

# **Evaluation of Utah Juvenile Drug Courts**

## **Final Report**

**January 2010**



THE UNIVERSITY OF UTAH

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*Utah Criminal Justice Center*

COLLEGE OF SOCIAL WORK  
COLLEGE OF SOCIAL & BEHAVIORAL SCIENCES  
UTAH COMMISSION ON CRIMINAL AND JUVENILE JUSTICE  
S.J. QUINNEY COLLEGE OF LAW



# **Evaluation of Utah Juvenile Drug Courts**

## **Final Report**

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**January 2010**

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**Juvenile Drug Court Evaluation  
Executive Summary  
January 2010  
Utah Criminal Justice Center**

There were six (6) juvenile drug courts (JDCs) from four (4) juvenile court districts operating in the state of Utah during the evaluation period (2007-2009). These JDCs were located in Weber, Salt Lake, Tooele, Utah, Emery, and Grand County. Utah juvenile drug courts varied widely in target population, structure, and services; however, they all ascribed to many of the foundations of drug courts, including, screening and assessments, individualized treatment, judicial review, and the use of sanctions and incentives.

**Population Served.** This study examined just over 1,500 youth who participated in the six JDCs from inception to the beginning of the evaluation period in 2007 (see Table below). Weber served the highest proportion of high risk youth (based on Pre-Screen Risk Assessment (PSRA) risk level at intake), while Emery and Tooele served the most low risk youth. Marijuana was the most common drug of choice across most JDCs, followed by alcohol. Weber and Emery had the highest mean number of prior incidents among their participants (9.4 and 7.8, respectively), while Weber and Utah Counties had the most severe priors (Class A misdemeanor). Additionally, Weber had the highest percent of participants with person (42%) and weapon (10%) offenses in their pre-JDC history.

	JDC Report Sample						
	Weber	Salt Lake	Tooele	Utah	Emery	Grand	Total
Year Began	2003	1995	1999	1998	2000	2003	
Total Youth Served <sup>1</sup>	133	649	192	489	11	50	1524

<sup>1</sup>Inception through 5/18/07

**JDC Characteristics.** The average length of JDC participation statewide was just over seven months (Mn = 231 days, SD = 104), but varied from 174 days in Tooele to 489 days in Emery. Weber JDC participants are, on average, in treatment for their entire length of participation (and in some cases, beyond). However, while active in treatment, Salt Lake, Utah, and Emery County JDCs had the most frequent treatment attendance, on average receiving treatment services every three to four days. The majority (70.4%) of JDC participants graduated from the programs (positive exit status). Salt Lake had the highest graduation rate near 80%, while Weber had the lowest at just under half. The remainder of JDCs had a graduation rate of around two-thirds.

**Juvenile Recidivism.** While active in the JDCs, about one-third (35%; n = 531) of the participants had a new incident recorded in CARE. During program recidivism rates ranged from 47% in Utah County to 25% in Salt Lake. For youth who had a new during JDC incident, the most frequently committed were status (39%), alcohol (37%), or property offenses (35%). Of all the participants who have exited JDC (N = 1516), just over one-third (38%) had a new juvenile incident following program exit, but this is limited by follow-up times and the opportunity for a reoffense to be captured within the juvenile justice system. The number of participants who had follow-up periods diminished as the length of the periods increased. Statewide, the juvenile post-

JDC recidivism rate went from 18% at 3 months following program exit, to 32% at 6 months, 40% at 9 months, and 48% at one year.

***Combined Juvenile and Adult Recidivism.*** Combined juvenile and adult recidivism were tracked for the four largest JDCs: Weber, Salt Lake, Tooele, and Utah JDCs. By including adult recidivism records, the percent of youth who recidivated was lower than the statistics with juvenile records only. For example, 30% of Weber participants who had 3 months follow-up post-exit in the juvenile court record had a new incident; however, only 19% of all Weber participants had a new incident or arrest in the 3 months following exit when all youth were included and followed into the adult system. This supports the hypothesis that youth who are younger when they enter the JDC are more likely to recidivate and, therefore, including only juvenile records in the follow-up periods inflates the rate of recidivism.

Utah (63% recidivated at 30 months post-exit) and Weber (55%) JDCs had the highest recidivism rates, while Tooele (44%) had the lowest (Salt Lake = 47%). These differences are not surprising, as Utah and Weber participants begin as more delinquent and continue on that path after exiting the program.

Participants in all four JDCs showed significant reductions in average (Mn) AOD (alcohol and drug, including DUI) offending rates from 18 months prior to JDC to 18 months post-exit. The four JDCs did not vary significantly from each other in the rate of reduction in AOD offending from pre- to post-JDC. The rate of reduction in delinquency/criminal (e.g., property, person, public order, *not* traffic, status, or AOD) offending from pre- to post-JDC varied statistically significantly by JDC. The rate of decline was significantly faster for Utah and Weber JDCs than for Salt Lake and Tooele. As Utah and Weber JDCs served participants that had higher rates of delinquency offending prior to JDC intake, participants of those courts had the opportunity for a greater decline in delinquency/criminal offending post-exit.

Since too few JDC participants had PSRA scores to examine recidivism by PSRA risk level, three risk level groups were created based on the number of delinquency incidents they had prior to JDC start (Low = 0 priors, Medium = 1-3, High = 4+). All three groups improved significantly on their rate of AOD offending from pre-JDC to post-JDC. The rate of decline in AOD offending did not vary significantly by risk group. The rate of change in delinquency/criminal offending from pre- to post-JDC varied statistically significantly by risk group. The group with the most delinquency offenses prior to JDC had the greatest decline in delinquency/criminal offending following JDC exit, while those with one to three delinquency priors showed a slight decline post-exit, and those with no delinquency priors had a slight incline in delinquency/criminal offending after exiting JDC.

***JDC vs. AOD Probationer Comparison Group.*** A comparison group was identified from a group of youth who had AOD offenses from 2003 to 2007 that resulted in probation dispositions. Although not ideal, this was the most appropriate comparison group that could be identified in juvenile court data. AOD probationers were significantly more likely to be minority, be younger at the age of their first incident, and have more prior juvenile incidents than the JDC participants from the four largest JDCs. In combined juvenile and adult recidivism records, the majority of the sample had the full follow-up period (93.4% of participants from the four largest JDCs had



30 months post-exit follow-up; 86.7% of AOD probationers had 30 months follow-up). AOD recidivism survival analysis showed no significant difference in estimated time to AOD recidivism for JDC versus AOD probationer youth. At 30 months post-exit, 39% of AOD probationers compared to 42% of JDC participants had a new AOD offense. Survival analysis for delinquency/criminal recidivism showed estimated days to delinquency/criminal recidivism for AOD probationers being over a year sooner than JDC participants. At 30 months post-exit, 48% of AOD probationers had a new delinquency/criminal offense compared to 34% of JDC participants.

AOD offending rates decreased significantly for AOD probationers and JDC participants (both graduated and terminated clients) from prior to intervention to post-exit. The rate of decline in AOD offending pre- to post-intervention was significantly greater for AOD probationers than for JDC graduates or terminated clients (which did not differ significantly from each other). Delinquency/criminal offending rates also decreased significantly from pre- to post-intervention for all three groups, with AOD probationers again showing the largest decline in offending rates from pre- to post-intervention. This is not surprising, as AOD probationers had higher rates of delinquency offending prior to intake, and, therefore, more opportunity for decline in delinquency/criminal offending post-exit.

***Factors Associated with Combined Recidivism.*** Male JDC and probation participants, as well as those with more severe AOD offense histories prior to participation, and those with more violations during participation, were more likely to have a new AOD offense after exiting JDC or probation. There were no significant differences between JDC and probation participants after controlling for these factors. Males, younger age at first incident, and more violations during JDC or probation increased the likelihood of post-exit delinquency/criminal recidivism. After controlling for all of these significant factors, JDC participants are significantly less likely than AOD probationers to have delinquency and criminal recidivism. This is an important finding, as other analyses suggested that lower rates of delinquency/criminal recidivism for JDC participants was primarily related to their status as less involved with delinquency prior to JDC start. This finding suggests that even when JDC participants are similar to AOD probationers in gender, age at first incident, and violations during participation, JDC involvement still offers some protection against future delinquency/criminal offending.

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## **Background**

There were six (6) juvenile drug courts (JDCs) from four (4) juvenile court districts operating in the state of Utah during the evaluation period (2007-2009). These JDCs were located in Weber, Salt Lake, Tooele, Utah, Emery, and Grand County. The first Utah JDC was created in Salt Lake County in 1995 and the most recently established started in Grand County in 2003. The size of population served varied significantly, with the Salt Lake and Weber County JDCs serving the largest and Emery County JDC serving the smallest number of youth. Similar to the research literature on JDCs, Utah juvenile drug courts varied widely in target population, structure, and services; however, they all ascribed to many of the foundations of drug courts, including, screening and assessments, individualized treatment, judicial review, and the use of sanctions and incentives.

Participation tracks (probation or plea in abeyance) varied among the JDCs during the study period, with Salt Lake, Tooele, and Grand County reporting the use of both tracks, and Utah and Emery JDCs exclusively using plea in abeyances. The Weber County JDC was the only program where a majority of participants were in the JDC as a condition of probation.<sup>1</sup> All JDCs, except Tooele and Grand County, utilized phases in their program. Weber, Utah, and Emery JDCs had four (4) phases, while Salt Lake JDC had three (3). Proposed program length varied by JDC, ranging from three (Grand) to 15 months (Utah). However, program data suggests that most programs were between six (6) and twelve (12) months long. All JDCs reported using a combination of the following assessment tools: Pre-Screen Risk Assessment (PSRA), Substance Abuse Subtle Screening Inventory (SASSI), and the Teen Addiction Severity Index (T-ASI); however, only Salt Lake, Tooele, and Grand JDCs use all three types.

