respect to the following factors: need for CD treatment at the time of filing, index felony, adult and juvenile criminal history, prior arrests, history of CD treatment or detox services, employment history, location, race/ethnicity, and age.<sup>6</sup>

The matching process resulted in a comparison group of 1,671 adults statistically identical to those admitted to a drug court (Table 1). While potentially important unobserved differences between treatment and comparison groups may remain, such as motivation, attitude, and family support, the opportunities for biases that influence outcomes are minimized based on observable characteristics available in administrative records used for this study (see *Technical Notes*).

<sup>4</sup> Division of Behavioral Health and Recovery, “Criminal Justice Treatment Account – Unduplicated Client Summary,” CJTA Panel, April 8, 2011.

<sup>5</sup> *Characteristics and Criminal Histories of Adult Offenders Admitted to Treatment under Washington State’s Criminal Justice Treatment Account SFY 2008 – SFY 2009*, Olympia, WA: Research and Data Analysis Division, <http://publications.rda.dshs.wa.gov/1456>. (2012).

<sup>6</sup> A logistic regression with an AUC of .77 was used to estimate the propensity to participate in drug court (propensity score).

TABLE 1.

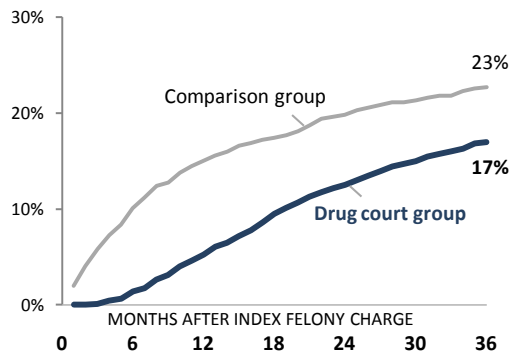
**Characteristics of Adults Admitted to Drug Courts July 2007 through June 2009  
and a Matched Comparison Group**

	Drug Court <i>n</i> = 1,671	Comparison <i>n</i> = 1,671	p-value
<b>Demographics</b>			
Age	32.1	32.2	0.8509
Male	61.8%	60.7%	0.5228
White Only	66.9%	68.9%	0.2077
Minority	33.1%	31.1%	0.2077
Hispanic	7.3%	6.7%	0.4568
<b>Index Felony (Charge associated with admission to drug court)*</b>			
Drug Possession	67.8%	68.4%	0.7105
Property –Theft/Fraud	20.9%	20.8%	0.9661
Property – Other	8.1%	7.6%	0.5631
Other Drug (excluding delivery)	3.1%	3.1%	1.0000
Other Felony (excluding violent, sex, and other drug charges)	3.4%	3.0%	0.4954
<b>Criminal History: Past 10 years (Mean)</b>			
Adult Felony Convictions	1.15	1.11	0.4441
Adult Felony Drug Possession Convictions	0.47	0.47	0.9693
Adult Felony Drug Delivery Convictions	0.04	0.04	0.9355
Adult Violent Felony Convictions	0.03	0.02	0.5880
Adult Non-criminal Convictions	1.79	1.76	0.7085
Adult Misdemeanor Convictions	2.12	2.04	0.4224
Total Arrests	6.73	6.58	0.5257
Juvenile Felony Convictions (lifetime)	0.13	0.12	0.8460
Juvenile Violent Felony Convictions (lifetime)	0.02	0.02	0.9117
Juvenile Misdemeanor Convictions (lifetime)	0.51	0.47	0.1981
<b>Other Characteristics</b>			
Treatment Need Indicated Prior to Index Felony	100%	100%	1.0000
Received AOD Treatment in Prior 2 Years	21.7%	19.6%	0.1349
Any Detox Admissions in Prior 2 Years	7.1%	6.8%	0.6842
Employed in Quarter Previous to Month of Index Felony	36.7%	36.7%	1.0000
Number of Quarters Employed in Prior 2 Years	3.15	3.15	0.9859
<b>Geographic Distribution</b>			
King County	28.6%	28.5%	0.9389
Pierce County	19.2%	18.3%	0.4786
Spokane County	10.8%	11.0%	0.8247
Clark County	7.6%	6.8%	0.3501
Snohomish County	6.6%	7.0%	0.6303
Thurston County	6.4%	6.8%	0.5784
Other Drug-Court Counties	20.7%	21.4%	0.5811
Rural County	9.9%	10.3%	0.7314

\* Index charges for the comparison group were randomly selected in such a way as to coincide with the distribution of charge dates of those admitted to drug courts.

