Residential Substance Use Treatment Access in Juvenile Rehabilitation in Washington State

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Contents

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Executive Summary

Residential Substance Use Treatment Access Findings

- Juvenile Rehabilitation (JR) has administered substance use treatment, in some form, since 1985.
- Each JR institution has its own unique substance use treatment model.
- There is a high and consistent need for substance use treatment. From 2014 to 2018, approximately 68 percent of youth showed a need for substance use treatment every year.
- Substance use treatment needs consistently exceed residential treatment capacity. From 2014 to 2018, only 56 percent of youth received the residential substance use treatment they needed.
- Treatment need is the primary determinant of treatment access. Of the demographics studied, only gender was significantly associated with treatment access. Female youth accessed treatment at a higher rate than males. Race, ethnicity and age were not significantly associated with treatment access.

Main Recommendations

- Establish a Substance Use Disorder Oversight Committee that meets regularly to ensure treatment is adequate, effective and available to youth.
- Establish a formal, centralized policy for substance use treatment by creating and adhering to a uniform substance use treatment model.
- Review assessment practices for improvements and consistency. We also recommend that tools used for assessment be empirically validated.
- Establish Quality Assurance and Continuous Quality Improvement procedures to ensure accurate and consistent data reporting across treatment programs.

Introduction

Substance Use Among Justice-Involved Youth

The high rate of substance abuse among juveniles with criminal records is concerning. Research demonstrates a consistent association between substance abuse and criminal behavior. A meta-analysis of 30 studies conducted by Bennet and Holloway (2008), found the odds of offending were three to four times higher for drug users than non-drug users. Adolescent substance use is also associated with a number of adverse outcomes in adulthood. Research shows that consumption of alcohol, marijuana or both, during adolescence is associated with lower rates of high school graduation, higher unemployment rates and poorer mental health outcomes in adulthood (Brook et al., 2013). Juvenile drug users also have higher rates of delinquent behavior, higher rates of repeat offending and are more likely to become adult offenders when compared to youth who do not use drugs (Belenko and Dembo, 2003; Papp et al., 2016). While concerning, it is important to note that the relationship between substance use and crime is complex. Studies indicating high correlations between substance use disorders (SUDs) and criminal behavior rarely establish a causal relationship.

Nonetheless, rates of substance abuse and mental health disorders are disproportionately high among justice-involved youth. Estimates of mental health disorders among justice-involved youth consistently exceed those within the general population, and can be as high as 80% (Underwood, 2016). While many detained youth face co-occurring disorders, SUDs remain among the most prevalent forms of mental health burden. According to a meta-analysis conducted by Golzari et al. (2006), 34 percent to 59 percent of detained youth suffer from a SUD, with considerable variation by demographic subgroup. Although the prevalence of SUDs are similar to the rates in detained youth overall, female youth are more likely than males to use illicit drugs beyond marijuana, and may be at greater risk for multiple SUDs (Young and Dembo, 2007; McClelland et al., 2004). While few studies have quantified the difference in rates of SUD by ethnicity, non-Hispanic White and Hispanic juvenile detainees have higher rates of SUDs than African American juvenile detainees (McClelland, 2004; Heaton, 2018). Furthermore, within the general public, rates of SUDs peak in young adults and then decrease steadily. According to the 2010 National Survey of Drug Use and Health, rates of alcohol and illicit drug use disorders were 7 percent for youth age 12 to 17, 20 percent for young adults age 18 to 25 and 7.3 percent for adults age 26 or older (Merikangas and McClair, 2012).

Although rates of substance use among juvenile offenders are high, when youth receive the appropriate level of substance use treatment, substance use and criminal behavior can be effectively reduced. In a meta-analysis of 66 incarceration-based treatment interventions, a 17 percent reduction in recidivism was found for youth who participated in a substance use treatment program (Mitchell 2012). Similarly, in a study on mental health and substance abuse treatment, Cuellar and colleagues found treatment of either condition to be associated with a 13 percent decline in the likelihood of detention (2004).

The current study explores the prevalence of SUDs and access to treatment across demographic groups among youth committed to JR in Washington State. While this study does not examine the impact that treatment has on future criminal involvement, it does contribute to the body of knowledge on the prevalence of SUDs in detained youth, as well as provide information on the challenges and achievements of the current residential SUD treatment process in JR.

History of Substance Use Treatment in Juvenile Rehabilitation

In the following sections, the terms outpatient and inpatient describe varying levels of treatment that occur for youth in residential facilities. Although outpatient treatment typically refers to programs where patients reside outside the program, youth in JR institutions reside in 24-hour secure facilities. Therefore, in this section outpatient and inpatient refer to the American Society of Addiction Medicine (ASAM) level of care. Numeric levels also refer to the ASAM levels of care. For adolescents, outpatient care indicates less than six hours of service per week, intensive outpatient indicates more than six hours per week and intensive inpatient indicates 24-hour care with trained counselors (Mee-Lee, 2013).

Substance abuse treatment has been a focus of JR in Washington State for nearly 35 years. Since its inception in 1985, in partnership with the Exodus Chemical Dependence Treatment Center, SUD treatment in JR has undergone significant change. The Exodus program was a 16 bed, 12-week, intensive inpatient treatment program at Echo Glen Children's Center. The program ran up to six cohorts per year for a maximum capacity of 96 youth annually. Using the Client Substance Index (CSI), JR assessed all youth upon admission and referred them to the treatment program if substance use treatment was necessary. Youth with an identified SUD would then transfer to Echo Glen to receive treatment. After completing the program, youth returned to their facility of origin to serve the remainder of their sentence.

As juvenile arrests for drug-related offenses increased throughout the 80s and 90s, substance use treatment in JR expanded significantly. From 1985 to 1995, the national rate of juvenile arrests (ages 10-17) per 100,000 persons for drug abuse violations nearly doubled from 330.3 to 642.4 (Hockenberry and Puzzanchera, 2018). By 2000, JR had three intensive inpatient programs, three intensive outpatient programs and a recovery program. Inpatient treatment consisted of Exodus at Echo Glen Children's Center (described above), Cascade Chemical Dependency Treatment Program at Maple Lane, and the Parke Creek group home. The Cascade program offered up to 28 weeks of treatment per individual, with four modes of treatment including, eight weeks of diagnostic and inpatient treatments, up to 12 weeks of long term/relapse prevention and an outreach education program designed for youth unable to participate in the above programs due to behavioral management issues. Cascade focused on maximum security male offenders age 16 to 21, and operated with a capacity of 64 beds. Parke Creek ran a 30-day program for minimum-security males age 14 to 20, and operated with a capacity of 16 beds.