All programs required participants to submit to random drug testing; however, the frequency of these tests varied depending on individual need and/or program phase. All programs required participants to appear before the JDC judge; however, the frequency of these court appearances also varied by programs and participation track (probation versus plea in abeyance). Although requirements differ, most JDCs required participants to appear before the judge once or twice per month. All six (6) JDCs reported using sanctions to address negative behavior and incentives to reward positive behavior. Additionally, all of the JDCs claimed to require parental involvement; however, information on parental participation was not recorded by any of the programs and therefore could not be examined in this report. See Appendix A for table summarizing program characteristics of the six (6) Utah JDCs.

## **Brief Literature Review**

As of December 2007, there were 455 juvenile drug courts in operation throughout the country (Huddleston, Marlowe, & Casebolt, 2008). Although the specific treatment and content of the programming is different for each of these problem-solving courts, the primary drug court philosophy and components are relatively consistent across each. These include, but are not limited to: screening and assessment, individualized treatment plans, judicial supervision,

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<sup>1</sup> Beginning in July 2008 Salt Lake JDC stopped accepting plea in abeyances

sanctions and incentives, and case dismissal or reduction for successful completers (NADCP, 1997; Office of Justice Programs, 1997).

## **Juvenile Drug Court Evaluations**

In general, JDC evaluations have shown that program graduates tend to do better both during and after program exit than those who are terminated from the program (Applegate & Santana, 2000; Shaw & Robinson, 1998).

In comparison to non-JDC youth, JDC youth usually fare better on measures of during and post-program recidivism. For instance, Summit County Ohio Juvenile Drug Court participants averaged one (1) arrest six months post program compared to 2.3 average arrests for the comparison group (Dickie, 2000). In a study of three Ohio juvenile drug courts (in Belmont, Summit, and Montgomery counties), three-quarters (75%) of the comparison group was re-arrested, compared to 56% of the drug court group during JDC participation (Latessa, Shaffer, & Lowenkamp, 2002). In an evaluation of Maine's Statewide Juvenile Drug Treatment Court, it was found that fewer JDC participants (44%) than a matched probationer comparison (52%) were re-arrested in the year following program exit; furthermore, JDC participation was a significant factor in a logistic regression indicating decreased risk of re-offending (Anspach & Ferguson, 2005).

However, some studies have demonstrated no better, or in some cases worse, outcomes for JDC youth than non-JDC youth, particularly where increased supervision among JDC youth leads to increased detection of substance use and delinquent behaviors. Maricopa County Juvenile Drug Court participants were using marijuana *as much* as probation juveniles and using cocaine 2.7 times *more than* probation participants (as indicated by drug screenings; Rodriguez & Webb, 2004). In an evaluation of the Kalamazoo County Juvenile Drug Treatment Court Program, those who opted-out of the court actually committed fewer crimes than those participating in the JDC (Hartmann & Rhineberger, 2003). Both studies suggested that it may have been the increased supervision of the JDC youth that led to increased detection of problem behaviors.

The most comprehensive JDC studies have demonstrated that JDC graduates usually fare better than both comparison youth and those terminated from JDCs. Studies of the Delaware Juvenile Drug Court Diversion Program, showed that JDC participants recidivated at a rate of 21% compared to a rate of 30% for the comparison group during the four-month treatment period. For 12-months following program completion, graduates recidivated at the lowest rate, while terminated clients had a higher recidivism rate (75%) than the comparison group (51%) (Belenko et al., 1998; Miller, Scocas, & O'Connell, 1998). At 18-months following the end of the treatment period, 67.3% of comparison youth recidivated, compared to 60.5% of unsuccessful participants and 47.7% of successful participants in a study of the Delaware Juvenile Drug Court Diversion Program (O'Connell, Nestlerode, & Miller, 1999).

Results from the previously mentioned studies highlight the stark differences between individual JDCs and provide limited support for their ability to provide lasting effects and decreased recidivism. The literature suggests that compliance plays a crucial role in JDC success and that preliminary observations of success may advance with time.

## **Variables Associated with JDC Completion**

Additional studies have examined what factors, if any, have an influence over program success, both graduation and reductions in recidivism. The effect of demographic variables has been mixed, while some risk factors remain associated with failure, even among JDC participants. Lastly, few JDC program characteristics have been examined in depth for their importance in graduating youth and keeping them away from AOD use and delinquent activity; however, a few preliminary findings are reported below.

**Demographics.** There appears to be no clear relationship between age and graduation, with one study showing a slight advantage for younger participants (Thompson, 2004), one for older (Shaw & Robinson, 1998), and one showing no relationship (Latessa et al., 2002). Similarly, certain minority statuses were associated with negative JDC outcomes in two studies (Rodriguez & Webb, 2004; Thompson, 2004), but had no relationship to graduation in another (Latessa et al., 2002). Gender appears to have a somewhat clearer relationship with JDC outcomes, with four studies indicating somewhat worse during and post-program outcomes (recidivism, termination) for male participants (Gilmore, Rodriguez, & Webb, 2005; Latessa et al., 2002; Rodriguez & Webb, 2004; Thompson, 2004).

**Risk Factors.** Some risk factors seem to be related to decreased likelihood of JDC success; however, the evidence is not conclusive at this point.

More severe delinquency histories are generally associated with worse outcomes, but exceptions exist. One study found that participants who had a lengthier court history, among those with more than two priors, were less likely to graduate from the court successfully (5.9 court referrals vs. 4.7; Thompson, 2004). Participants of the Maricopa County JDC were also found to be at an increased risk of re-offending if they had experienced prior contact with the juvenile justice system (Rodriguez & Webb, 2004). However, another study of Maricopa County JDC found that criminal history did not significantly impact likelihood of program completion (Gilmore et al., 2005).

No studies included in this review examined the relationship between drug abuse severity and JDC outcomes. One study did show that increased use prior to entering the program (as indicated by a higher proportion of positive drug tests) was associated with less likelihood of successfully completing the program (Gilmore et al., 2005). The literature does demonstrate that participants need to establish periods of abstinence during JDCs in order to be successful in the program (Belenko et al., 1998).

Because juveniles are not independent adults and are under the custody of an adult, family issues become even more important for juvenile drug courts than for their adult counterparts. JDC graduates in Kentucky averaged a significantly higher score on the family support of addiction recovery index of the Addiction Severity Index (ASI) than non-graduates of the JDC (Logan, Williams, Leukefeld, & Minton, 2000). However, two separate analysis of the Maricopa County JDC found that changes in guardianship did not impact program completion (Gilmore et al., 2005; Rodriguez & Webb, 2004).

## **JDC Program Characteristics**

Supervision intensity has been minimally assessed for its impact on program completion. A couple of studies report that increased drug screenings and time spent in the program positively impact program completion (Belenko et al., 1998 & Senjo & Leip, 2001). Research suggests that family involvement is necessary in order for the juvenile to succeed in treatment (Belenko & Dembo, 2003; Bureau of Justice Assistance, 2003; Cooper, 2002). However, no outcome studies linking mandatory family participation to JDC success were found. Most juvenile drug courts require regular school attendance and high school graduation or GED completion, for older youth, in order to graduate from the program (Belenko & Logan, 2003). Studies have shown that by increasing school attendance among their participants, juvenile drug courts have been able to drastically reduce truancy (Thomas, 1999), which has been shown to be an indicator of future behavioral and adjustment issues in adulthood (Loeber, 1996). In support of this, JDC participants in Maricopa County who were not attending school had a higher number of delinquent complaints (new charges and arrests) than those attending school (Rodriguez & Webb, 2004). This suggests that school attendance can also help reduce recidivism in the short-term.

## **Evidence-Based Practices for Substance Abusing Youth**

### **Treatment Models**

In a report prepared for the Governor's Conference on Substance Abuse Prevention, Intervention, and Treatment for Youth, researchers compiled a literature review of all available research on treatment for adolescents (Titus & Godley, 1999). Selections from this report are summarized below.

Research on the effectiveness of 12-Step programs is mixed. One study demonstrated that completers of the programs fair better in the areas of abstinence and functionality, while another showed high relapse to substance abuse following program completion. Furthermore, Belenko and Dembo (2003) have argued that 12-Step programs are not developmentally appropriate for adolescents.

The effectiveness of Cognitive-Behavioral Therapy (CBT) programs is mostly supported. CBT programs have demonstrated improvements in abstinence rates (both during and post-treatment), school attendance, parent and adolescent satisfaction, and decreased severity of peer issues, when compared to other treatment models.

Various models of Family Therapy have demonstrated effectiveness over other treatment models (see Appendix B for a full description). For example, family therapy has proven more effective in general than parent-only focused interventions or group therapy on a number of variables including drug use (self report and drug testing), parent-adolescent communication, family behavior, adolescent psychiatric symptoms, acting out behaviors, and school performance.

Multisystemic Therapy (MST) has been proven to be more effective than less intensive “treatment as usual” interventions, such as standard individual counseling (an eclectic blend of psychodynamic, behavioral, etc.), Department of Youth Services interventions (usual treatment for a serious adolescent offenders including probation, court attendance, and other sanctions such as a curfew), and usual Community Services (standard requirements for youth offenders including outpatient substance abuse treatment, 12-Step attendance, and possible inpatient treatment if needed). Additionally, MST has contributed to increased treatment, decreased use of alcohol, marijuana, and other drugs, and reduced arrests (both criminal and substance-related), incarcerations, and out-of-home placements compared to standard interventions for adolescent drug offenders.

### **Treatment Provision**

Few evaluations of JDC’s have focused on examining which treatment elements contribute to success. Despite this, a few commonalities were observed in the literature. Treatment and support services for JDC youth should include (1) comprehensive psychosocial services (Latessa et al., 2002), (2) sufficient resources to allow for immediate referral into treatment (Shaffer & Latessa, 2002), and (3) community-based services (Whitehead & Lab, 1989).

