

Drug Court and Recovery Support Services

Washington Court and Recovery Enhancement System Outcome Evaluation

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THE WASHINGTON COURT AND RECOVERY ENHANCEMENT SYSTEM (WA-CARES) provides recovery support services (RSS) to clients who access substance use disorder treatment through the drug court system. RSS aim to eliminate barriers to treatment success by providing services such as transportation and other basic needs like food and clothing to high risk clients. Drug courts located in five counties (Clallam, Cowlitz, Okanogan, Skagit and Snohomish) participated in this SAMHSA-funded portion of the Washington Court and Recovery Enhancement System project. To assess the added impact of RSS on drug court outcomes, we created a statistically matched group of adults in Washington State drug courts during the same time period. The comparison group was matched on demographics, criminal histories, treatment histories and other relevant characteristics. We then compared treatment, employment, re-arrest and incarceration rates during the 12 months following admission to drug court between the two groups.

The addition of recovery support services provided through WA-CARES enhances the success of the drug court model and increases the likelihood that a drug court participant will be engaged in treatment, employed, and arrest free.

Key Findings

Over a 12-month follow-up period we found that compared to a statistically matched group of peers:

- Drug court participants with RSS attended more days of treatment on average (133 days compared to 95 days).
- RSS recipients were more likely to be employed during the year following drug court admission (57 percent versus 46 percent).
- Rates of arrest were significantly lower for RSS recipients (34 percent versus 46 percent).







Recovery Support Services (RSS)

Grant funds from the Substance Abuse and Mental Health Services Administration (SAMHSA) and the Bureau of Justice Assistance (BJA) funded: 1) implementation of an automated drug court case management system, and 2) recovery support services for drug court participants in select counties. This report focuses on the recovery support services component of the grant. A prior report described the drug court case management system, along with detailed characteristics of program participants.





Recovery support services (RSS) address major barriers to success for individuals in recovery from substance use disorders, such as employment or job training, basic needs and transportation. RSS are made available for adults in substance use disorder treatment in Clallam, Cowlitz, Skagit, Okanagan and Snohomish Counties through the WA-CARES program. The services provided are based on the individual participant's expressed needs during a recovery support needs assessment completed at program admission. It was expected, based on prior work in Washington State, that providing enhanced support services would improve recovery and other outcomes for RSS participants.^{1,2}

Overall, 2,226 recovery support services were provided to the 175 clients in the RSS study group. The majority of RSS costs were related to basic needs like food and clothing (\$48,535), transportation (\$39,832) and dental services (\$39,102). The most common services provided were transportation (n = 748) and recovery coordination (n = 561). RSS participants received an average of 13 services over the year following admission to drug court (see chart below).



Recovery Support Services (RSS) and Expenditures

Methods

During the first 24 months of WA-CARES (January 2011 – December 2012), 175 clients were admitted to drug court and received recovery support services (RSS). To assess the impact of RSS on outcomes, we created a statistically matched group of 175 adults in Washington State drug courts during the same time period based on demographics, criminal histories, year of drug court admission, treatment histories and other relevant individual and county characteristics (see Table 1). We then compared treatment, employment, arrest and incarceration outcomes during the 12 month period after admission to drug court across the two groups. Multivariate regression analyses controlled for any remaining residual differences in participant characteristics.

Treatment Outcomes

Entry within 7 Days Among clients who received treatment



n = 123 of 172 n = 87 of 151

Days in Treatment Among clients who received treatment



n = 172 n = 151

RSS recipients entered treatment sooner

During the 12-month follow-up period, RSS recipients and those without RSS had significantly different substance use disorder treatment experiences. Specifically, we examined how quickly individuals entered treatment, Washington Circle measures,³ treatment retention and the number of days in treatment.

Over two-thirds (72 percent) of RSS recipients entered treatment within 7 days of drug court admission, compared to 58 percent of those without RSS (p < .01). Individuals receiving recovery support started treatment an average of 7 days earlier than those without RSS. On average, RSS recipients entered treatment 16 days after admission to drug court, while those without RSS entered treatment 23 days after admission (see Table 2).

We also examined Washington Circle measures of initiation and engagement, which have been established as useful measures for predicting long-term success in recovery.³ Retention is an additional measure used in Washington State which is based on receiving treatment services at least once per month until being discharged successfully. Relative to the non-RSS group, RSS recipients were more likely to initiate treatment (98 percent versus 92 percent), more likely to be engaged in treatment (98 percent compared to 87 percent) and more likely to be retained in treatment (85 percent versus 72 percent). See Table 2.