## INCARCERATION | Drug courts participants were less likely to be incarcerated

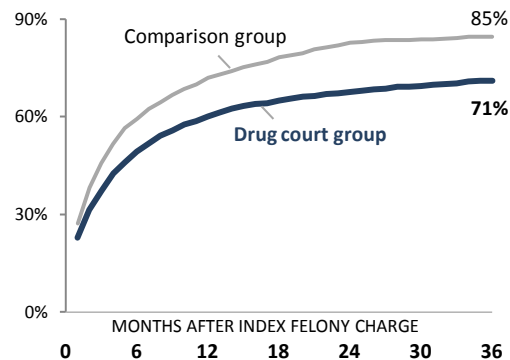
FIGURE 2.  
**Cumulative state-prison incarceration rate over the three-year follow-up period**  
*Drug court and comparison group clients*



In addition to encouraging participation in substance abuse treatment, drug courts are expected to be a less expensive alternative to incarceration.<sup>7</sup> At the end of the three-year follow-up period, drug court participants were significantly less likely to be incarcerated in a Department of Corrections (DOC) facility than similar adults in the comparison group. By the end of the study period, 17 percent of drug court participants and 23 percent of individuals in the comparison group had been incarcerated. As illustrated in Figure 2, the difference in cumulative incarceration rates widens throughout the first 12 months, then narrow somewhat over the rest of the follow-up period.

## RE-ARREST | Drug courts participants were less likely to be re-arrested

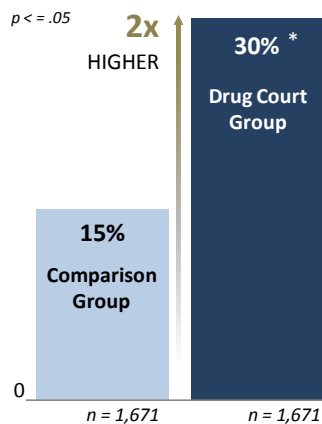
FIGURE 3  
**Cumulative arrest rate over the three-year follow-up period—for individuals in the community**  
*Drug court and comparison group clients*



Over half (56 percent) of the individuals in the study population were re-arrested within six months of their index event. Statewide, drug court participants were significantly less likely to be re-arrested than those in the comparison group throughout the follow-up period. Overall arrest rates increased steadily over the follow-up period, to about 80 percent by year three. Among the six largest counties, overall re-arrest rates ranged from 66 percent in Thurston to 95 percent in Snohomish.

Because, individuals in the comparison group were more likely to be incarcerated than those admitted to drug courts, we examined the arrest rates of non-incarcerated individuals who remained in the community and at-risk of arrest (Figure 3). Among those in the community during the follow-up period, there was a significant difference in the re-arrest rates of drug court participants (71 percent) and the comparison group (85 percent).

FIGURE 4.  
**Not arrested during follow-up period**  
*Adjusted*



A multivariate analysis controlling for the remaining differences in the drug court and comparison groups corroborates these findings (Figure 4, left). After controlling for previous arrests, convictions, demographics, days at-risk, and other factors, a defendant admitted to drug court was twice (30 percent) as likely as a comparison group subject (15 percent) to remain free of arrest during the three-year follow-up period.<sup>8</sup>

<sup>7</sup> Incarceration includes only those held in DOC institutions and does not include those jailed in city or county facilities.

<sup>8</sup> A logistic regression predicting the probability of re-arrest, controlling for criminal history, demographics, and other factors (Table 2, Technical Notes), was used to estimate a coefficient (beta=.79, *p*<.0001) for the effect of drug court participation.