Intensive outpatient programs consisted of Substance Abuse Growth Education (SAGE) at Green Hill, Substance Abuse Focused Education (SAFE) at Mission Creek Youth Camp and the Bridge Treatment Program (BRIDGE) at Naselle Youth Camp. SAGE was a six-week program designed for males age 14 to 21, and operated with a capacity of 16 beds. SAFE was an eight-week program designed for medium security males age 14 to 19 who were participating in vocational training programs. Mission Creek operated with a capacity of 60 youth. BRIDGE operated a 10-week program with two tracks: a day program for residents involved in a fulltime school program, and a night program for youth involved in a fulltime vocational program. BRDIGE focused on medium security males and females age 14 to 19.

In addition to the services above, outpatient treatment was available in the Cascade, SAGE, BRIDGE and SAFE programs. All youth who successfully completed one of the four programs, or other previous treatment, were eligible for outpatient services. For youth involved in the Juvenile Offender Basic Training Camp, Camp Outlook included substance use education as part of the 120-day training program. Canyon View community facility provided recovery services and supplied 16 additional beds for continued care. Youth would transfer to Canyon View after the completion of one of the inpatient or

intensive outpatient programs. Chemical Dependency Coordinators (CDCs) located within each institution and parole region ensured the accurate assessment of youth. They also ensured youth received the appropriate level of care. As part of the Substance Use Oversight Committee, CDCs met quarterly and presented recommendations to the Assistant Secretary until the group ended in the early 2000s.

Following budget cuts in 2009, resources devoted to substance use treatment diminished. With new leadership, the agency moved its focus and resources towards reentry planning and services. CDCs moved into the broader field of behavioral health and began taking on additional responsibilities related to mental health. Due to significant decreases in the number of annual residential commitments from 1995 to 2015, facilities across JR closed. Mission Creek and Camp Outlook closed in 2002, and Maple Lane Institution closed in 2011. These closures marked the end of the SAFE, Juvenile Offender Basic Training Camp and Cascade programs. In 2016, Parke Creek and Canyon View community facilities became stepdown facilities due to a need for more community beds. At both facilities, treatment services transferred to community providers, and the focus moved to preparing youth for reentry into their communities.

Current SUD Treatment Process

As of 2019, JR operates residential SUD treatment programs within each of the three institutions, although the treatment model and level of care vary. All drug and alcohol programs are state certified by the Department of Health (DOH) to provide treatment (Washington State Directory, 2018). Substance use treatment in JR focuses on providing a continuum of services, including assessment, education, pre-treatment, treatment (inpatient and outpatient) and continued care. Youth enter JR and receive the Global Appraisal of Individual Needs Short Screen (GAIN SS) within one hour of admission. If the GAIN SS indicates a treatment need, a Chemical Dependence Professional (CDP) assesses the youth using the Adolescent Substance Use Assessment (ASUA) prior to enrolling in treatment. If the ASUA further indicates a need for treatment, the goal is to enroll the youth in treatment. In contrast to the process in 1985, youth do not transfer facilities to receive treatment. Youth receive the level of treatment available at the institution they reside in. Additionally, continued care services are provided on an individual basis, as no formal recovery program exists following the conversion of Canyon View to a reentry facility in 2016.

Echo Glen Children's Center continues to provide treatment through the Exodus program. Exodus follows a Dialectical Behavior Therapy for Substance Abusers (DBT-S) model and is certified to provide intensive inpatient, level two intensive outpatient and level one outpatient services. Inpatient services are available in the Kalama living unit and operate with a funded capacity of approximately 32 youth per year (four cohorts, up to eight youth). Outpatient services are available in all living units within Echo Glen and administered on an individual basis. Instead of a cohort enrollment structure, outpatient services at Echo Glen use a rolling approach to enrollment. This means if an opening becomes available in the program, a youth can fill that spot regardless of how far into the program the other members of the group are.

Green Hill School offers substance use treatment through the Green Hill School SMART Drug/Alcohol Unit. Because many of the SUD counselors from Maple Lane moved to Green Hill following its closure in 2011, Green Hill adopted the SMART model used in the OMNI program. The SMART program is certified to provide level two intensive outpatient services and operates with a funded capacity of approximately 32 youth annually. Naselle Youth Camp offers substance use treatment through the TIDES program.

Naselle is certified to provide level one outpatient services and operates with a funded capacity of approximately 27 youth annually. Both the SMART and TIDES programs utilize a Matrix-informed model as the foundation of treatment. The Matrix Model was modified to incorporate Washington Administrative Code (WAC) requirements necessary for program certification, and to expand the focus beyond the use of amphetamines. The Matrix Model provides a framework for engaging stimulant abusers, and includes education on issues critical to addiction and relapse, direction and support from a trained therapist and increases familiarity with self-help programs. Additionally, both Green Hill and Naselle admit youth using a cohort structure, where youth enter the program at the same time and remain with the same youth until completion/expulsion.

In total, JR currently operates with a residential treatment capacity of 91 youth per year across three different treatment models, with additional youth receiving outpatient treatment as needed. This is a conservative estimate and does not include youth receiving treatment at the community facilities, those receiving services on parole or those receiving services through grant-funded programs. While these additional sources of treatment are necessary, treatment within the institutions represents a core component of JR's service continuum and is the first intervention used to improve substance use needs.

Table 1: Treatment Model by Institution

Facility	Treatment Model	Annual Capacity	Treatment Level
Echo Glen Children's Center	Dialectical Behavioral Therapy - Substance Abuse (DBT-S)	32	Intensive Inpatient Intensive Outpatient
Green Hill School	SMART	32	Intensive Outpatient
Naselle Youth Camp	Matrix-informed Model	27	Outpatient

Note: Treatment levels come from the 2018 Behavioral Health Administration Washington State Directory of Certified Mental Health, Substance Use Disorder, and Problem & Pathological Gambling Services. Naselle's Matrix-informed model utilizes the Matrix Model for substance use treatment as the foundation, but includes additional components to meet WAC requirements for substance use treatment programs. Green Hill's SMART program was developed internally by counselors deeply familiar with the substance use treatment process.