RSS recipients spent more time in treatment

RSS clients also participated in more substance use disorder treatment than those without RSS. On average, RSS clients attended 133 days of treatment during the study period, while those without RSS attended an average of 95 days of treatment (p < .0001).

In addition to the bivariate analysis, we ran a multiple regression model to measure the impact of RSS on the number of treatment days, while controlling for demographics, current offense, previous treatment and other baseline characteristics.

In the controlled analysis, RSS was associated with an estimated 49 additional days of substance use disorder treatment in the study period. This finding was statistically significant (p < .0001). See Table 3.

Employment Outcomes

Employment Rate

Percent employed any time during follow-up



RSS recipients are more likely to become employed

We identified an individual as being employed if they had any wages reported to the Employment Security Department. Just over half (57 percent) of RSS recipients were employed at some point during the year following admission, compared to 46 percent of individuals without RSS (p = .05).

We also looked at rates of employment over time (Figure 1) and compared employment rates between the two groups in both the pre-period (the year before drug court admission) and post-period (the year following drug court admission).

Despite having similar rates of employment during the year prior to entering drug court, RSS recipients had much higher rates of employment in the fourth quarter following admission than those without RSS (46 percent versus 29 percent).

n = 99 of 175 n = 81 of 175

A logistic regression analysis controlling for residual differences in demographics, urbanicity, prior employment, county unemployment rate and other baseline characteristics supports these findings. The odds of employment are estimated to be 77 percent higher for clients receiving RSS, relative to those without RSS. This finding is statistically significant (p < .05). See Table 4.

Figure 1. Employment Outcomes

Percent with earnings by quarter • 4 quarters pre- and post- Drug Court admission date



Note: The quarter of admission to drug court was not included.

Criminal Behavior Outcomes

Any Arrest

Any time during follow-up



n = 60 of 175 n = 80 of 175

Felony Arrest Any time during follow-up p = 0.245



n = 42 of 175 n = 51 of 175

State Prison Incarceration Rate Any time during follow-up p < .0001



Any Arrest or State Prison Incarceration Any time during follow-up



RSS recipients were less likely to be arrested

Previous research suggests drug court participants in Washington are significantly more likely to remain free of arrest compared to those charged with similar felonies who were not drug court participants.⁴ RSS made available through the WA-CARES program appear to add value to the drug court model, further increasing the likelihood a drug court participant will remain arrest free.

Rates of arrest for felonies and gross misdemeanors in the follow-up period, recorded in Washington State Patrol data, were significantly lower for RSS recipients versus those without RSS. Over the course of the 12month follow-up period, 34 percent of individuals in the RSS group were arrested, compared to 46 percent of those without RSS (p < .01). We also examined the percent of each group re-arrested for a felony offense. RSS participants experienced a lower felony re-arrest rate than those without RSS, although the difference between the two groups did not reach statistical significance. Among RSS participants, 24 percent were arrested for a felony offense during the 12 month follow-up period, versus 29 percent of those without RSS (p = .245).

RSS recipients had lower rates of DOC incarceration

Consistent with lower re-arrest rates, RSS recipients were also less likely to be incarcerated in a State Department of Corrections (DOC) facility during the 12-month follow-up period. Just 5 percent of those who received recovery support services were incarcerated versus 19 percent of those without RSS (p <.0001). Incarceration includes only those held in DOC institutions and does not include those jailed in city or county facilities.

We also examined a combined measure of arrest or DOC incarceration. About 38 percent of RSS recipients were either arrested or incarcerated during the follow-up period, compared to just over half (53 percent) of those without RSS (p < .01). A logistic regression measuring the impact of RSS on re-arrest and incarceration, controlling for demographics, urbanicity, criminal history, county arrest rate and other baseline characteristics showed the odds of re-arrest or incarceration were 54 percent lower for RSS participants relative to those without RSS (p < .01). See Table 5.

Summary

The findings presented here suggest recovery support services that address major barriers to success for individuals in recovery, such as transportation, food, clothing and other basic needs may be effective enhancements for drug court participants. Recovery support services appear to have a positive impact on the amount of time drug court clients spend in substance use disorder treatment and improve treatment participation. Most notably, recovery support services appear to increase employment and reduce the likelihood that drug court participants will commit new crimes or become incarcerated in the year after starting the program. Given these promising findings, we recommend that future studies include other key outcomes (such as housing stability and service utilization) and evaluate the cost-benefit of providing recovery support services.