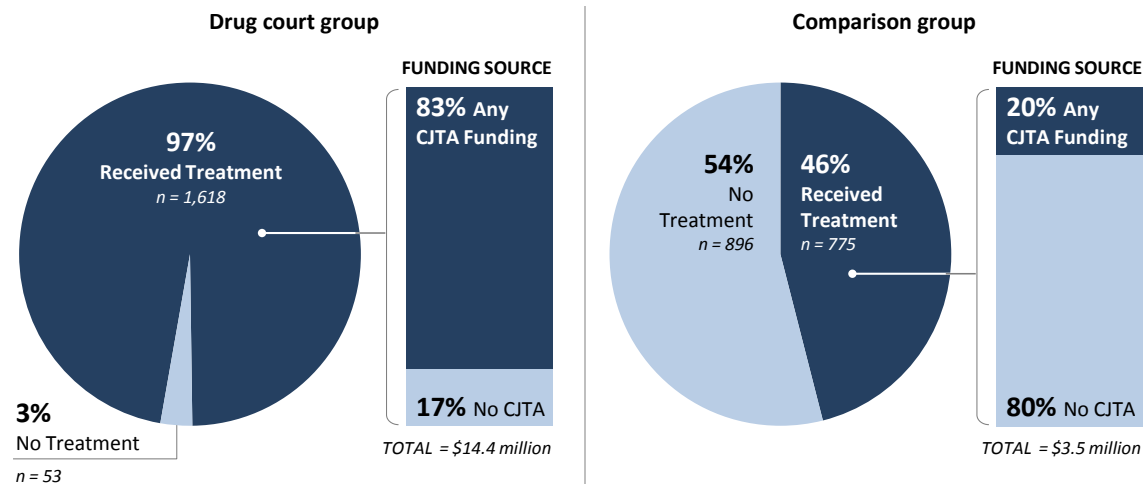
## TREATMENT | Chemical dependency treatment experiences differed significantly

There were significant differences in CD treatment experiences of drug court and comparison group defendants over the three-year follow-up period. We examined treatment participation and funding source, time to treatment, days of treatment received, total treatment costs, and treatment mix. Relative to the comparison group (Figure 5), defendants admitted to drug court were more than twice as likely to receive CD treatment in the follow-up period (46 percent versus 97 percent). Per-person treatment costs averaged \$8,906 for drug court clients, 83 percent of whom received at least some funding through the CJTA. Per-person treatment costs for the comparison group averaged \$2,093. Only 20 percent of those clients received any funding through the CJTA. Only 20 percent of those clients received any funding through the CJTA.

FIGURE 5.