Methods

Identifying Substance Use Needs

In order to identify the number of JR youth with a SUD treatment need, we examined the GAIN SS and the ASUA. The GAIN SS is a 15-question screen developed by Chestnut Health Systems, and takes approximately 5 minutes to administer (Dennis, Feeney, and Stevens, 2006). The GAIN SS is a short version of the Global Appraisal of Individual Needs (GAIN-I). The purpose of the GAIN SS is to provide a tool that quickly and accurately identifies clients who have one or more behavioral health disorders. JR pays Chestnut for the use of this tool, and trained intake specialists administer the screen on every youth within one hour of admission. The GAIN SS consists of three subscales, the External Disorder Screener, the Internal Disorder Screener, and the Substance Disorder Screener (SDS). Each subscale has a maximum score of five for a total maximum score of 15. This study uses the SDS score only. The ASUA is a longer assessment designed by JR to identify the level of dependence for each substance a youth

uses. The ASUA is a modified version of the Adolescent Chemical Dependence Assessment (ACDA) developed by JR in 2003, and centers around the six dimensions of American Society of Addiction Medicine (ASAM) criteria for SUD treatment. The ASUA takes one to two hours to administer and is only used for youth who score greater than zero on the GAIN SS, although variation exists among facilities. A certified CDP administers the ASUA at each institution.

For the purposes of this project, a GAIN SS score above zero on the SDS indicates substance use need. A GAIN SS score of one or two indicates "a possible diagnosis; the client is likely to benefit from a brief assessment and outpatient intervention" (Dennis, Feeney, and Stevens, 2006). When using the ASUA, any youth receiving a diagnosis other than "no diagnosis" is considered to have a substance use disorder, regardless of the substance used. We used the records in the Client Activity Service Tracker (CAST) in the agency's Automated Client Tracking (ACT) system, to determine access to substance use treatment. We identified youth as having received treatment if they started any inpatient or outpatient treatment while in JR residential supervision, regardless of the outcome of that treatment (completion, drop out, expulsion, etc.). Due to the limited availability of data on the treatment process within the community, this report focuses solely on the treatment process within JR institutions. Treatment received while at a community facility, on parole or through a grant-funded program were not included in this analysis. Additionally, data for treatment provided through grant-funded programs is stored outside of the automated client tracking system.

Study Population

This study aimed to answer two primary research questions:

1. What is the prevalence of SUDs in JR youth?
2. Is access to SUD treatment equal across demographic groups?

This study examined 2,854 youth released between 2014 and 2018 from a secure residential facility in Washington State. There were 44 youth removed from the study population due to not receiving the GAIN SS, incomplete race/ethnicity data or incomplete residential information. The final sample size for this study was 2,810 youth. Demographic, sentencing, assessment and treatment data from JR's ACT system were matched to each youth in the final sample.

Analytic Strategy

As mentioned, the prevalence of SUDs in JR was determined by dividing the total number of youth with a GAIN SDS score above zero by the number of youth released within that year. The percent of youth with a treatment start was determined by dividing the number of youth who had ever started treatment by the number of youth with an identified SUD need in the GAIN SS. Additionally, developing Sankey charts using Tableau version 2019.2 helped to visualize the treatment process.

This study utilized both a chi-squared test and logistic regression model. We used the chi-squared test to determine whether demographic characteristics were similar among youth with and without a substance use need. We used the logistic regression model to quantify the likelihood of treatment based on the severity of SUD need (GAIN SDS score), as well as to determine whether treatment access was equal across demographic subgroups. In the first model, the start of treatment represented the dependent variable (the outcome), and the one to five GAIN SDS score represented the independent variable. This model only included youth with a GAIN SDS score above zero (n=1,899). To test whether treatment access was equal across demographic subgroups, we ran separate univariate models. The independent variables were age at admission, gender and race/ethnicity, with treatment start as the dependent variable. Then each demographic model ran to include SUD need. Finally, we ran a combined

model with treatment start as the dependent variable and GAIN_SUD as the independent controlling for race/ethnicity, gender, age at admission, length of stay greater than 90 days and facility. This model included all youth in the sample (n=2,810). All models used robust standard errors to produce unbiased estimates, and were estimated using STATA, version 15.

Results

Table 2 describes the demographic characteristics of youth released from JR between 2014 and 2018. As shown in the table, 68 percent of all youth released from JR between 2014 and 2018 had an identified substance use treatment need. Female youth had a significantly higher percentage of SUDs (74 percent) than males (67 percent)($p = 0.009$). Significant differences were also found for race/ethnicity ($p=.034$) and age ($p<.001$). Native American (79 percent) and multi-racial youth (71 percent) had the highest proportion of SUDs, while Asian youth had the lowest (63 percent). Regarding age, we found higher proportions of SUDs in youth age 16 and older compared to youth under 16.

Table 2: Demographic Characteristics of 2014 - 2018 JR Releases

	Total Number of Youth	Number of Youth with SUD	Percent with SUD	Significance
All Youth	2810	1899	68%	N/A
Gender				**0.009**
Female	296	220	74%	
Male	2514	1679	67%	
Race/Ethnicity				**0.034**
African American	507	335	66%	
Asian	59	37	63%	
Hispanic	512	355	69%	
Multi-Racial	384	273	71%	
Native American	112	89	79%	
Other Race	51	34	67%	
White	1185	776	65%	
Age at Admission				**0.000**
14 or under	450	234	52%	
15	527	341	65%	
16	699	508	73%	
17	905	648	72%	
18+	237	168	71%	
Facility				**0.000**
Echo Glen	1060	661	62%	
Green Hill	831	596	72%	
Naselle	919	642	70%	
Sentence Type				**0.000**
Regular	2301	1588	69%	
Adult	165	92	56%	
CDDA Revoke	167	148	89%	
SSODA Revoke	122	34	28%	
SDA Revoke	55	37	67%	

Note: Bold values represent significance at the $p < 0.05$ level. Pearson chi-squared test was used to determine significance. Data represents residential releases from JR between 2014 and 2018. Chemical Dependence Disposition Alternative (CDDA) revokes include Chemical Dependence Mental Health Disposition Alternative (CDMHDA) revokes. SUD is determined by a GAIN SS SUD score above zero. Facility represents the facility at which the youth received the GAIN SS.