### **Literature Review Conclusion**

The need for JDCs and community-based substance abuse treatment resources for youth has long been recognized. The existing research supports, to a degree, the efficacy of these programs and treatment models. In general, graduates of JDCs fare better than terminated participants and similar non-JDC youth. Therefore, factors that may enhance the likelihood of participants’ successful completion, such as immediate access to the full continuum of treatment and CBT and MST treatment models, should be further explored.

## **Methods**

### **Data Collection**

#### **JDC Program Data**

The evaluation began with the collection of program data from the individual JDCs. A contact individual from each JDC was identified by the Utah Administrative Office of the Courts (AOC). Each court’s contact person was contacted by phone and e-mail and asked to provide as much of the following information (see Table 1) as was available.

<b>Topic</b>	<b>Data Items, Examples</b>
Referred Client List	Name, Casenumber, referral date
Screened and Rejected List	Name, Casenumber, reason rejected, screening date
Eligibility Criteria Results	Date, Type, Item Responses
Client List	Name, Casenumber, Qualifying Incident Numbers, unique program ID

<b>Topic</b>	<b>Data Items, Examples</b>
Intake Assessment Results	Date, Type, Item Responses
JDC Intake Date	Date
Client Track	Ex: plea in abeyance, probation
JDC Phase Change Dates	Dates
Incentives	Date, Type
Sanctions	Date, Type, Precipitating Event
Program Non-Compliance	Date, Type, Ex: skip tx, dirty UA, miss court
Community Service	Hours required, additional hours, dates completed
JDC Hearings	Dates
Contacts with Juvenile Probation Officer	Date, Type, Ex: phone, face-to-face, field, collateral
Other required class/group attendance	Dates, Type, if Parents attended, Ex: Speaker's Bureau
School Attendance/Status	Ex: days missed, achievement
Parent Involvement	Dates, Type, Ex: at court, classes, treatment
JDC Exit Date	Date
JDC Exit Status	Ex: graduated, terminated, dropped out
Exit Questionnaire or Assessment	Date, Type, Item Responses

For the majority of the JDCs, few of the items in Table 1 were available in a standard format. What was available was provided to UCJC in a variety of formats (e.g., Excel lists, Word documents) and UCJC staff visited some of the JDCs to hand search records and pull additional information. Since several of the requested data items were not available, JDCs also provided program materials (e.g., copies of manuals, drug testing policies, agreements) to supplement the data and provide descriptions of their policies and practices. Several follow-up contacts were made with the individual JDCs to ensure that, at a minimum, the following information was available for all participants (past and present) in each JDC: Casenumber, name, intake date, exit date, and exit status (positive, negative, neutral). The results presented in this report are mostly limited to the measures that were available across all six (6) JDCs.

### **CARE Data**

Casenumbers provided by the JDCs were sent to the AOC to query their CARE (Courts and Agencies Records Exchange) database for the juvenile court histories of the JDC participants. Table 2 lists CARE data that was provided for this study. The CARE data provided for JDC youth comprise the bulk of the results of this study. CARE data was cleaned and analyzed to describe JDC youths' characteristics and court histories prior to JDC, new incidents and court actions during JDC, and recidivism and further court involvement post-JDC.

<b>Table</b>	<b>Data Items</b>
Incident Intake	Incident Date, Type, Degree; Intake Date, Decision
Incident Disposition	Disposition Date, Type; Closure Date, Reason
Incident Hearing	Hearing Date by Incident
Case Profile	Demographics, Home County
Probation	Probation Start and End Dates



**Comparison Group Selection.** In addition to the CARE data compiled and analyzed for JDC youth, several attempts were made to find similar youth with AOD offenses to use as a comparison group. In this report AOD offenses are defined as alcohol and other drug (AOD), which includes minor in possession, controlled substance, driving under the influence (DUI), and similar offenses. The various methods undertaken to identify an appropriate comparison group are described in Appendix C. Ultimately a comparison group was identified from a group of youth who had AOD offenses from 2003 to 2007 that resulted in probation dispositions. For those that had more than one AOD offense, one was randomly selected. Youth who had ever participated in a JDC were removed. Final sample size was n = 609. This group was compared with JDC participants from the four largest JDCs (Weber, Salt Lake, Utah, and Tooele) who entered from 2003 to 2007. The use of this AOD probationer comparison group was not ideal, as the AOD probationers typically had more severe juvenile delinquency histories than their JDC counterparts (see Table 3). However, this was the best comparison group that could be identified and was agreed to by AOC representatives. It is also important to remember that AOD probationers may also attend some form of substance abuse treatment, often as a requirement of probation.

	4 Largest JDC's (2003-2007) (N = 631)	AOD Probationers (2003-2007) (N = 609)
<b>Demographics</b>		
Percent Male*	71	82
Percent Minority*	12	36
<b>Juvenile Court History</b>		
Average Age at First Incident*	14.6 (2.0)^	14.2 (1.9)
Average Age at First AOD/DUI Incident*	15.8 (1.2)	15.7 (1.3)
Average Delinquent Incidents prior to/at first AOD/DUI Incident*	1.5 (2.5)	2.7 (3.1)
Average Status Incidents prior to/at first AOD/DUI Incident	0.6 (1.3)	0.7 (1.1)
Average Traffic Incidents prior to/at first AOD/DUI Incident	0.2 (0.7)	0.2 (0.7)
Average Delinquent Incidents prior to/at Cut-Date^^*	2.4 (3.5)	4.5 (4.1)
Average AOD/DUI Incidents prior to/at Cut-Date*	2.2 (1.5)	2.9 (1.7)
Average Age at Cut-Date	16.5 (1.0)	16.5 (1.2)

\*Statistically significant at p < .05. Categorical variables compared using Pearson Chi-Square test. Ratio variables compared using Independent Samples t-tests  
 ^Figures presented in parenthesis are Standard Deviations  
 ^^Cut-Date is JDC Start Date for JDC youth and Probation Sentence Date for AOD Probationers

### **Treatment Data**

Records on substance abuse assessments and treatment participation were requested from the five (5) JDC treatment providers, as the JDC programs maintained few of these records. The following table (Table 4) describes the types of assessment and treatment data that were

requested from each of the treatment providers. Similar to the process with data collection from the JDC contact persons, many of the measures requested from the treatment providers were not readily available. Treatment data reported in this study are mostly limited to measures that were available across multiple JDCs. A combination of data and qualitative information collected from the treatment providers was used to describe the treatment programs of each JDC.

<b>Topic</b>	<b>Data Items, Examples</b>
Intake Assessment Results	Teen Addiction Severity Index (T-ASI), Substance Abuse Subtle Screening Inventory (SASSI)
Drug of Choice	Ex: marijuana, alcohol, methamphetamine
Treatment Dates	Start and End Date, dates of each service
Treatment Intensity	ASAM Level, Ex: outpatient, intensive outpatient, social detox
Treatment Modality	Ex: individual, group
Additional Services	Ex: family therapy, psychoeducational groups, skills building, case management, medication management
Drug Testing	Dates, drugs tested for, results, Ex: positive, negative, tamper, skipped

Treatment data was requested on a convenience sample of recent JDC participants, since individual treatment providers would be responsible for locating and pulling treatment records. For large JDCs (e.g., Salt Lake, Utah) a random sample of participants was then selected from recent intake years to limit the amount of files treatment providers would need to locate. Table 5 shows the samples requested and received from each of the five treatment providers. Four Corners Community Behavioral Health (FCCBH) provided treatment records on all Emery and Grand JDC participants, due to the availability of electronic records and the small sample sizes. Weber Human Services (WHS) provided data on all participants who had entered through November 2006. These data had already been compiled for a past evaluation of the Weber JDC. Salt Lake County Substance Abuse Services (SAS), Utah County SAS, and Valley Mental Health (VMH) Tooele Unit, provided data in a variety of ways, including electronic data queries, manual file reviews by staff, and allowing UCJC researchers access to individual assessment files.

	Weber	Salt Lake	Tooele	Utah	Emery	Grand	Total
Treatment Provider/Data Source	WHS	SLCo SAS	VMH	UTCo SAS	FCCBH	FCCBH	
<b>Treatment Data Requested</b>							
n	75	61	60	114	4	29	343
% of total study sample	56	9	31	23	36	58	23
<b>Treatment Data Received</b>							
n	112	41	44	48	11	50	306
% of total study sample	84	6	23	10	100	100	20
Intake Years Covered	2003-2006	2005-2007	2005-2007	2005-2007	All	All	--

Overall, 306 (20%) JDC youth had treatment provider records included in this study. However, representation was low for Salt Lake (6%), Utah (10%), and Tooele (23%) JDCs. To determine if these samples were representative of the overall participants from each of these JDCs, brief descriptive analyses were conducted. As shown in Table 6, Salt Lake participants with treatment (Tx) data were similar to the overall Salt Lake sample on gender and minority status, but were slightly older, had more priors, and were in the program for slightly longer. Tooele participants with treatment data were similar to the overall Tooele sample on time in program, age, and minority status, although they had slightly more priors and males. Lastly, Utah County participants with treatment data were similar to the overall Utah County JDC on age, gender, and minority status, but had slightly more priors and longer time in the program.