### Treatment received and funding source

Drug court and comparison group clients

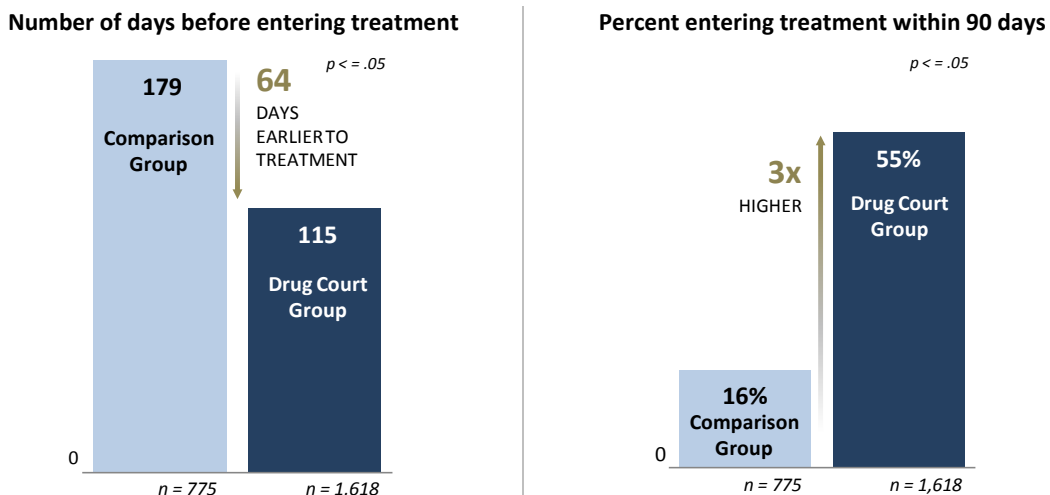


Drug court participants began treatment two months earlier on average (Figure 6, below), entering treatment more quickly (mean = 115 days) than did those in the comparison group (mean = 179 days). More than half (55 percent) of drug court participants began treatment in 90 days or less; they were 3.4 times more likely to enter treatment within three months than those in the comparison group.

FIGURE 6.

### Time to CD treatment

Drug court and comparison group clients

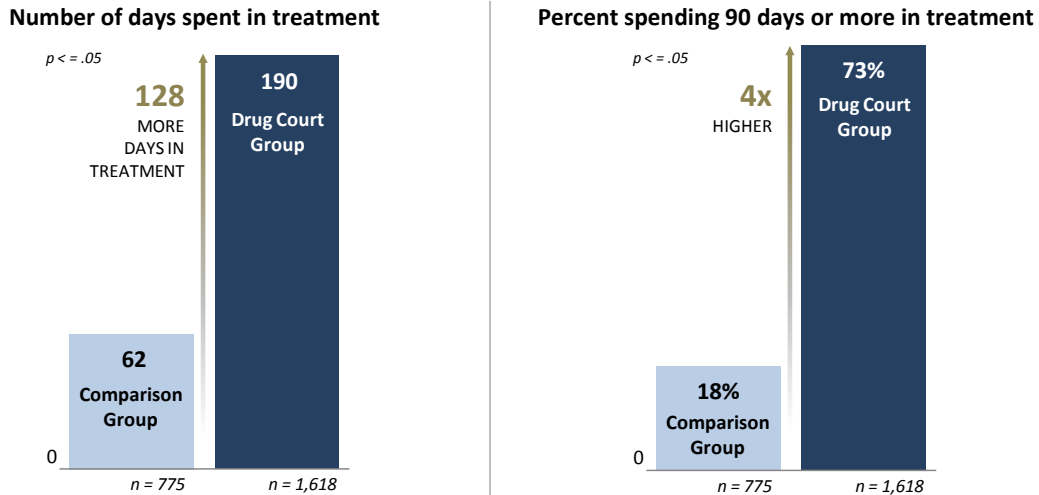


In addition to entering treatment sooner, drug court participants received more treatment services. Drug court participants were engaged in some form of treatment three days for every one day in the comparison group—190 days versus 62 days overall (Figure 7).

FIGURE 7.

**Days in CD treatment**

*Drug court and comparison group clients*



More treatment days translate into higher treatment costs for drug court participants. Their average monthly treatment costs increase rapidly in the first six months after the index event, as participants react to the requirements and encouragement of drug courts (Figure 8). Average treatment costs then gradually decline as clients exit drug court and associated treatment programs.

Over the follow-up period, the net treatment costs associated with drug court participation was about \$6,500 on average (Figure 9).

FIGURE 8.

**Average monthly CD treatment costs**

*Drug court and comparison group clients*

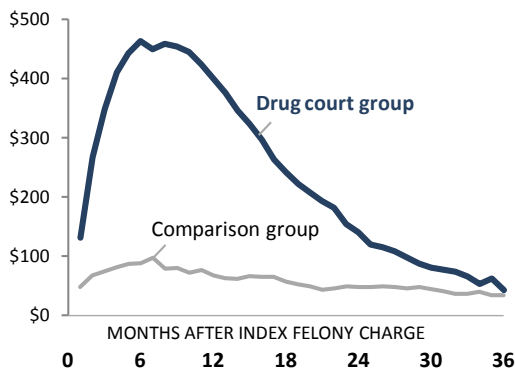
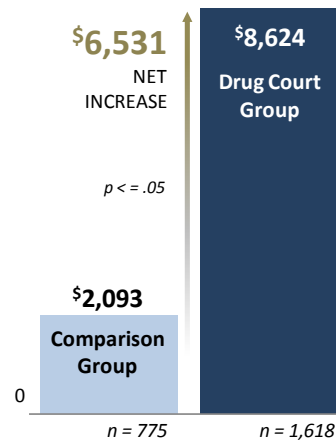