Figure 1: Prevalence of Substance Use Needs by Year of Release

Releases from 2014-2018

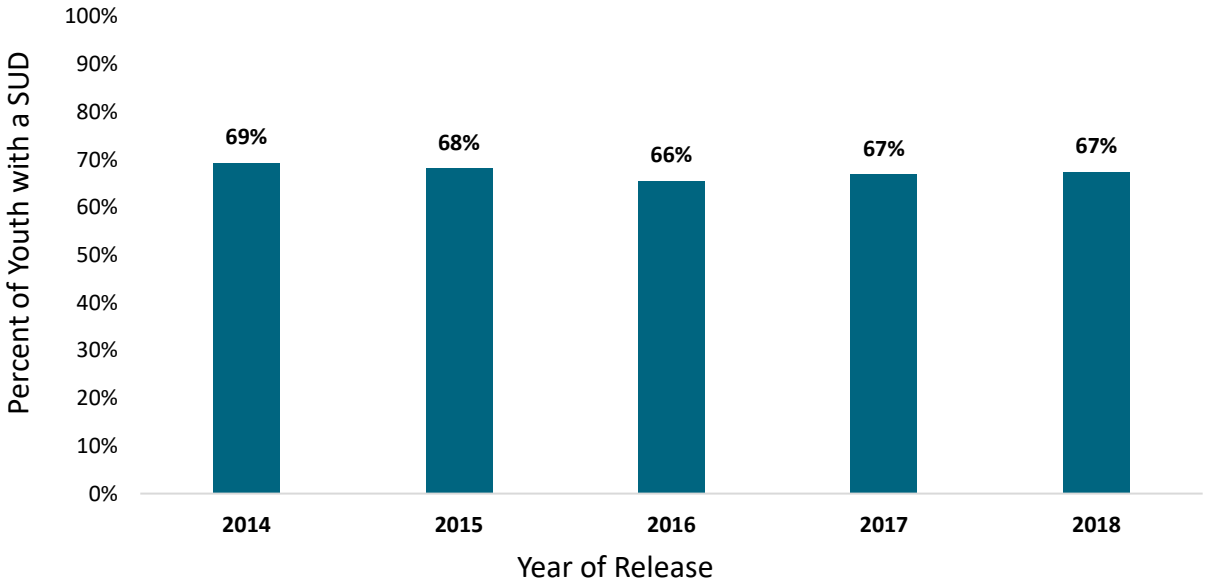


Figure 2: Treatment Access and Completion Among Youth With an Identified SUD

2014-2018 Releases

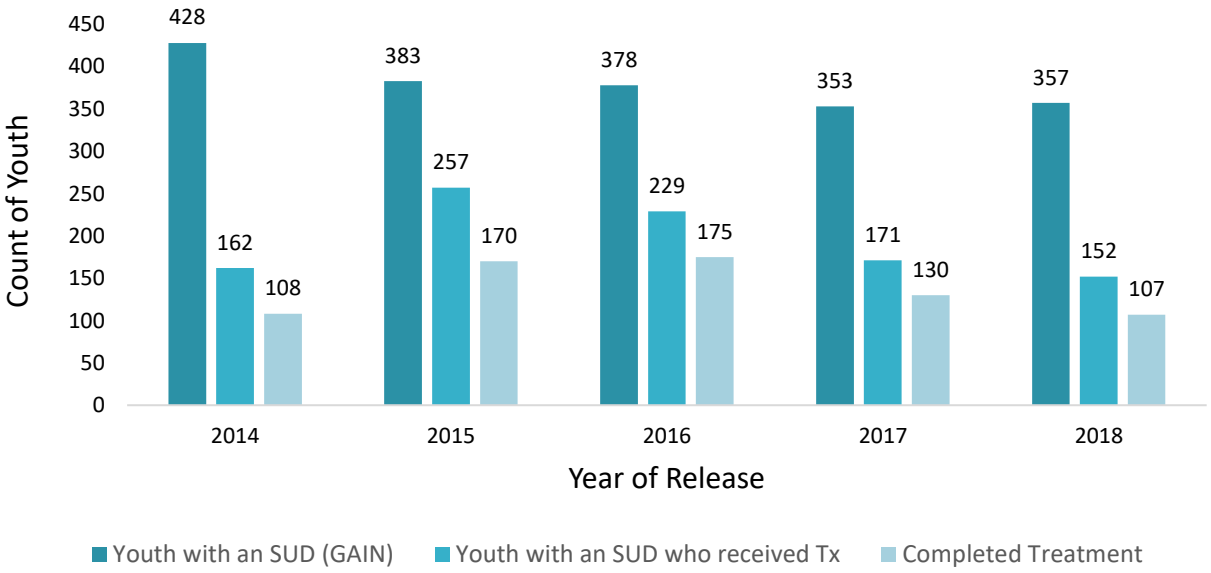


Figure 1 illustrates the percent of youth with identified SUD needs by year. As shown, substance use treatment needs have remained remarkably consistent over the last five years with more than half of the JR population being identified as needing further assessment and likely to benefit from outpatient treatment. From 2014 to 2018, the percent of youth with an identified substance use treatment need has ranged from a high of 69 percent in 2014 to low of 66 percent in 2016. This consistency suggests that substance use needs have been, and will continue to be, a significant need among youth in JR. Figure 2 shows the number of youth who accessed and completed residential treatment prior to release. Most notably, Figure 2 illustrates that substance use treatment needs have consistently exceeded residential treatment capacity. From 2014 to 2018, an average of 185 youth with identified substance use treatment needs did not receive residential treatment each year. Although concerning, Figure 2 also indicates that completion rates for youth who start treatment has increased slightly since 2014. For youth who started treatment, 70 percent completed treatment in 2018 compared to 67 percent in 2014. Across all years, an average 71 percent of youth who started treatment also completed treatment. These results indicate that although youth who start treatment are likely to complete it, too few youth receive the opportunity to start residential treatment. Residential treatment allows JR to confirm youth are receiving treatment early in their obligation and should be a priority for youth with a SUD treatment need. Best practices suggest, "Intervention must take place early when it has the best chance of reversing or ameliorating problem behaviors" (Terry et al., 2000, p. 64).