<b>Table 6 Treatment Data Samples Comparability to JDCs</b>			
	Salt Lake	Tooele	Utah
<b>Days in JDC (Mn)</b>			
All Participants	216	174	258
Participants with Tx Data	251	179	282
<b>Age at Start (Mn)</b>			
All Participants	16.0	15.9	16.6
Participants with Tx Data	16.4	16.0	16.6
<b>Male (%)</b>			
All Participants	74	65	77
Participants with Tx Data	81	82	79
<b>Minority (%)</b>			
All Participants	12	14	6
Participants with Tx Data	11	9	9
<b>Total Lifetime Prior Incidents (Mn)</b>			
All Participants	2.8	3.3	6.6
Participants with Tx Data	3.9	4.8	7.7

### **Adult Recidivism Data**

After the AOD probationer comparison group was identified, a combined list of AOD probationers (n = 596) and participants from the four largest JDCs (n = 622) was sent to the Bureau of Criminal Identification (BCI) for a search of adult arrest records.<sup>2</sup> The list sent to BCI included all name (e.g., alias) and date of birth (DOB) combinations known by the Juvenile Court for each youth. BCI records also include multiple name and DOB combinations for offenders found in their system. Cases from the list provided to the BCI that matched exactly on last name, first name, and DOB were found in their records and identified by their unique adult State ID (SID). All arrest records were pulled for those SIDs and provided to the researchers. Table 7 shows the match of AOD probationers and JDC participants that were found in BCI records.

<sup>2</sup> This sample was slightly smaller than the original sample of JDC participants from the four largest JDCs from 2003-2007 (n = 631) and the original group of AOD Probationers from 2003-2007 (n = 609). This discrepancy is due to a few cases being removed that had inconsistencies or problems with their juvenile data.

<b>Table 7 BCI Records Match</b>		
	<b>4 Largest JDC's (2003-2007)</b>	<b>AOD Probationers (2003-2007)</b>
N sent to BCI for match in adult arrest records	622	596
N matched in BCI adult arrest records	318	308
% with BCI adult arrest records	51	52

Those who were not found in BCI records are assumed to not have any adult recidivism in the state of Utah. This is a conservative estimate of adult recidivism. However, due to the use of multiple name and DOB combinations in both the juvenile and adult system, it can be expected that a majority of those with an adult arrest record were found in the BCI database. Furthermore, less restrictive match criteria (e.g., last name, first initial, and date of birth) could have resulted in too many false matches.

### **Data Analyses**

Descriptive analyses (e.g., frequencies, Means (Mn), Medians (Md), and Standard Deviations (SD)) were conducted on the majority of variables to portray the individual JDCs and the overall picture of statewide juvenile drug court youth. Few analyses were conducted to compare the six (6) JDCs on individual measures, as the descriptive statistics and program materials provided by the JDCs indicated that they are unique in the youth they accept and the services they provide. Therefore, the six (6) JDCs are not appropriate comparison groups for one another.

Combined juvenile and adult recidivism analyses were conducted for participants from the four largest JDCs (Weber, Salt Lake, Tooele, Utah) from 2003-2007, as well as a group of AOD probationers from the same time period. First the four largest JDCs were compared against one another on post-JDC recidivism by time period (chi-square), estimated time to recidivism (Kaplan-Meier Survival Analysis), severity (chi-square), and number of new incidents/arrests (ANOVA). For each JDC, changes in pre- to post-JDC offending frequency was examined using Mann-Whitney U tests. Repeated Measures ANOVAs were conducted to determine if the change in offending rate from pre- to post-JDC varied significantly by JDC location. Repeated Measures ANOVAs were also conducted to compare “risk groups” within JDCs on pre- to post-JDC recidivism rates. The same set of analyses was conducted to compare JDC to AOD probationer participants on the same outcomes (e.g., recidivism by time period, estimated time to recidivism, severity, amount, and change from pre- to post-intervention).

Relationships between possible predictor variables and JDC exit status (graduation vs. termination/negative exit status) were examined using the appropriate parametric (e.g., T-tests) and non-parametric (e.g., Mann-Whitney U, Median Tests, chi-square) tests depending upon the nature of the data (e.g., categorical vs. ratio, normal vs. skewed distribution). Tests examining variables related to JDC exit status were conducted for all JDCs combined (statewide results) and for the four largest JDCs (Weber, Salt Lake, Tooele, and Utah) individually when sample sizes on individual measures were sufficient.

Similar analyses were conducted to examine the relationship between predictor variables and post-JDC/probation recidivism. Variables that were significantly related to outcomes in bivariate tests were included in a series of logistic regression analyses predicting post-program recidivism.

Logistic regression analyses were conducted to examine the individual contribution of each factor on recidivism when multiple variables were taken into account. Group membership (JDC or probation) was added as a final variable to determine if JDC or probation youth have better recidivism outcomes after controlling for other significant factors. Separate logistic regressions were conducted to examine factors related to AOD and delinquency/criminal recidivism. Separate logistic regressions were also conducted for JDC participants alone (no probationer comparison group), in order to examine the relationship between JDC-specific variables (e.g., graduation or termination) and recidivism. In the JDC-only logistic regressions, JDC location (e.g., Weber, Salt Lake) was added as a final variable to determine if recidivism rates vary significantly by JDC after controlling for other significant factors (such as youths' delinquency histories).

## Results

### Population Served

From September 29, 1995 to May 18, 2007, the six currently operational drug courts in Utah have served 1,524 youth. As shown in Table 8, below, Salt Lake began the first JDC in Utah in 1995 and has served about 50 youth per year since then.<sup>3</sup> Since beginning in late 1998, Utah County has served approximately 60 youth per year. The remaining JDCs have been in operation for a shorter amount of time and have served fewer youth per year on average. It should be noted that the number of youth who entered in 2007 is only through May 18<sup>th</sup>.

Intake Year	Weber	Salt Lake	Tooele	Utah	Emery	Grand	Total
1995		23					23
1996		101					101
1997		58					58
1998		62		2			64
1999		45	3	80			128
2000		51	37	79	2		169
2001		62	32	59	0		153
2002		73	16	49	1		139
2003	21	78	17	63	2	6	187
2004	37	35	27	43	2	15	159
2005	35	2	19	61	1	9	127
2006	29	46	23	45	2	14	159
2007 <sup>1</sup>	11	13	18	8	1	6	57
Total	133	649	192	489	11	50	1524

<sup>1</sup>2007 admissions only collected through 5/18/07

<sup>3</sup> The low number of youth reported with an intake date in Salt Lake in 2005 is believed to be due to missing data from changed record keeping in that year.

## Demographics

The majority of JDC youth were White and male, although this varied by JDC (see Table 9). Weber served the largest female and minority<sup>4</sup> populations of the four largest JDCs. After Whites, Hispanics (7.2%) and Native American/Hawaiian Natives (1.6%) were the next most common ethnic groups. Average age at intake across all JDCs was 16.3 years old (Standard Deviation (SD) = 1.2). In normally distributed samples 68% of the group will fall within one SD below or above the Mean (Grimm & Yarnold, 1995). This means that most JDC participants were between 15.1 (16.3 – 1.2) and 17.5 (16.3 + 1.2) years old at intake.

	Weber	Salt Lake	Tooele	Utah	Emery	Grand	Total
Age at Start (Mn)	16.7	16.0	15.9	16.6	17.1	16.7	16.3
Male (%)	65	74	65	77	82	78	73
Minority (%)	24	12	14	6	20	25	12

## Risk Level

Pre-Screen Risk Assessment (PSRA) risk level at intake<sup>5</sup> was available for more recent<sup>6</sup> participants. As shown in Table 10, all JDCs served a mix of risk levels; however, Weber served the highest proportion of High risk youth, while Emery and Tooele served the most Low risk youth.

	Weber	Salt Lake	Tooele	Utah	Emery	Grand	Total
n	54	44	79	114	4	25	320
Low	20	46	73	39	75	36	45
Moderate	30	41	20	40	25	44	33
High	50	14	6	22	0	20	21

## Court History

Juvenile court histories were examined and divided into incidents that occurred prior to JDC start date, during JDC, and after JDC exit. Of those incidents that occurred prior to JDC start, the most recent (last) incident date that included an alcohol or drug (AOD) offense (including DUIs) was identified as the “Qualifying Event” (QE) for JDC.<sup>7</sup> Table 11, on the next page, shows that the vast majority of JDC youth had a QE; however, some youth who participated in Weber, Emery, and Grand County JDCs did not have one. A random sample of these cases was checked with the individual JDCs. It was determined that these youth entered the JDCs for other reasons,

<sup>4</sup> Race and ethnicity from CARE was recoded into White vs. Minority for the 88.2% of JDC participants that had data on either Race or Ethnicity (11.8% missing data).

<sup>5</sup> PSRA’s that were within 90 days prior to or 30 days after JDC start date were flagged as “at intake” and considered in this analyses. For the few youth that had more than one meeting this criteria, the highest score was selected

<sup>6</sup> PSRA’s were completed between October 2002 and May 2007

<sup>7</sup> This was first done as a means of matching JDC youth with AOD probationers with similar qualifying events for a comparison group.

including entering after having a positive drug test violation on juvenile probation or having AOD being a contributing factor in a non-AOD offenses, such as habitual truancy. For those that had a QE, slightly more had a drug rather than an alcohol offense (except for Grand JDC, see Table 11), although many youth had more than one type of offense at the QE. Emery JDC had the highest percent of youth with a DUI offense at their QE, although this only represented two individuals. Salt Lake was most likely to have youth who only had AOD offenses at their QE; whereas many Weber and Grand JDC participants had several types of offenses present at their qualifying event (e.g., property, status, public order). The average time from the QE incident date to court intake was one to two weeks for most JDCs, while the time from court intake to JDC start was one-and-a-half to two months for most of the JDCs (except Emery, where only 11 youth have participated).