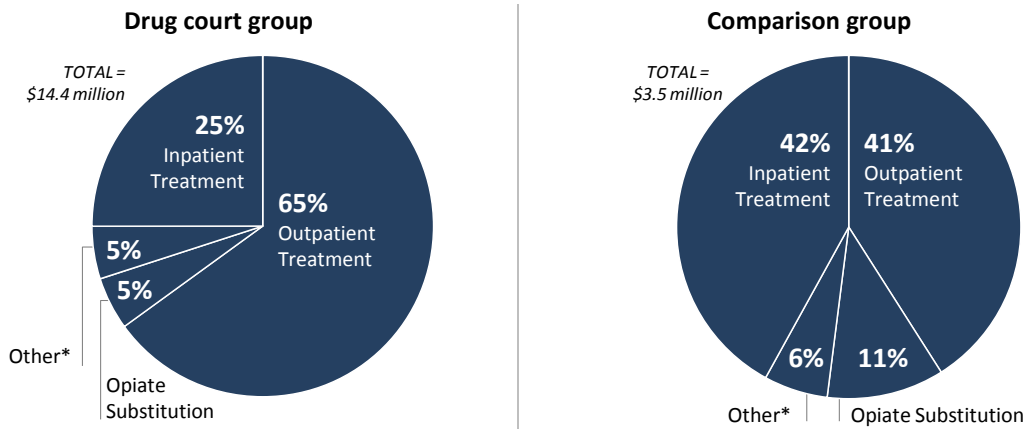
FIGURE 9.

**Total per-person treatment costs**



As shown in Figure 10 (below), outpatient treatment was the dominant treatment expenditure (65 percent) for those admitted to drug courts, followed by expenditures on inpatient treatment (25 percent) and opiate substitution therapy (5 percent). Treatment expenditures for comparison group subjects were divided equally among outpatient (41 percent) and inpatient (42 percent) services, while 11 percent of expenditures covered opiate substitution therapy.

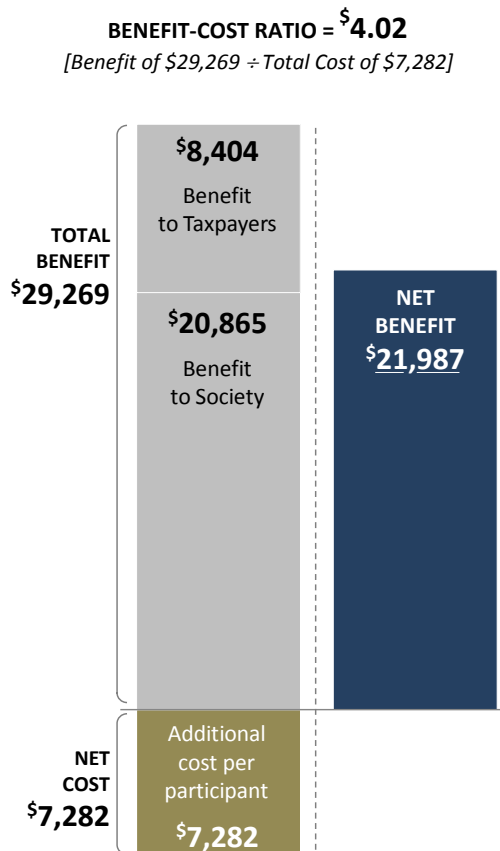
FIGURE 10.  
**Treatment mix** (based on estimated costs)  
*Drug court and comparison group clients*



\*Other includes intake, case management and other services.