Figure 3: Percent of Youth Who Received Treatment by Level of Need (GAIN SDS Score)
2014-2018 Releases

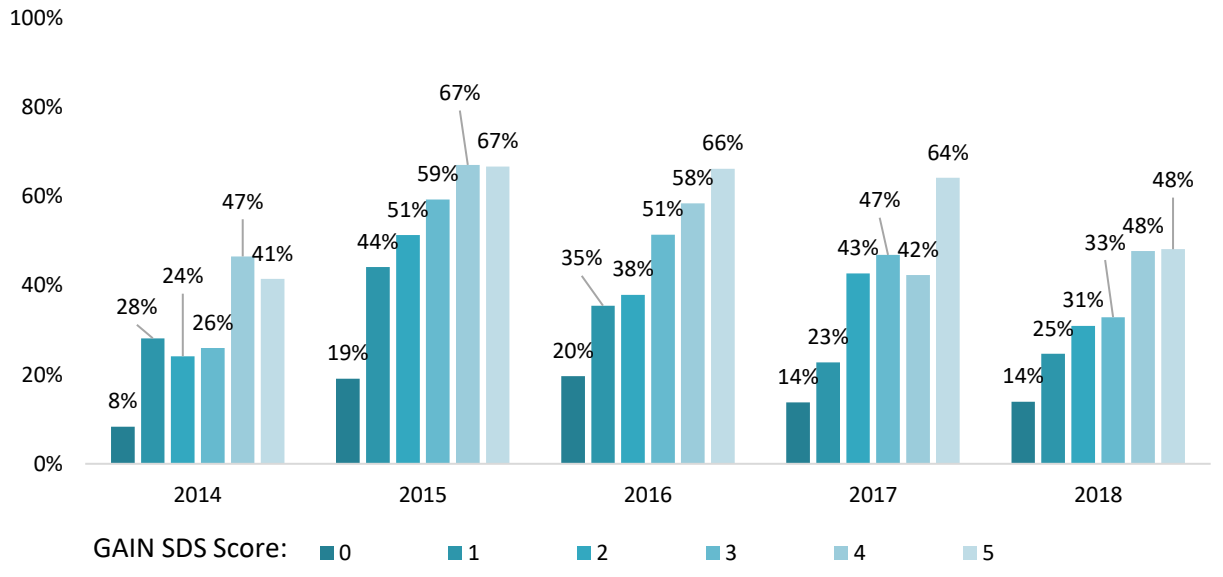


Figure 3 illustrates the percent of youth who received treatment by GAIN SDS score per year. As shown, as youth substance use treatment needs increase, the likelihood of treatment also increases. Table A2 (appendix) quantifies this relationship and estimates the odds of starting treatment based on treatment need using a univariate logistic regression model. As shown in the table, when compared to youth with a GAIN SDS score of one, youth with a GAIN SDS score of five are three times as likely to have ever started treatment. These results are promising for two primary reasons. First, this indicates that JR has incorporated the use of valid assessment tools in its treatment process. The GAIN SS has shown to be

both a reliable and valid instrument among adolescents and appears to be identifying youth with substance use needs appropriately (McDonell et al., 2009; Dennis, Chan, and Funk, 2006). Second, these results indicate that treatment need is a primary factor in determining treatment access. While other factors are certainly involved, in both the univariate and multivariate models treatment need is a strong predictor of treatment access.

Figure 4: Substance Use Needs and Treatment Access by Gender
2014-2018 Releases

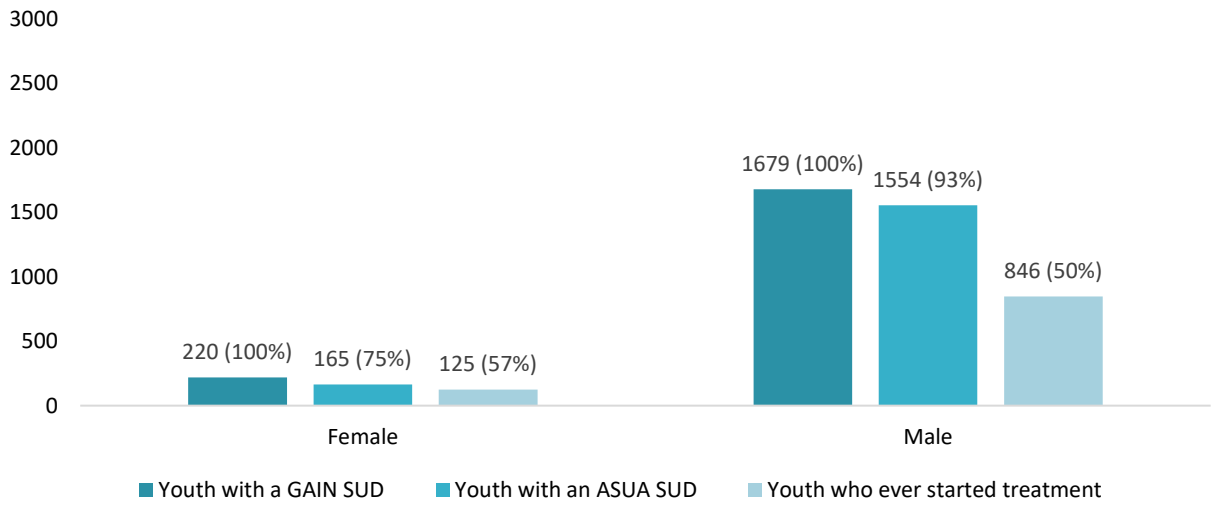


Figure 4 (above), and Tables A2 and A3 (appendix) illustrate the associations between demographic variables and treatment access. Figure 4 shows the distribution of SUDs and treatment access by gender. Although male youth make up the vast majority of JR youth, females appear to access treatment (5 percent) at a higher rate than males (50 percent). Logistic regression further supported these results. In univariate logistic regression models, younger age at admission and female gender were associated with increased odds of treatment access, although age at admission was not significant in the multivariate model. Table 3 describes the results of the multivariate logistic model. As seen in Table 3, when adjusted for treatment need, facility and remaining sentence length, only gender remained significantly associated with treatment access. Compared to males, females were approximately 1.9 times more likely to start treatment in the adjusted model. We found no significant differences in treatment access for race/ethnicity.