In addition to the most recent AOD episode flagged as the QE, JDC youth had varied juvenile court histories. Over half of all JDC participants, and nearly all in Weber, Utah, and Grand JDCs, had incidents prior to the QE. However, very few JDC youth were on probation prior to JDC.<sup>8</sup> Most youth were between twelve and sixteen years old at their first incident (Mn = 14.2, SD = 1.9). As shown in Table 11, average age at first incident varied by JDC, with Emery having the youngest on average and Salt Lake having the oldest on average. Weber and Emery had the highest mean number of prior incidents among their participants. Weber and Utah Counties had the most severe priors, with an average of a Class A Misdemeanor versus an average of a Class B Misdemeanor for the other JDCs. Across all JDCs, youth were most likely to have had property and status offenses in their past, in addition to AOD offenses. Weber had the highest percent of participants with person and weapon<sup>9</sup> offenses in their history.

**Table 11 Juvenile Court History**

	Weber	Salt Lake	Tooele	Utah	Emery	Grand	Total
<b>Prior to Qualifying Event (QE)</b>							
Percent on Probation Prior to JDC	6	1	1	0	9	8	2
Total Lifetime Prior Incidents (Mn)	9.4	2.8	3.3	6.6	7.8	5.9	4.8
Percent with priors before QE	96	52	60	87	82	88	70
<b>Of those with Priors before QE:</b>							
Age at First Prior Incident (Mn)	13.5	14.5	13.8	14.3	12.9	13.6	14.2
Total Prior Incidents (Mn)	7.9	2.4	3.0	5.4	7.3	4.6	4.5
Severity of Priors (Mn)	MA	MB	MB	MA	MB	MB	MB
<b>Charge Type (% participants with):</b>							
Alcohol	33	29	32	39	44	52	35
Drug	33	15	13	40	11	14	27
DUI	4	0	0	4	0	9	2
Person	42	8	21	19	22	32	19
Property	79	59	55	70	56	43	65
Public Order	35	13	20	27	56	23	23
Status	75	34	30	55	67	68	49
Traffic	18	6	14	17	33	16	13

<sup>8</sup> Probation prior to JDC reported in Table 11 is only for probation placements that ended prior to JDC start. Probations that were open at JDC intake and continued through part of JDC participation are reported in Table 15 as “during.”

<sup>9</sup> Emery had 11% with weapon offenses prior to JDC; however, this was only one youth

**Table 11 Juvenile Court History**

	Weber	Salt Lake	Tooele	Utah	Emery	Grand	Total
Weapon	10	2	4	5	11	2	5
<b>Qualifying Event (QE)</b>							
Percent with QE	81	98	99	97	82	90	96
<b>Of those with QE:</b>							
Total Incidents at QE (Mn)	2.3	1.6	1.5	2.0	2.2	2.0	1.8
Severity of QE (Mn)	MA	MB	MB	MB	MB	MB	MB
<b>Charge Type (% participants with):</b>							
Alcohol	44	18	17	36	33	82	28
Drug	65	89	88	72	67	24	79
DUI	5	1	0	6	22	13	3
Person	5	0	0	2	0	4	1
Property	13	5	7	10	0	11	7
Public Order	15	2	1	4	0	7	4
Status	17	12	7	18	0	13	13
Traffic	8	1	3	6	11	9	4
Days from QE to Court Intake (Mn)	14	18	10	10	14	5	14
Days from Court Intake to JDC Start (Mn)	61	58	49	53	25	46	55

Prior incidents were also examined by combining all pre-JDC offenses (from both the Qualifying Event (QE) and any priors before that) into a combined, non-overlapping, offense type variable. As shown in Table 12, this allowed us to examine youth offense histories to determine if JDC participant were primarily AOD offenders or had more varied delinquency histories. Table 12 shows that all JDCs, except Salt Lake and Tooele, served more youth who had delinquency charges (with or without AOD), than AOD alone. Grand was the only JDC who served some youth who had only status offenses as their priors. No courts served youth who had only traffic offense priors. These figures demonstrate that the majority of JDC participants were youth who had both AOD and delinquency histories. Seven (7) Salt Lake and one (1) Utah County participant did not have any priors according to the court record; however, these cases were mostly from the mid-1990's and could represent errors in the database.

**Table 12 Pre-JDC Incidents by Category**

	Weber	Salt Lake	Tooele	Utah	Emery	Grand	Total
Has Prior JDC Incident(s) (n)	133	642	192	488	11	50	1516
<b>Charge Type (% participants with, no overlap)</b>							
AOD <sup>1</sup>	9	60	53	27	27	28	42
Delinquency <sup>1</sup>	20	1	1	3	18	6	4
AOD & Delinquency <sup>1</sup>	71	39	46	70	55	62	54
Status Only	0	0	0	0	0	4	0

<sup>1</sup>These categories include those who may have also had status or traffic in addition to the primary offense type

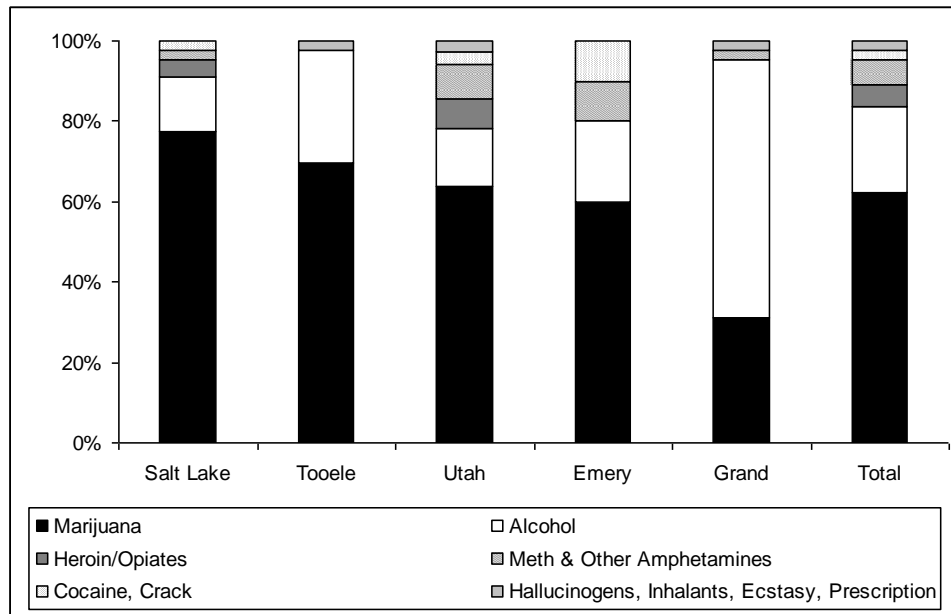
### Substance Use

Drug of Choice records were obtained from both JDC program records and treatment provider data (drug of choice information was not available for Weber JDC). Marijuana was the most common drug of choice across most JDCs, followed by alcohol (except in Grand where these were switched, see Figure 1). Very few youth reported more “serious” drugs (e.g.,



methamphetamines, cocaine, heroin) as their primary drug of choice. Salt Lake and Tooele participants had an option of indicating “none” as their drug of choice; 15% and 25%, respectively, chose this option. Only results for those who selected a drug of choice are presented in Figure 1. Tooele JDC assessment records included additional information: average age at first use was 13.6 (SD = 1.4), while only one in five (21%) used tobacco products.

**Figure 1 Drug of Choice**



Adolescent Substance Abuse Subtle Screening Inventory (SASSI) records were obtained from partial samples at four JDCs. The SASSI is a widely used assessment and research tool, and helps to identify individuals who have a high probability of having a substance abuse disorder based on several scales, including favorable attitudes toward alcohol (FVA) and other drugs (FVOD); obvious attributes (OAT), which identifies participants’ acknowledgement of problem behaviors; and subtle attributes (SAT), which identifies those who may have trouble identifying their substance abuse problem. Weber JDC, by policy, only serves youth who have a high probability of abuse/dependence (see Table 13). Salt Lake JDC only had high probability youth in this SASSI sample, but it is not known if they are representative of all youth served by the JDC. Utah JDC mostly served high probability youth, while Tooele served youth with a mix of low and high probability for abuse/dependence. Weber and Salt Lake records also included whether or not the high probability youth were more likely to meet criteria for abuse or dependence. Just over half of Weber JDC youth met criteria for dependence (the most severe substance use rating on the SASSI).

**Table 13 SASSI Results**

	Weber	Salt Lake	Tooele	Utah
SASSI Probability of Abuse/Dependence (n)	100	35	50	102
% Low	0	0	44	18
% High	100	100	56	82

	Weber	Salt Lake	Tooele	Utah
Of those with High Probability (n)	100	35		
% Abuse	49	63		
% Dependence	51	37		

## Services Received

### Program Length

The average length of JDC participation statewide was just over seven months (Mn = 231 days, SD = 104), but varied from 174 days in Tooele to 489 days in Emery. In general, youth who graduated from JDCs (positive exit status) spent longer in the program than those who exited for a negative reason (dropped out, terminated, etc.). Table 14 shows the average length of JDC participation.<sup>10</sup>

	Weber	Salt Lake	Tooele	Utah	Emery	Grand	Total
Days in JDC (Mn)	273	216	174	258	489	226	231
For Negative Exit Youth	232	221	158	229	504	221	218
For Positive Exit Youth	328	215	182	272	483	240	237

### Probation

Some JDCs operate as an alternative to probation, while other JDCs serve youth who are also on juvenile probation while active in the program. Table 15 shows the percent of JDC participants who had CARE data indicating being on probation at any time<sup>11</sup> during JDC participation. As Weber JDC serves youth who have an extensive juvenile history and risk level, it is not surprising that the majority of their participants are concurrently on juvenile probation. On the other hand, Salt Lake and Tooele JDCs who serve youth with less extensive delinquency histories had very few youth who were also on probation during drug court.<sup>12</sup> The average length of days on probation during JDC could be somewhat longer than the overall average length of JDC program for all participants (as shown in Table 14 above), due to the participants who are concurrently on probation being in JDC for a longer time than the non-probationer participants.