**COSTS AND BENEFITS | State drug courts are cost effective overall**

FIGURE 11.  
**Lifetime Costs and Benefits**  
*Present Value*



Based on treatment costs estimated in this report and other existing estimates of court costs (i.e., court administration, monitoring, sanctions and incarceration) the marginal cost of drug court—the additional cost relative to handling a case in a standard criminal court—was \$7,282 per defendant (Table 3, *Technical Notes*). Consistent with previous evaluations<sup>9</sup>, this analysis demonstrates that Washington State drug court participants are less likely to be arrested over the follow-up period, an impact that can be expressed in lifetime monetary benefits to tax payers and society.

Estimated drug court costs and their associated reductions in crime were entered into the Washington State Institute for Public Policy (WSIPP) cost-benefit model, a tool developed to establish common metrics of cost-effectiveness across a variety of prevention and treatment programs.<sup>10</sup> The model provides a per-person estimate of \$21,987 (Figure 11) in net benefits associated with reduced criminal justice (\$8,404 to tax payers) and victimization (\$20,865 to society) costs. This translates to a return of \$4.02 in benefits per dollar expended.<sup>11</sup> Note that these estimates do not include the value of other potential benefits, such as improved employment and health outcomes that may also be attributable to the increased CD treatment associated with drug court participation.

<sup>9</sup> Mitchell, O., Wilson, D., Eggers, A., & MacKenzie, D. (2012). Assessing the effectiveness of drug courts on recidivism: A meta-analytic review of traditional and non-traditional drug courts. *Journal of Criminal Justice*, 40, 60-71.

<sup>10</sup> Lee, S., Aos, S., Drake, E., Pennucci, A., Miller, M., & Anderson, L. (2012). Return on investment: Evidence-based options to improve statewide outcomes April 2012 update. Olympia: Washington State Institute for Public Policy.

<sup>11</sup> Elizabeth Drake, Washington State Institute for Public Policy, personal communication, 4/10/2013.

## SUMMARY | Conclusions and future analysis

Compared to a statistically-matched comparison group, 1,671 adults charged with felonies and later admitted to Washington State drug courts in SFY 2008-2009 were, over a three-year follow-up period, twice as likely to remain free of arrest and participate in CD treatment. Based on the criminal justice outcomes alone, the additional costs associated with drug court participation are an investment that resulted in positive net benefits to tax payers and society (at a benefit-to-cost ratio of \$4.02).

Because this analysis examined the experiences of Washington State drug court participants in the aggregate it offers no conclusions about the effectiveness of any specific drug court. Given the significant differences in follow-up arrest rates by jurisdiction, 66 to 95 percent, there may be meaningful differences between individual drug courts with respect to operations, data, client risk levels and drug court effectiveness. Future analyses will investigate these jurisdiction-level issues in more detail and will also examine employment and health outcomes associated with CJTA-funded CD treatment for individuals in drug court and non-drug court settings.

### Also in this series . . .



### Characteristics and Criminal Histories of Adult Offenders Admitted to Treatment under Washington State's Criminal Justice Treatment Account SFY 2008 – SFY 2009

JANUARY 2012

Estee • Black • Felver • Mayfield • Lukeno

The first in a series of reports prepared for the DSHS Division of Behavioral Health and Recovery to help evaluate and monitor the effectiveness of the treatment funded by the state's Criminal Justice Treatment Account. This report compares key demographic, criminal history, and geographic differences between two groups of offenders whose treatment is funded through the account: 1) those involved with formally established drug courts, and 2) those charged through non-drug court programs in either Superior Courts or Courts of Limited Jurisdiction.

Available at: <http://publications.rda.dshs.wa.gov/1456/>



**DATA SOURCES**

Drug court participants were identified using data provided by individual drug courts in the following counties: King, Pierce, Snohomish, Thurston, Spokane, Clark, and Clallam. Drug court participants in Superior Courts in other counties were identified using docket codes in the Superior Court Management Information System (SCOMIS). A small number of drug court cases were also identified using the Drug Court Case Management (DCCM) system, which was in the early stages of implementation during the study period. The following components of the DSHS-RDA Integrated Client Database were also used for this analysis.