Table 3: Logistic Regression Predicting the Odds of Starting SUD Treatment

Treatment Ever Started	Odds Ratio	Robust SE	Z score	P-Value	95% CI lower bound	95% CI upper bound
GAIN SUD	4.65	0.499	14.33	0.000	3.77	5.74
Race (ref = white)						
African American	0.874	0.106	-1.11	0.267	0.688	1.11
Asian	0.890	0.268	-0.39	0.699	0.493	1.61
Hispanic	0.862	0.105	-1.22	0.221	0.680	1.09
Multi-racial	0.827	0.112	-1.39	0.164	0.633	1.08
Native American	0.960	0.214	-0.18	0.855	0.620	1.49
Other race	0.835	0.290	-0.52	0.603	0.423	1.65
Gender (ref = male)						
Female	1.92	0.332	3.77	0.000	1.37	2.69
Facility (ref = Naselle)						
Echo Glen	1.05	0.168	0.34	0.737	0.772	1.44
Green Hill	2.23	0.242	7.39	0.000	1.80	2.76
Age at Admission (con.)	0.953	0.044	-1.03	0.303	0.870	1.04
Length of Stay More Than 90 Days	4.77	0.815	9.13	0.000	3.41	6.66
Model Statistics						
N	2,810					
Log pseudo-likelihood	-1592.01					
Wald chi-square	363.68					
Pseudo R-square	0.1211					

In order to better visualize the treatment process, a Sankey Diagram (Figure 5) was developed to illustrate the various pathways a youth can receive, or not receive, treatment. A Sankey diagram is a directional flow chart in which the arrows have a width equal to the proportion within the population. Thicker lines represent larger proportions of youth. In the diagram below, each line represents a different combination of diagnoses from the GAIN SS and ASUA assessments, and their eventual treatment status. Starting from the left, youth are categorized as having had a GAIN SS diagnosis (blue) or not (red). From there, each line represents a different combination of ASUA diagnosis and treatment access outcomes. As each variable is dichotomous, there are eight total possibilities. For example, the thick blue line at the bottom represents youth that had a GAIN SS diagnosis, a matching ASUA diagnosis (at least one substance dependence), and received substance use treatment (n=816). Conversely, the thick red line at the top are youth that did not receive a diagnosis from the GAIN or the ASUA, and therefore never received treatment (n=641). Less intuitively, the thin red line (second from the top)

indicates youth with no diagnosed need who received treatment (n=7). As this chart only describes the initial GAIN SS and ASUA assessments, this is likely due to reassessment later in the youth's residential stay.

Figure 5: Substance Use Assessment Process and Treatment Access in JR

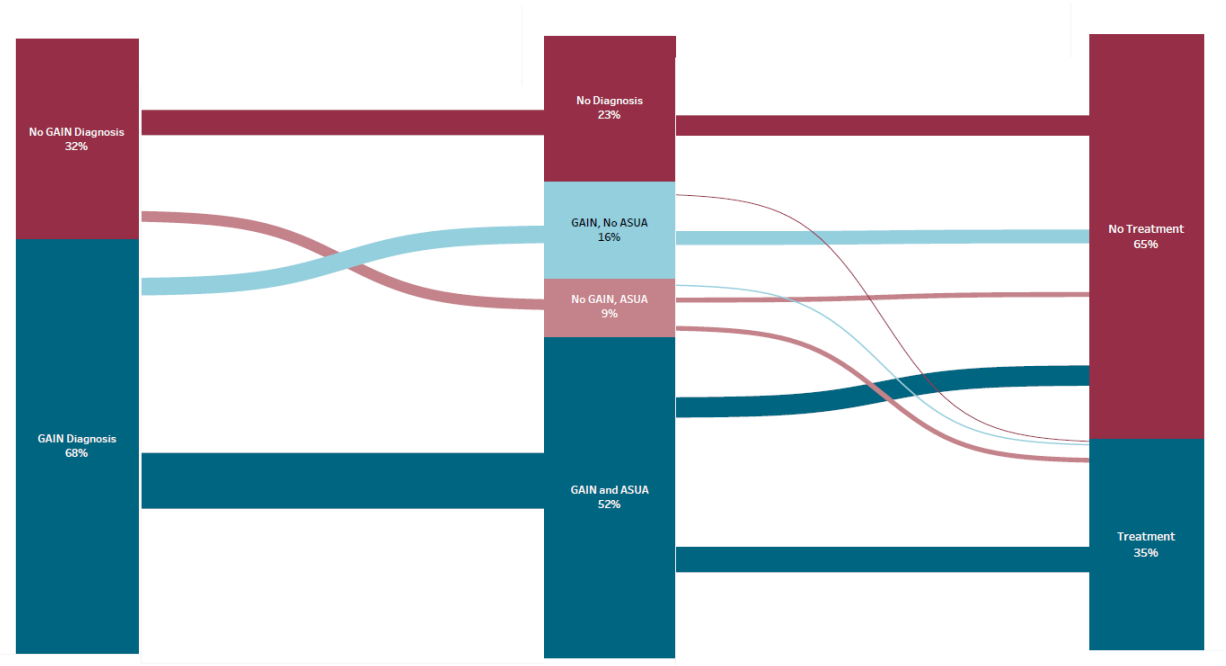
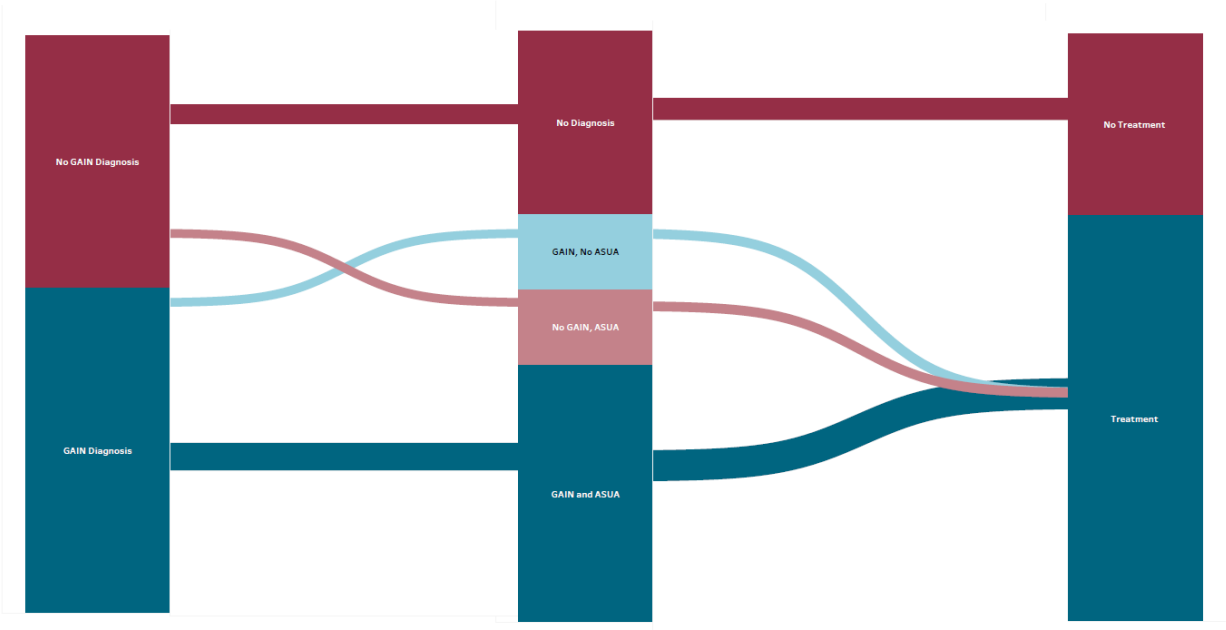