<sup>10</sup> Fewer than 2% (n = 32) of JDC records indicated participation of over 18 months. These records were hand examined and all except 5 Emery JDC cases were excluded from this and subsequent length of participation analyses. The five Emery JDC cases longer than 18 months were confirmed with the JDC as being accurate. The remaining 27 cases from the other JDCs were determined to be data entry errors (length of participation much longer than length of treatment or another confirmatory variables) or outlier cases that were not representative of the JDC (e.g., one case out of 649 Salt Lake JDC participants that was over 18 months participation).

<sup>11</sup> Includes already being on probation when starting JDC, starting JDC and probation concurrently, and starting probation after JDC but prior to exit

<sup>12</sup> Salt Lake JDC switched to targeting moderate and high risk youth in July 2006 and started exclusively serving youth who were on probation in July 2008.

**Table 15** Probation during JDC

	Weber	Salt Lake	Tooele	Utah	Emery	Grand	Total
Percent on Probation during JDC	95	3	5	55	55	66	31
Of those on Probation during JDC							
Days on Probation during JDC (Mn)	291	191	240	195	399	227	226

## Treatment

Treatment participation also varied by JDC. Table 16 presents treatment frequency measures for the sub-sample of JDC participants that had treatment data.<sup>13</sup> As shown in the sample size (n) rows, the availability of data within these samples also varied, depending upon individual measures and the exclusion of outliers (see footnotes in Table 16). Not surprisingly, the Tooele JDC, the shortest program based on intake and exit dates, had the shortest average time (59 days) in treatment. The Tooele JDC also had the least frequent treatment<sup>14</sup>, with an average of 9.2 days between services. Average treatment duration at the Weber JDC was longer (Mn = 320 days) than the average length of participation (Mn = 273 days). This was due to WHS treatment records being provided in an aggregate format that did not allow for the removal of treatment services that began prior to or continued after program exit. It does show, however, that Weber JDC participants are, on average, in treatment for their entire length of participation (and beyond). Similarly, average time from JDC intake to treatment start and treatment end to JDC exit for Emery and Grand JDCs indicate that these participants are also actively in treatment for the majority of their time in JDC. Tooele, Salt Lake, and Utah County JDCs had average lengths of treatment participation that were notably shorter than their average program lengths (115, 64, and 65 days, respectively). However, while active in treatment, Salt Lake and Utah County (along with Emery) JDCs had the most frequent treatment attendance, on average receiving treatment services every three to four days.

**Table 16** Treatment Frequency

	Weber	Salt Lake	Tooele	Utah	Emery	Grand	Total
Treatment Data Received (n)	112	41	44	48	11	50	306
Days from JDC Start to Tx Start <sup>1</sup>							
n	71	34	37	46	10	41	239
Mn	5	37	30	20	9	31	21
SD	4	28	20	21	10	19	22
Treatment Duration <sup>2</sup>							
n	112	41	44	48	10	43	298
Mn	320	152	59	194	478	181	223
SD	148	116	39	94	221	111	160
Average Days between Treatment Services							
n	112	41	44	48	10	43	298
Mn	5.3	4.1	9.2	2.7	3.9	6.0	5.4
SD	5.9	2.1	6.0	0.9	1.2	6.1	5.3

<sup>13</sup> See the Data Collection section under Methods for an explanation of treatment sample selection

<sup>14</sup> Frequency was calculated by dividing the total number of treatment services by the number of days from first to last treatment service. Cases with lapses in treatment attendance were included.

**Table 16 Treatment Frequency**

	Weber	Salt Lake	Tooele	Utah	Emery	Grand	Total
Days from Tx End to JDC End <sup>3</sup>							
n	92	38	41	45	10	41	267
Mn	7	61	66	45	2	9	30
SD	24	53	52	40	2	19	44

<sup>1</sup>Cases where treatment started prior to JDC intake (WHS records only) or greater than 90 days after JDC start (approx. 10% of cases) were excluded

<sup>2</sup>Average treatment duration for Weber JDC includes treatment that occurred prior to and after JDC exit, as records were not provided in a format that allowed for the exclusion of those data.

<sup>3</sup>Cases where treatment continued after JDC exit (WHS records only) were re-set as 0 (ending on the same day as JDC). Cases where treatment ended greater than 180 days prior to JDC exit (approx 4% of cases) were excluded

The types of treatment services that JDC participants received also varied widely from court to court. Due to variations in data availability from the treatment providers, the following descriptions of JDC treatment services are based on a mix of quantitative data records and qualitative information provided by the treatment providers.

**Weber.** The majority of Weber JDC participants received both individual and group treatment (see Table 17). Regarding level of care, all participants are required to begin treatment in a 30-day social detoxification (ASAM Level III.2-D) program<sup>15</sup> housed at the Archway facility, then step down to outpatient (ASAM Level I) treatment. The treatment model used by the program includes elements of case management (e.g., helping youth find employment, catch up in school, join an after-school club), family therapy, and skills development (e.g., “Understanding the Feelings of Others” or “Dealing with Group Pressure”). A few JDC youth (13%) also received medication management.

**Salt Lake.** All participants with treatment data received individual treatment during JDC participation, while the majority also received group (see Table 17). Many participants received more than one level of care. Data on level of care revealed that 88% of participants received outpatient (ASAM Level I) treatment while in the JDC, while just under half (42%) received intensive outpatient (IOP, ASAM Level II), and 10% received day treatment (ASAM Level II.5). This distribution is based on the 41 JDC participants who had quantitative treatment records provided for this study. The following components are usually considered a part of treatment, whether it’s delivered at the outpatient, IOP, or residential level. In the Salt Lake treatment records, 88% had case management services recorded, while 45% had other types of documented services, such as skills development and recreational activities. Although not documented in the data provided for this study, family therapy and medication management are also available within the continuum of care, but are provided as needed and would need to be obtained by youth and their families outside the parameters of standard JDC treatment.

**Tooele.** Most Tooele JDC participants received group treatment; while one-quarter received individual treatment (see Table 17). Out of this same group of participants with treatment records available for analysis (n = 44), only 7% had case management services recorded at the treatment provider. This is not surprising, as the Tooele JDC primarily uses juvenile probation officers for case management. Although not documented in the treatment records provided, the treatment

<sup>15</sup> An organized residential nonmedical setting providing safe, twenty-four-hour monitoring, observation, and support in a supervised environment. Social detox is characterized by its emphasis on peer and social support.

provider indicated that nearly all youth participate in family therapy to a certain degree. Although a majority of JDC participants only receive outpatient treatment services, intensive outpatient (IOP, ASAM Level II) services were recently added at the treatment provider and will be used as needed. Higher levels of care (e.g., day treatment and residential) are also used as needed and are currently accessed through referrals to Valley Mental Health in Salt Lake City. Medication management and additional services (e.g., alcohol and drug classes based on the Prime for Life model, teen parenting groups) are also available as needed, but are not required components of the JDC treatment model.

**Utah.** Quantitative treatment records indicated that all Utah County JDC participants receive both individual and group treatment modalities. The majority of participants receive both outpatient (88%) and IOP (73%) levels of care. No higher levels of care (e.g., day treatment, residential) or medication management are offered at the primary treatment provider. The treatment provider indicated that all youth receive case management services and family therapy (a major component of their treatment model: “Families Who Care”), while additional services (e.g., psychoeducational skills building, smoking cessation, anger management) are offered as needed. However, there was no documentation of these services.

**Emery.** Treatment services for the Emery JDC include both group and individual treatment (see Table 17). All participants begin with a 12-week IOP program (ASAM Level II) and then step down to outpatient (ASAM Level I). The treatment provider does not provide any higher levels of care and typically do not provide medication management or family therapy. Just over one-third (36%) of participants had records showing case management services while in the JDC.

**Grand.** More Grand JDC participants received group treatment (72%) than individual (56%, see Table 17). About three-quarters (76%) had case management services recorded; while 12% received skills development services. The treatment provider indicated that treatment is primarily outpatient, with higher levels of care (IOP and above) being available through referral to outside sources. These referrals are rare; however, as they require sending youth outside the community. Family therapy and medication management are available in-house and are used as needed.

<b>Table 17 Treatment Modality</b>							
	Weber	Salt Lake	Tooele	Utah	Emery	Grand	Total
Treatment Data Received (n)	112	41	44	48	11	50	306
<b>Percent of participants with (%)</b>							
Individual Treatment	98	100	25	100	91	56	81
Group Treatment	98	68	86	100	91	72	88

## Drug Testing

Drug tests that are conducted by juvenile court staff (e.g., probation officers) are recorded in a CARE module. Results for recent JDC participants who had urinalysis tests (UAs) recorded in CARE are shown in Table 18 on the next page. Court administered UAs during JDC occurred a little more often than once a month on average (every 13 days, on average, in Grand JDC to every 32 days, on average, in Utah JDC). It should be noted that standard deviations are large, indicating a wide range of drug testing frequencies even within each JDC. Only three (3) Emery

JDC participants had UA data in CARE and had an average of over 100 days between UAs, indicating that court administered UAs are infrequently conducted or recorded at that JDC. Therefore, court administered Emery drug test results are not presented in Table 18.

Research suggests that JDC youth should be drug tested more frequently during the first phase of the program and gradually stepped down to less frequent tests as they progress to higher phases. For instance, some researchers suggest that JDC youth should be tested two (2) to three (3) times per week during phase one (1), but only once per week during the final phase (BJA, 2003; Rodriguez & Webb, 2004). However, due to wide variance in detection periods for different types of substances, decisions regarding the frequency of drug testing should be made on an individual basis, and take the specific drug(s) of choice into consideration. For instance, detection periods for the two most commonly used substances among JDC participants range from two (2) days to three (3) weeks for marijuana (Wong, & Tse, 2005) and 60-90 minutes per alcoholic beverage consumed (Doweiko, 2006).