- 1 **Treatment and Assessment Report Generation Tool (TARGET), Division of Behavioral Health and Recovery** – TARGET data were used to identify clients who received CD treatment.
- 2 **Client Services Database (CSDB), Research and Data Analysis Division** – CSDB was used to link data from multiple sources and for client date of birth, race/ethnicity and gender.
- 3 **Criminal History Database, Washington State Institute for Public Policy (WSIPP)** – The WSIPP Criminal History data were used to identify court filings and associated charges. These data include information from systems of the Washington State Administrative Office of the Courts and the Department of Corrections.
- 4 **Arrest Database, Washington State Patrol (WSP)** – The WSP data include arrests in which an arrestee is fingerprinted. Felonies tend to be more often reported into WSP than less serious offenses, and completeness of reporting varies by jurisdiction.

**SAMPLE SELCTION**

We selected the court filing or arrest that most likely led to admission to drug court using specific selection criteria. For adult drug courts operating in Superior Courts, the selection criteria were, in order of precedence: presence of a drug court docket code in the Superior Court Management Information System (SCOMIS), felony charge with precedence for drug or property crimes, and proximity of Superior Court filings in the 2 years preceding the drug court admission. We also identified participants based on records provided by Clark, King, Snohomish, Thurston, Pierce and Clallam County drug courts and a limited number (for this time period) of records available in the state Drug Court Case Management system. For non-drug court participants, felony court filings were randomly selected to mirror the distribution of drug court filings over the study period.

One-hundred percent of drug-court participants had a CD treatment need flag in the DSHS Integrated Client Database (see “Data Sources” above). The comparison group was filtered according to that criteria and “disqualifying” charges such as violent felonies and sex crimes. A one-to-one, propensity score matching process was used to identify a statistically identical comparison group (Table 1). The number of records included in analyses based on these selection criteria is shown in the chart (Figure 11) below.

FIGURE 11.  
**THE MATCHING PROCESS**

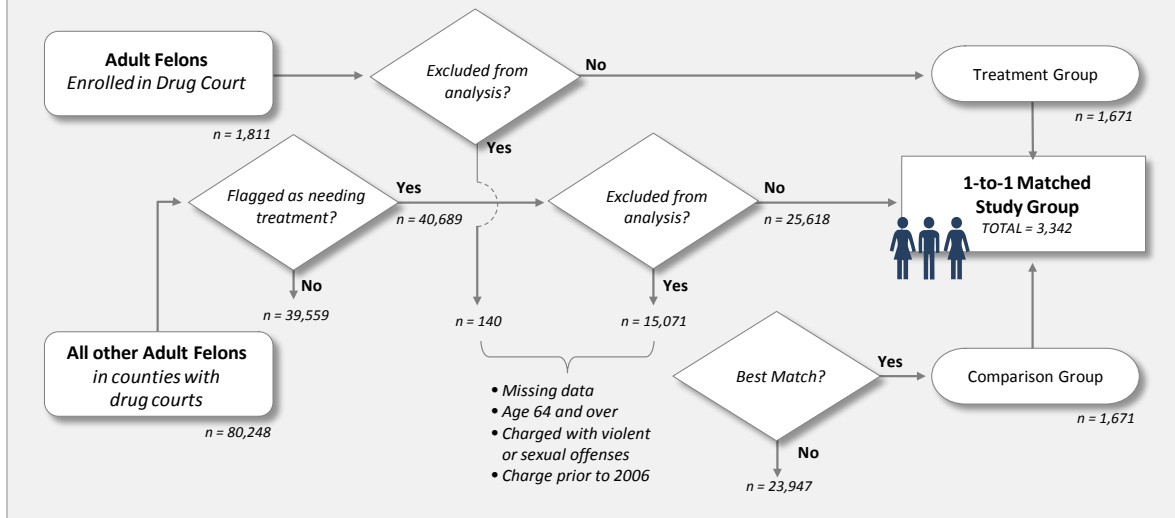


TABLE 2.