Figure 6: Potential Substance Use Assessment Process and Treatment Access in JR



Discussion

This study provides an overview of JR's substance use treatment process in Washington State as well as descriptive information on the SUD needs and treatment access for youth being served in JR. Results from this study indicate a few important findings.

- Significant variation exists among treatment programs across institutions. Each institution follows a unique treatment model, has varying levels of staff and resources and administers varying levels of treatment services. This variation not only makes it difficult to compare and monitor programs, but also indicates the potential for treatment content and quality to vary by institution. Efforts to standardize the treatment process and ensure youth are receiving the same quality of treatment across institutions could facilitate program evaluation, support continuity of services for youth transitioning between facilities and ultimately assist in improving outcomes for youth.
- There is substantial need for effective substance use treatment in JR. As measured by the GAIN SS, 68 percent of youth released between 2014 and 2018 had a substance use need. Although the use of a GAIN SS score above zero may overestimate the need within this population, these results are similar to those found in other studies among justice-involved youth (Heaton, 2018; Teplin et al., 2002).
- Treatment need appears to be the driving factor for treatment access. When compared to youth with a GAIN SDS score of one, youth with a GAIN SDS score of five are three times as likely to have accessed treatment. Additionally, substance use need, as indicated by the GAIN SS, was one of four significant predictors of treatment access, along with length of stay greater than 90 days, the youth's admission facility and gender. Race and age were not significantly associated with treatment access in the multivariate analysis. Females were significantly more likely than males to access residential treatment.
- Treatment need has consistently exceeded residential treatment capacity in JR. From 2014 to 2018, only 56 percent of youth with identified substance use needs (GAIN plus ASUA diagnosis) started residential treatment. While substance use needs have remained remarkably consistent, residential treatment capacity has decreased since JR repurposed the Parke Creek and Canyon View facilities in 2016. Given that substance use need is the primary driver of treatment access, and the majority of youth who start treatment complete it, JR should look to expand treatment to a larger share of the population by increasing residential treatment capacity.

Given these results, it is important to note the limitations of this study. First, the consistency and availability of data collected through institutional treatment programs limited analyses. Although the assessment process generally moves from GAIN SS diagnosis to ASUA diagnosis to treatment, without a clear formal policy describing the treatment process, disparities in assessment practices and data reporting emerged across institutions. Furthermore, data on the level of service a youth receives is not consistently collected. When staff are asked what the recommended level of service is in the ASUA, staff in some institutions indicate the youth's true level of need while others indicate the level of service available within that institution, regardless of the youth's assessed need. This variation limited the comparability of data across institutions and made it difficult to draw conclusions across the continuum about JR's ability to match treatment to need. Second, this study only analyzed the SUD treatment process within institutions and did not include treatment services available through community providers at community facilities or parole. Therefore, results are not reflective of the complete continuum of services available to youth in JR and are not generalizable to all treatment opportunities. As all youth enter JR through an institution, they all spend a portion of time in a location where

treatment services are available to youth with an identified need, but results may not reflect the entirety of services a youth received.

Recommendations

For more than 30 years, JR has administered substance treatment as part of the rehabilitative process for juveniles in Washington State. While the efforts of past and present JR staff is valuable, two primary areas for improvement remain – documenting and implementing a standardized JR treatment process, and increasing access to treatment services.

1. **Establish a SUD Oversight Committee that meets regularly to ensure treatment is adequate, effective and available to youth.**

This recommendation comes from JR Administrative Policy, bulletin 12, July 1, 2000. While the Behavioral Health Quality Assurance team meets regularly and includes members of the substance use team, dedicating a separate meeting with the CDCs of each institution to specifically discuss the SUD treatment process would be of value. Additionally, this implies that all institutions appoint a CDC. From bulletin 12, "The Substance [Use Disorder] Oversight Committee must design and coordinate a continuum of culturally relevant substance abuse services. The JR Assistant Secretary must appoint the Chair of the Substance [Use Disorder] Oversight Committee. Members of the committee must be providers of JR substance abuse treatment services in their organizational unit or program, or be knowledgeable in the field of substance abuse and treatment. The Substance [Use Disorder] Oversight Committee may invite/involve other state agencies and community representatives. It must communicate with the Department of Health to ensure quality treatment is provided to JR youth. The Substance [Use Disorder] Oversight Committee will ensure treatment is adequate, effective and available to youth, and develop and recommend [evidence based] policy proposals to Regional Administrators, Superintendents, Directors and the Assistant Secretary." Efforts to reinstate this committee will help develop consistent standards as well as increase collaboration between facilities.