About half (52% across all JDCs) of the participants had at least one court administered UA that was positive for a substance. The most commonly detected substance was THC (13% of UAs that screened for THC found it; next most common were Alcohol, Amphetamines, and Benzodiazepines with 2% of tests that screened for those substances resulting in a detection of use). This corresponds with drug of choice data in Figure 1 on Page 15, where marijuana was the most commonly self-reported drug of choice. Although 34% (Tooele) to 67% (Salt Lake) of youth with CARE drug tests had at least one test with drugs or alcohol detected, most youth abstained from drug use while in the program (as shown by the low number of high UAs per youth).

Table 18 also displays treatment provider UA results for the two JDCs that had drug test results readily available. For Weber and Utah JDCs it appears that treatment provider drug tests are more frequent than court administered ones. Similar to court administered drug test results, about half of the youth had at least one positive (high) drug test, but the average number of high UAs was quite low (Mn = 2 for Weber, 3.1 for Utah). Again, THC was one of the most commonly detected substance (28% of Weber and 26% of Utah JDC participants had a drug test detecting THC).

	Weber	Salt Lake	Tooele	Utah	Grand	Total
CARE UAs (n)	50	76	76	94	41	340
Average Days between UAs						
Mn	20	18	22	32	13	23
SD	24	17	19	60	17	39
Number of UAs while in JDC						
Mn	10	17	9	7	31	13
SD	8	11	6	8	20	13
Percent of Youth with 1+ High UA	49	67	34	51	62	52
Number of High UAs per Youth						
Mn	1.1	3.4	0.7	1.5	1.9	1.7
SD	1.9	5.3	1.4	2.2	3.4	3.3

**Table 18 Drug Test Results**

	Weber	Salt Lake	Tooele	Utah	Grand	Total
Treatment Provider UAs (n)	98			50		
Average Days between UAs						
Mn	5			7		
SD	2			4		
Percent of Youth with 1+ High UA	47			60		
Number of High UAs per Youth						
Mn	2.0			3.1		
SD	3.6			7.2		

## Outcomes

### Final Status

The majority (70.4%) of JDC participants graduated from the programs (positive exit status in Table 19). As shown in Table 19, Salt Lake had the highest graduation rate near 80%, while Weber had the lowest at just under half. The remainder of JDCs had a graduation rate of around two-thirds. Youth who had a negative exit status included those who dropped out of the program, were terminated by the JDC, or left for other negative reasons. If those who left on neutral status or were active at the end of the study period are excluded, the statewide JDC graduation rate is 71.2% (1,071 of 1,504).

**Table 19 JDC Final Status**

	Weber	Salt Lake	Tooele	Utah	Emery	Grand	Total
Positive (graduated) (%)	45	79	66	68	64	68	70
Negative (terminated/dropout) (%)	48	21	34	32	27	24	28
Neutral (%)	5	0	1	0	0	8	1
Active (%)	1	1	0	0	9	0	0

### Risk Level

Too few youth had Pre-Screen Risk Assessments (PSRA) at both intake<sup>16</sup> and exit<sup>17</sup> to do an analysis of risk level change by JDC. For the 19 youth who had both, the majority (n = 13) did not change risk level, while two (2) lowered their risk level and (4) increased their risk level.

### During JDC Recidivism

While active in the JDCs, about one-third (35%; n = 531) of the participants had a new incident recorded in CARE. During program recidivism rates ranged from 47% in Utah County to 25% in Salt Lake. For youth who had a new during JDC incident, the most committed were status, alcohol, or property offenses (youth could have multiple types of offenses, see Table 20). On average, the most severe during JDC offense was a Class B misdemeanor for all JDCs, except Emery, where it was a Class C misdemeanor. Average time from JDC start to the first during recidivism event was 100 days (SD = 91) across the JDCs. Average number of incidents during

<sup>16</sup> PSRAs within 90 days prior to JDC start date or 30 days after were flagged as “intake”

<sup>17</sup> PSRAs within 30 days prior to JDC exit date or 60 days after were flagged as “exit”

JDC ranged from 1.4 (Emery) to 4.0 (Weber). Incidents are defined in CARE as a discreet offense and multiple incidents can occur in one episode (e.g., incident date). Approximately half of the youth who had at least one new incident had more than one new episode during JDC (e.g., 53 Weber participants had at least one during JDC new incident, while 24 had two or more episodes). For those youth who had more than one recidivism episode, average time from JDC start to the final episode during JDC was 206 days (SD = 135).

**Table 20** During JDC Recidivism

	Weber	Salt Lake	Tooele	Utah	Emery	Grand	Total
Total JDC Sample Size (n)	133	649	192	489	11	50	1524
<b>Has During JDC New Incident(s)</b>							
n	53	165	62	230	5	16	531
%	40	25	32	47	46	32	35
<b>Of those with During JDC New Incident(s):</b>							
Days from JDC Start to 1st Incident (Mn)	109	103	87	100	155	66	100
Total # of During JDC Incidents (Mn)	4.0	2.1	2.3	3.0	1.4	1.9	2.7
Severity of During JDC Incidents (Mn)	MB	MB	MB	MB	MC	MB	MB
Severity compared to Priors (% participants with):							
Less Severe	53	33	32	56	60	25	45
Equally Severe	26	52	47	34	0	56	41
More Severe	21	15	21	10	40	19	14
<b>Charge Type (% participants with):</b>							
Alcohol	30	30	34	44	40	38	37
Drug	6	17	19	24	20	6	19
DUI	2	2	5	6	0	0	4
Person	23	10	11	6	0	19	10
Property	36	37	31	35	20	25	35
Public Order	30	19	15	19	40	13	19
Status	62	29	26	44	20	44	39
Traffic	4	9	7	12	0	13	9
Weapon	8	2	5	3	0	6	3
<b>Has &gt;1 During JDC New Episode</b>							
n	24	81	32	133	2	9	281
%	18	12	17	27	18	18	18
Days from JDC Start to Last Incident (Mn)	220	213	164	212	253	165	206

In Table 21 on the next page, during JDC recidivism is presented by offense type, with non-overlapping categories. For example, 33% of JDC participants had AOD offenses during JDC, but no delinquency, while 34% had delinquency offenses during JDC, but no AOD offenses. For all JDCs, the sum of youth having delinquency offenses (either alone or with AOD offenses) was greater than youth who had only AOD offenses (except Tooele where 47% had AOD only, while 40% had delinquency). This suggests that general delinquency recidivism is more common than having only AOD recidivism. Of those who recidivated, very few youth (14% overall) had only minor (status or traffic) offenses.



**Table 21 During JDC Recidivism by Category**

	Weber	Salt Lake	Tooele	Utah	Emery	Grand	Total
Has During JDC New Incident(s) (n)	53	165	62	230	5	16	531
<b>Charge Type (% participants with, no overlap)</b>							
AOD <sup>1</sup>	11	29	47	37	20	25	33
Delinquency <sup>1</sup>	38	41	34	27	40	38	34
AOD & Delinquency <sup>1</sup>	23	16	6	24	20	13	19
Status Only	28	13	10	10	20	25	13
Traffic Only	0	1	3	1	0	0	1

<sup>1</sup>These categories include those who may have also had status or traffic in addition to the primary offense type

### Post-JDC Juvenile Recidivism

Of all the participants who have exited JDC (N = 1516), just over one-third (38%) had a new juvenile incident following program exit. These figures, and all presented in Table 22 or 23, do not account for varying lengths of follow-up times and the opportunity for a reoffense to be captured within the juvenile justice system. Keeping this important limitation in mind, the descriptive statistics in Table 22 demonstrate that all JDCs had recidivists and that alcohol, drug, property, and status offenses were the most common types among those with a new incident following JDC exit. Approximately one-quarter (23%) of youth had more than one episode (incident date) recorded in CARE following JDC exit. Table 23 shows that, similar to Table 21 for during program recidivism, JDC participants across all six programs included delinquency and general recidivists in addition to those who had only AOD re-offending. The majority of participants who had a new juvenile incident were adjudicated on that incident. See Appendix D for a description of new post-JDC incidents and adjudications by AOD and delinquency offenses.

**Table 22 Post-JDC Juvenile Recidivism**

	Weber	Salt Lake	Tooele	Utah	Emery	Grand	Total
Total Exited JDC Participants (n)	131	644	192	489	10	50	1516
<b>Total with Post-JDC New Incident(s)</b>							
n	43	258	79	180	3	9	572
%	33	40	41	37	30	18	38
<b>Of those with Post-JDC New Incident(s):</b>							
Days from JDC Exit to 1st Incident Date (Mn) <sup>1</sup>	157	269	228	152	130	347	218
Age at 1st Post-JDC Incident (Mn) <sup>1</sup>	17.0	16.6	16.2	17.0	17.7	16.8	16.7
Total Post-JDC Incidents (Mn)	3.2	4.0	3.6	4.4	1.0	2.1	4.0
Severity of Post-JDC Incidents (Mn)	MA	MB	MB	MB	MB	MA	MB
Severity compared to Priors (% participants with):							
Less Severe	58	29	35	50	67	22	39
Equally Severe	26	46	47	33	33	44	40
More Severe	16	25	19	17	0	33	21
Charge Type (% participants with):							
Alcohol	35	41	53	48	0	89	45
Drug	30	41	34	43	33	33	40
DUI	0	5	4	8	0	0	5

**Table 22 Post-JDC Juvenile Recidivism**

	Weber	Salt Lake	Tooele	Utah	Emery	Grand	Total
Person	12	17	19	17	0	0	17
Property	58	46	37	38	0	11	42
Public Order	21	19	25	33	33	11	25
Status	44	38	35	48	33	22	41
Traffic	12	14	14	15	0	0	14
Weapon	0	5	4	3	0	0	4
<b>Has &gt;1 Post-JDC New Incident Episode</b>							
n	27	147	46	128	0	2	350
%	21	23	24	26	0	4	23