Several other studies have found positive outcomes for individuals receiving recovery support services in Washington State. The Access to Recovery (ATR) program was associated with increased length of stay in substance use disorder treatment and improved rates of treatment completion. ATR services were also strongly linked to improved employment and earnings and lower medical costs after treatment.^{1,2} Based on these findings and other work, an adolescent version of RSS has recently been added to the Washington State list of promising practices.⁵ The Division of Behavioral Health and Recovery has proposed a change to RCW 70.96A.350 for the 2015 legislative session that would expand the scope of services purchased with Criminal Justice Treatment Account (CJTA) funds to include recovery support services. The CJTA was established by the Washington State Legislature to pay for chemical dependency treatement for criminal offenders with substance use disorders. The findings reported here suggest that drug court participants would benefit from this added resource.

An important limitation to this study is the possibility of unobserved differences between the RSS and no RSS groups. The propensity score matching process accounted for potential bias based on observed characteristics. However, potentially important unobserved differences between the two groups may remain, such as motivation, attitude, peer associations and family support. Drug court outcomes such as graduation were not included in this report due to insufficient time for program completion in a 12-month follow-up period. Jail data was not available as a measure of incarceration at the time of this study. Future work should include both drug court outcomes and jail time in order to measure the full spectrum of benefits and costs of RSS.

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SUPPORTING TABLES

TABLE 1.

Characteristics of RSS participants and the Matched Comparison Group (Non-RSS)

Demographics	RSS	Non-RSS
	n = 175	n = 175
Age 18 to 24	31%	31%
Age 25 to 34	41%	41%
Age 35 to 44	15%	15%
Age 45 to 54	10%	10%
Age 55 to 64	3%	3%
Male	66%	66%
Female	34%	34%
White Only	79%	79%
Minority	21%	21%
Hispanic	3%	3%
Index Offense		
Charge associated with admission to drug court		
Felony Drug Offense (excluding delivery)	31%	30%
Felony Drug Delivery	13%	11%
Felony Property	41%	47%
Felony Other	6%	5%
Misdemeanor	6%	4%
Unknown	3%	2%
Criminal History: Past 24 Months (pre-admission)		
Arrested	94%	98%
Felony Arrest	80%	80%
Misdemeanor Arrest	71%	70%
Adult Conviction	75%	78%
Adult Felony Conviction	51%	58%
Adult Misdemeanor Conviction	49%	53%
Juvenile Conviction (lifetime)	68%	75%
Juvenile Felony Conviction (lifetime)	43%	42%
Juvenile Misdemeanor Conviction (lifetime)	55%	57%
Incarcerated	6%	6%
Average number of arrests (in previous 10 years)	6.8	6.8
Other Characteristics: Past 24 Months (pre-admission)		
Received Alcohol or Drug Treatment	33%	32%
Mental Illness	41%	39%
Homelessness	57%	53%
Medicaid Eligible	57%	54%
Received Basic Food	89%	89%
Employed	55%	56%
County Arrest Rate	26%	27%
County Unemployment Rate	10%	9%
Geographic Distribution		
Urban High/Medium	25%	25%
Urban Low	40%	44%
Rural	35%	31%

NOTE: There were no statistically significant differences between RSS and Non-RSS groups on any of the variables shown. An exact matching procedure was used for age group and gender.

TABLE 2.

Outcome measures of RSS Participants and the Matched Comparison Group (Non-RSS) *Post 12 Months*

Treatment Outcomes Among clients who received treatment	RSS n = 172	Non-RSS <i>n</i> = 151	p-value
Average number of treatment days in follow-up period	133	95	<.0001
Treatment started within 7 days of admission	72%	58%	.009
Average number of days from admission to treatment	16	23	.105
Treatment Participation Among clients who received treatment	n = 170	n = 149	
Washington Circle Measure – Initiation	98%	92%	.008
Washington Circle Measure - Engagement	98%	87%	<.0001
Retention	85%	72%	.007
Employment	n = 175	n = 175	
Employed at any time during follow-up period	57%	46%	.054
Employed in fourth quarter after drug court admission	46%	29%	.001
Re-Arrest/Incarceration	n = 175	n = 175	
Any Re-arrest	34%	46%	.029
Felony Re-Arrest	24%	29%	.276
DOC Incarceration	5%	19%	<.0001
Arrest or Incarceration	38%	53%	.004

TABLE 3.