2. **Identify, formally document and adhere to the substance use treatment care model in JR.**

JR currently operates three different treatment programs at its three institutions. Although there are valid reasons for this (available level of care, security level of youth, staff availability, etc.), this variation makes it difficult to compare and evaluate programs, as well as draw conclusions about JR SUD treatment as a whole. Furthermore, youth often move between institutions and may receive a mix of treatment models throughout their stay. As substance use need is not a determinant of placement, efforts should be made to ensure youth have access to similar treatment regardless of residential placement. SUD treatment throughout the continuum should adhere to a set of standards on treatment eligibility, capacity, and continued care beyond what is required for program certification by the Department of Health. Additionally, when a youth transfers facilities, JR should outline a transition plan and notify necessary staff to maintain the services a youth was receiving. Standards should emphasize evidence-based practices, identify consistent eligibility and exclusion criteria, include standards for data collection and reporting, contain a quality assurance process, and receive approval by the Substance Use Disorder Oversight Committee mentioned above (1). Multisystemic Therapy (MST) and Therapeutic Communities for juveniles with SUDs represent two programs listed in WSIPP's Inventory of Evidence Based programs, rated as evidence-based and research-based, respectively (Wanner, 2018).

3. **Review assessment practices: Identify areas for improvement and consistency.**

The ASUA needs to be empirically validated. As the needs of youth and requirements for program certification have changed over time, JR has used a number of assessments to identify treatment needs.

Starting in 1985, JR assessed youth with the Client Substance Index (CSI). In 2003, the agency revised its assessment tool and created the Adolescent Chemical Dependence Assessment (ACDA). Around 2010, the agency revised its assessment tool again and created the Adolescent Substance Use Assessment (ASUA), which closely resembled the ACDA. While these assessments appear to have consistently predicted treatment need, the ASUA has not been empirically validated within this population. As assessment is a foundational component of an effective treatment process, efforts to ensure that the ASUA is valid and reliable will help facilitate effective treatment. JR should regularly validate their assessments every five years, or after significant changes have occurred (i.e. new assessment tool).

We need to accurately document the recommended level of care on the ASUA. At the end of the ASUA there is a question that asks, "Level of Care Indicated (highest level indicated per ASAM dimensions)." Without clear guidance, staff have answered this question in two different ways. The first is to document the youth's true level of need (i.e. inpatient, outpatient), regardless of the level of treatment available at their facility. The second is to respond with the level of treatment available at the facility, regardless of the youth's identified level of need. While this data could be extremely useful in evaluating the treatment process, the current variation creates unusable data. Ultimately, JR should be able to answer the questions, "Are youth receiving the recommended level of substance use treatment," and, "What is the impact of substance use treatment on an outcome (i.e. recidivism, employment, education) when youth with identified needs receive the recommended level of treatment?" This requires that JR indicate the youth's level of need, regardless of service availability. The Behavioral Health Administrator should provide clear guidance to staff related to this question and ensure the data collected is accurate and reliable.

4. Quality Assurance and Continuous Quality Improvement

While DOH criteria for substance use treatment program certification provide a standard for the number of sessions and timing of treatment, few get to the level of assessing whether evidence-based care is being delivered. JR should expand upon these requirements and implement quality assurance (QA) metrics that focus on the quality and amount of service (dosage) being delivered. Evaluation will assist in determining whether we are utilizing best practices, and allow us to identify the overall impact of treatment on the youth we serve. Additionally, as last reported in the Rehabilitation Administration 2015- 2017 Strategic Plan, JR set a treatment completion target of 6 percent for youth diagnosed with a substance use need. JR should reinstate a completion target and make a concerted effort to improve treatment completion rates as part of the QA process.

Conclusion

While this study provides a foundation, further work is needed to assess the impact substance use treatment has on youth in JR. Building upon the wealth of experience that comes with administering treatment for more than three decades, JR should look for innovative, evidence-based approaches to increasing residential treatment capacity. Substance use can influence a youth's ability to pursue higher education, obtain employment, build positive relationships and avoid further criminal involvement. The ability to address substance abuse will likely be an important determinant of successful reentry to their community. Recognizing this potential will allow JR to appropriately prioritize substance use treatment among its continuum of services.

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Appendix

Table A1: Odds of Starting Treatment by GAIN SS SDS Score

GAIN SDS Score (ref = 1)	Odds Ratio	P-value	Lower 95% CI	Upper 95% CI
2	1.36	0.042	1.01	1.84
3	1.75	0.000	1.29	2.37
4	2.58	0.000	1.92	3.48
5	3.00	0.000	2.20	4.09

Note: Sample includes youth with an identified SUD need as determined by a GAIN SDS score above zero (n=1,899). Reference group is youth with a GAIN SDS score of one.

Table A2: Substance Use Needs by Age at Admission

2014-2018 Releases

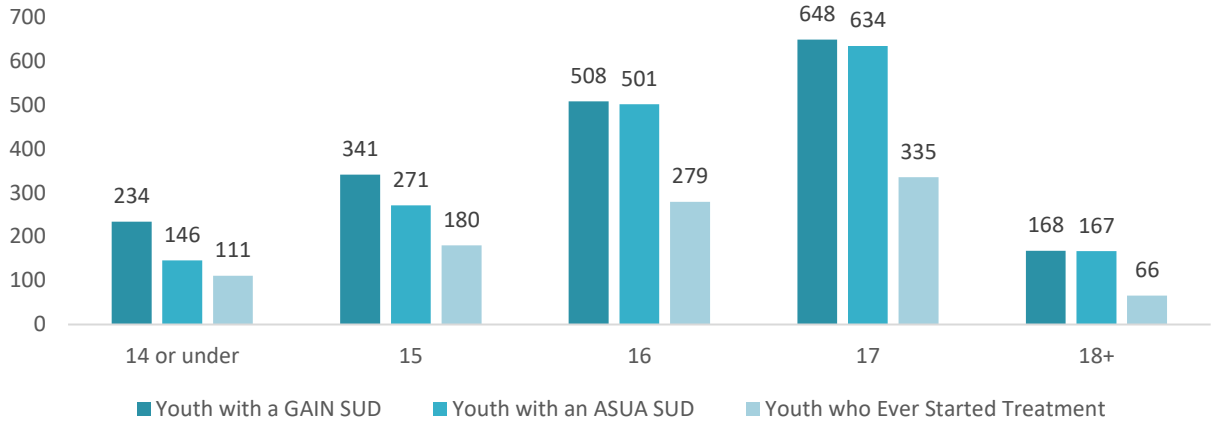

Table A3: Substance Use Needs by Race

2014-2018 Releases