**Logistic Regression Estimating Probability of No Arrest in the three-year Follow-up Period**

TOTAL = 3,342 (AUC = 0.753)

Parameter	Estimate	Standard Error	p-value
Intercept	- 2.1816	0.3254	<.0001
Drug Court Participant (relative to comparison group)	<b>0.7942</b>	0.0952	<.0001
Age	0.0181	0.0048	0.4568
Male	- 0.1791	0.0975	0.0663
Hispanic (relative to non-Hispanic)	0.2225	0.1728	0.1978
Asian/Pacific Islander (relative to White)	0.0694	0.2296	0.7625
Black (relative to White)	- 0.1723	0.1584	0.2765
Native American/Alaska Native (relative to White)	0.1106	0.1643	0.5009
Arrests, number of prior	- 0.1547	0.0150	<.0001
Adult felony convictions, number of prior	- 0.2191	0.0370	<.0001
Adult misdemeanor convictions, number of prior	-0.0579	0.0257	0.0241
Juvenile felony convictions, number prior	- 0.1292	0.1306	0.3223
Juvenile misdemeanor convictions, number prior	- 0.1519	0.0678	0.0250
Employment earnings in most recent quarter, in \$1,000s	0.0320	0.0151	0.0343
Clark County (Relative to King County)	-0.5702	0.2285	0.0126
Pierce County (Relative to King County)	-0.7424	0.1604	<.0001
Snohomish County (Relative to King County)	-1.3778	0.3215	<.0001
Spokane County (Relative to King County)	0.4793	0.1598	0.0027
Thurston County (Relative to King County)	0.4504	0.1837	0.0142
Other Drug-Court Counties (Relative to King County)	0.0320	0.1685	0.8489
Rural County	0.5973	0.1776	0.0008

**COST ESTIMATES**

Drug court costs (Table 3) are based on four sources: (1) DSHS-RDA estimates of chemical dependency treatment costs based on TARGET utilization records and the average costs of inpatient and outpatient treatment, opiate substitution therapy, assessment and case management; (2) prison costs are based on a recent KGM Consulting analysis of DOC incarceration costs for fiscal 2010;<sup>12</sup> (3) Superior Court and sanction-related costs are from a 2003 cost analysis conducted by the Washington State Institute for Public Policy;<sup>13</sup> and (4) drug court administration and monitoring costs are from a 2007 survey conducted by the Urban Institute.<sup>14</sup> All costs are expressed in 2010 dollars.

TABLE 3.

**Drug Court Cost Summary, 2010 Dollars**

	Drug Court	Criminal Court	Difference
Chemical Dependency Treatment (1)	\$8,624	\$2,093	\$6,531
Incarceration (@\$94.50 per offender/day) (2)	\$4,631	\$7,655	– \$3,024
Superior Court Costs (3)	\$3,947	\$2,114	\$1,833
Sanction-related Costs (Jail) (3)	\$4,425	\$6,917	– \$2,492
Drug Court Administration and Monitoring (4)	\$4,270	\$0	\$4,270
<b>TOTAL</b>	<b>\$25,897</b>	<b>\$18,779</b>	<b>\$7,118</b>
<i>Present Value of the Additional Cost of Drug Court (relative to standard criminal court)</i>			<b>\$7,282</b>

RDA CONTACT: Jim Mayfield, 360.902.0764

<sup>12</sup> Cost effectiveness of Washington State adult prison offenders, final report, October 2012. Olympia: Criminal Justice Planning Services/KGM Consulting.

<sup>13</sup> Barnosky, R., & Aos, S. (2003). Washington State's drug courts for adult defendants: Outcome evaluation and cost-benefit analysis (Document No. 11-07-1201). Olympia: Washington State Institute for Public Policy.

<sup>14</sup> Bhati, A., Roman, J., & Chalfin, A. (2010). To treat or not to treat: Evidence on the prospects of expanding treatment to drug-involved offenders. Washington, D.C.: The Urban Institute Justice Policy Center.