Regression Estimating Days in Treatment during the 12-month Follow-up *Total Clients = 350*

Parameter	Parameter Estimate	Standard Error	p-value
Intercept	33.28	16.15	.040
RSS Participant (relative to No RSS)	49.07	6.27	<.0001
Male	3.41	7.12	.632
Age 25 to 34 (relative to Age 18 to 24)	7.62	7.82	.331
Age 35 to 44 (relative to Age 18 to 24)	16.10	10.30	.119
Age 45 to 54 (relative to Age 18 to 24)	34.61	11.68	.003
Age 55 to 64 (relative to Age 18 to 24)	-9.75	18.13	.591
Hispanic (relative to non-Hispanic)	43.37	19.72	.029
Minority (relative to White)	-15.48	8.41	.067
Felony Drug Offense - excluding delivery	20.08	13 53	139
(relative to misdemeanor)	20.00	15.55	.155
Felony Drug Delivery (relative to misdemeanor)	46.25	15.00	.002
Felony Property (relative to misdemeanor)	21.03	13.19	.112
Felony Other (relative to misdemeanor)	18.91	18.42	.305
Number of arrests in prior 10 years	72	.57	.212
Urban High/Medium (relative to rural)	23.36	8.96	.010
Urban Low (relative to rural)	25.05	7.61	.001
Substance use disorder treatment in prior 2 years	2.05	7.53	.786
Basic Food in prior 2 years	6.01	11.09	.588
Medicaid eligibility in prior 2 years	54	7.72	.944

TABLE 4. **Logistic Regression Estimating Probability of Employment in the 12-month Follow-up** *Total Clients = 350*

Parameter	Parameter Estimate	Odds Ratio	p-value
Intercept	.69		.545
RSS Participant (relative to No RSS)	.57	1.77	.019
Male	.93	2.5	.001
Age 25 to 34 (relative to Age 18 to 24)	26	.77	.382
Age 35 to 44 (relative to Age 18 to 24)	92	.40	.017
Age 45 to 54 (relative to Age 18 to 24)	61	.55	.184
Age 55 to 64 (relative to Age 18 to 24)	-2.77	.06	.012
Hispanic (relative to non-Hispanic)	31	.73	.678
Minority (relative to White)	.08	1.08	.808
Misdemeanor arrest in prior 2 years	.30	1.35	.295
Juvenile felony conviction (lifetime)	.11	1.11	.703
Number of arrests in prior 10 years	06	.94	.016
Urban High/Medium (relative to rural)	21	.81	.595
Urban Low (relative to rural)	.33	1.39	.269
County Unemployment Rate	18	.84	.095
Employment in prior 2 years	.99	2.69	<.0001
Basic Food in prior 2 years	.03	1.03	.937
Medicaid eligibility in prior 2 years	06	.95	.834

TABLE 5.

Logistic Regression Estimating Probability of Arrest or Incarceration in the 12-month Follow-up *Total Clients = 350*

Parameter	Parameter Estimate	Odds Ratio	p-value
Intercept	27		.708
RSS Participant (relative to No RSS)	77	.46	.002
Male	.04	1.04	.900
Age 25 to 34 (relative to Age 18 to 24)	42	.66	.158
Age 35 to 44 (relative to Age 18 to 24)	28	.75	.477
Age 45 to 54 (relative to Age 18 to 24)	-1.09	.34	.032
Age 55 to 64 (relative to Age 18 to 24)	-1.39	.25	.073
Hispanic (relative to non-Hispanic)	-1.44	.24	.101
Minority (relative to White)	.45	1.57	.175
Misdemeanor arrest in prior 2 years	.002	1.00	.994
Juvenile felony conviction (lifetime)	05	.96	.877
Number of arrests in prior 10 years	.06	1.06	.013
Urban High/Medium (relative to rural)	2.13	8.37	<.0001
Urban Low (relative to rural)	.51	1.67	.135
County Arrest Rate	03	.98	.215
Basic Food in prior 2 years	.09	1.10	.831
Medicaid eligibility in prior 2 years	.35	1.43	.212

This report summarizes an evaluation of recovery support services provided through the WA-CARES program. We examined substance use disorder treatment, employment, arrest and incarceration outcomes over a 12-month follow-up period for RSS recipients compared to a statistically matched group of peers. Matched peers were drawn from a pool of other adults admitted to drug court in Washington State during the same time period (January 2011 to December 2012). Those selected for the Non-RSS group had demographics, criminal and treatment histories similar to those who received recovery support services through WA-CARES.

SELECTION CRITERIA FOR RSS RECIPIENTS INCLUDED IN ANALYSIS

We first identified RSS recipients who were admitted to drug court between January 2011 and December 2012 (n = 175). These individuals had sufficient follow-up data to examine outcomes for 12 months after their admission date. The month of admission to drug court defines the "index month," the prior 24 months define the pre-period, and the subsequent 12 months define the post-period (or follow-up period).

The RSS group excluded 60 individuals in Snohomish Family court which were entered into the drug court case management system as part of DBHR's contract with Snohomish county. These cases were excluded because they did not meet the criteria for admission to adult felony drug court.

STUDY TIMELINE



SELECTION CRITERIA FOR NON-WA-CARES RECIPIENTS INCLUDED IN POTENTIAL COMPARISON POOL

The potential comparison pool included all individuals admitted to a Washington State drug court between the same time frame (January 2011 to December 2012) for which data was available (n = 2,132). Data on drug court participants was provided directly from the county or extracted from DCCM or SCOMIS (the Superior Court Management Information System).

PROPENSITY SCORE MATCHING

Demographics and baseline measures were constructed for both the WA-CARES treatment group and the potential comparison pool.

Matching variables included demographics, a county population measure (urban/rural), current offense, year of drug court admission and a number of other pre-period indicators, including homelessness, mental illness, previous substance use disorder treatment, employment, criminal history, Medicaid eligibility, and receipt of Basic Food services.

Two additional county-level indicators were also included in the model: county unemployment rate and county arrest rate. A matched comparison group of individuals who did not receive recovery support through WA-CARES was constructed using propensity scores and exact matching on two variables (age group and gender).

The propensity score is a single summary measure derived from the characteristics which reflect the predicted probability a case falls into either the treatment or comparison group. Individuals in the treatment group (RSS) are matched to cases with similar scores in the comparison pool (no RSS).

All 175 RSS recipients were matched with a comparison group member. After the matching process, no statistically significant differences remained between the RSS group and the comparison group on key observable measures (Table 1).

DATA SOURCES

DCCM. The Drug Court Case Management system (DCCM) was implemented in January 2011 in all WA-CARES sites as part of this federally funded project. Data is recorded in DCCM by drug court staff and is based either on court proceedings or participant self-report.

SCOMIS. The Superior Court Case Management Information System (SCOMIS) is used by the courts to manage and report Washington's superior court cases.

Community Risks and Outcomes Evaluation (CORE) Information System. County arrest and unemployment rates were drawn from CORE. CORE is a set of indicators available at the state, county, school district and locale level that are used for substance abuse prevention service planning in Washington State. A full description of CORE and reports available can be viewed online at http://www.dshs.wa.gov/rda/research/risk.shtm.

DSHS Integrated Client Database. The Research and Data Analysis Division (RDA) of DSHS maintains a longitudinal, integrated client database (ICDB) containing over 10 years of detailed service risks, history, costs and outcomes. A full description of the ICDB can be viewed online at http://publications.rda.dshs.wa.gov/1394/. ICDB measures in this report are provided for the 24 months prior to entering drug court and the 12-month follow-up period. ICDB measures include:

- Homelessness Homelessness was identified using an indicator that combines data from six different information systems, including HMIS, ACES, Provider One, TARGET, the DBHR Consumer Information System, and the FAMLINK child welfare data system. As the WA-CARES project did not focus specifically on housing, this data element was deemed most appropriate for use as a risk factor in the statistical matching process.
- Employment and earnings Employment was defined as having any earnings recorded in the Washington State unemployment insurance wage files. The quarter of admission to drug court was not included.
- Mental Illness Mental illness was identified using a combination of diagnoses, psychotropic medications and mental health services recorded in administrative data.
- **Medicaid Eligibility** Medicaid eligibility reflects that a Medicaid Recipient Aid Category was recorded in Provider One during the 24 months prior to the index event.
- **Basic Food** Administrative records from the Economic Services Administration indicating at least one month of Basic Food coverage during the 24 months prior to the index event.
- Substance use disorder treatment clients who received substance use disorder treatment and RSS were identified using data from the Treatment and Assessment Report Generation Tool (TARGET). The number of days clients attended treatment was calculated from service dates recorded in TARGET.
- Convictions Convictions as recorded in the Washington State Institute for Public Policy criminal history file.
- Arrests Arrests recorded in the Washington State Patrol database. Arrests are primarily felonies and gross
 misdemeanors, but include some youth misdemeanors.



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