<sup>1</sup>Post-JDC recidivism measures, especially time to first post-JDC incident and age at first post-JDC incident are right censored due to juvenile court jurisdiction, and thus, records, ending primarily at a youth's 18<sup>th</sup> birthday

**Table 23 Post-JDC Juvenile Recidivism by Category**

	Weber	Salt Lake	Tooele	Utah	Emery	Grand	Total
Total with Post-JDC New Incident(s) (n)	43	258	79	180	3	9	572
<b>Charge Type (% participants with, no overlap)</b>							
AOD <sup>1</sup>	26	32	37	31	33	78	33
Delinquency <sup>1</sup>	42	26	23	18	33	0	24
AOD & Delinquency <sup>1</sup>	30	35	32	41	0	22	36
Status Only	2	7	8	10	33	0	8
Traffic Only	0	0	1	0	0	0	0

<sup>1</sup>These categories include those who may have also had status or traffic in addition to the primary offense type

Although post-JDC recidivism descriptives are presented in Tables 22 and 23, above, with no regard for varying lengths of follow-up time in the juvenile court record, this is an important variable to consider. New arrests following age 18 may or may not be captured in the juvenile court record depending upon jurisdiction of the courts for a particular individual. Because all of the programs served some participants into adulthood (over age 18 at program exit) and adult recidivism data is not included, the previous figures should be viewed cautiously and may lead to inaccurate conclusions about the effectiveness of particular JDCs. As shown in Table 24, below, the average age at exit ranged from 16.4 (SD = 1.34) in Tooele to 18.4 (SD = 1.00) in Emery. A higher recidivism rate may be expected in Tooele due to their relatively longer follow-up period (Mn = 585, SD = 488) compared to some other JDCs (Emery Mn = -127, meaning on average, participants were four months older than 18 at exit from the program). However, the large standard deviations (SD) across the JDCs show that each drug court had participants with a wide range of ages at program exit.

**Table 24 JDC Exit Age and Follow-Up Length**

	Weber	Salt Lake	Tooele	Utah	Emery	Grand	Total
Total Exited JDC Participants w/ DOB (n)	131	621	189	479	10	50	1480
<b>Age at JDC Exit</b>							
Mn	17.5	16.6	16.4	17.3	18.4	17.3	16.9
SD	1.09	1.27	1.34	0.96	1.00	1.05	1.23
<b>Age at JDC Exit (% of participants)</b>							
18 or under	62	87	88	74	40	68	80
Over 18	38	13	12	27	60	32	20

**Table 24 JDC Exit Age and Follow-Up Length**

	Weber	Salt Lake	Tooele	Utah	Emery	Grand	Total
Days from JDC Exit to 18th Birthday (follow-up)							
Mn	194	507	585	266	-127	258	399
SD	400	462	488	349	364	385	448

One method to account for varying opportunities to have reoffending captured in the juvenile justice system is to calculate recidivism statistics for only those former participants who had accrued minimum lengths of follow-up period in the CARE record prior to their 18<sup>th</sup> birthdays. As shown in Table 25, below, the number of participants who had follow-up periods diminished as the length of the periods increased. Statewide, the recidivism rate went from 18% at 3 months following program exit, to 32% at 6 months, 40% at 9 months, and 48% at one year. These statistics take into account only those participants who had the opportunity to have a new offense occur within the juvenile justice system, and therefore, the sample in Table 25 is biased towards participants who were younger at program exit. This group of participants may be different than typical or older participants in some important ways. Emery and Grand County JDC results are not presented in Table 25, due to the small sample sizes that had accrued the follow-up periods in each of those programs. Post-JDC recidivism in both the juvenile and adult systems is explored in the subsequent sections, starting with *Post JDC Juvenile and Adult Combined Recidivism*.

**Table 25 Post-JDC Juvenile Recidivism by Time Period**

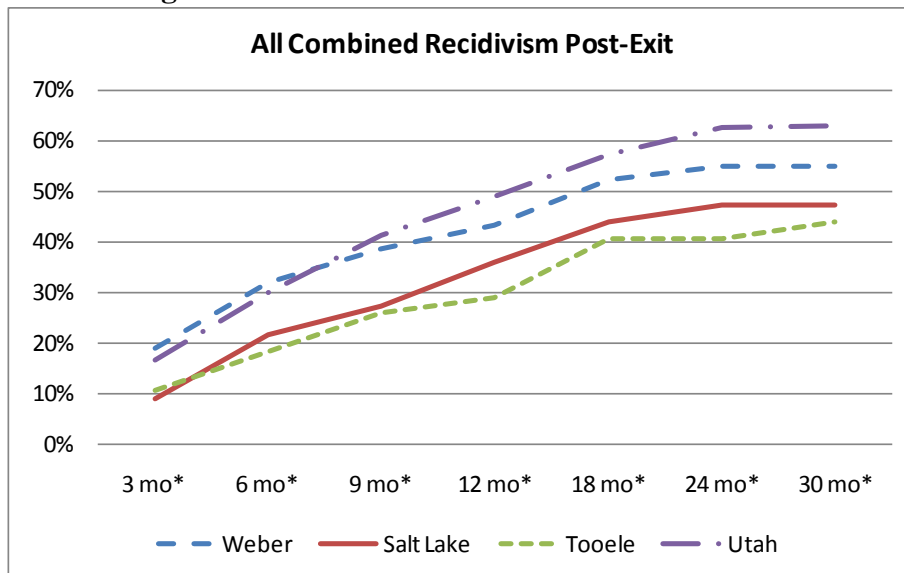
	Weber	Salt Lake	Tooele	Utah	Total
<b>3-months Post-JDC Exit</b>					
Number with follow-up period (n)	71	497	153	305	1060
New incident during follow-up period:					
n	21	67	24	78	192
%	30	13	16	26	18
<b>6-months Post-JDC Exit</b>					
Number with follow-up period (n)	58	440	139	253	918
New incident during follow-up period:					
n	25	119	37	107	291
%	43	27	27	42	32
<b>9-months Post-JDC Exit</b>					
Number with follow-up period (n)	46	387	126	210	790
New incident during follow-up period:					
n	27	136	44	108	319
%	59	35	35	51	40
<b>12-months Post-JDC Exit</b>					
Number with follow-up period (n)	35	345	117	166	680
New incident during follow-up period:					
n	22	146	51	99	323
%	63	42	44	60	48

## Post JDC Juvenile and Adult Combined Recidivism

Adult recidivism records were queried for JDC participants from the four largest JDCs from 2003-2007 as part of the comparative analysis between JDCs and AOD probationers. Figure 2 shows combined juvenile and adult recidivism by time period for the four largest JDCs, out of those who had each follow-up period. In this section, recidivism is defined as *either* a new incident referred to the juvenile court *or* a new arrest in the adult criminal history record (BCI), unless otherwise specified. Since records were compiled from both juvenile and adult systems, nearly everyone had the full 30 month follow-up period. By including adult recidivism records, the percent of youth who recidivated was lower than the statistics presented in Table 25. For example, 30% of Weber participants who had 3 months follow-up post-exit in the juvenile court record had a new incident; however, only 19% of all Weber participants had a new incident or arrest in the 3 months following exit when all youth were included and followed into the adult system. This supports the hypothesis that youth who are younger when they enter the JDC are more likely to recidivate and, therefore, including only juvenile records in the follow-up periods inflates the rate of recidivism. Recidivism for the four largest JDCs combined is compared to AOD probationers in the next section.

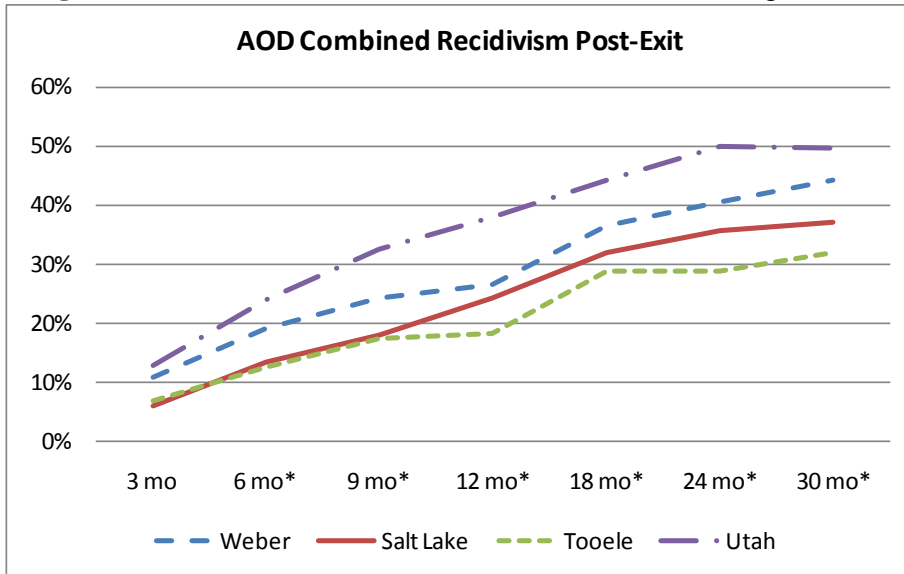
Figures 3 and 4 show combined juvenile and adult recidivism for AOD offenses and delinquency/criminal offenses. Similar to the overall recidivism presented in Figure 2, Utah and Weber JDCs had the highest recidivism rates, while Tooele had the lowest. These differences are not surprising, as statistics in the *Population Served* portion of this report indicate that Utah and Weber participants had a higher percentage of participants with prior incidents before their qualifying event (QE), more total priors, and more participants with delinquency priors than Salt Lake and Tooele participants. Simply, the Utah and Weber participants begin as more delinquent and continue on that path after exiting the program.

**Figure 2 Combined Juvenile and Adult Recidivism**



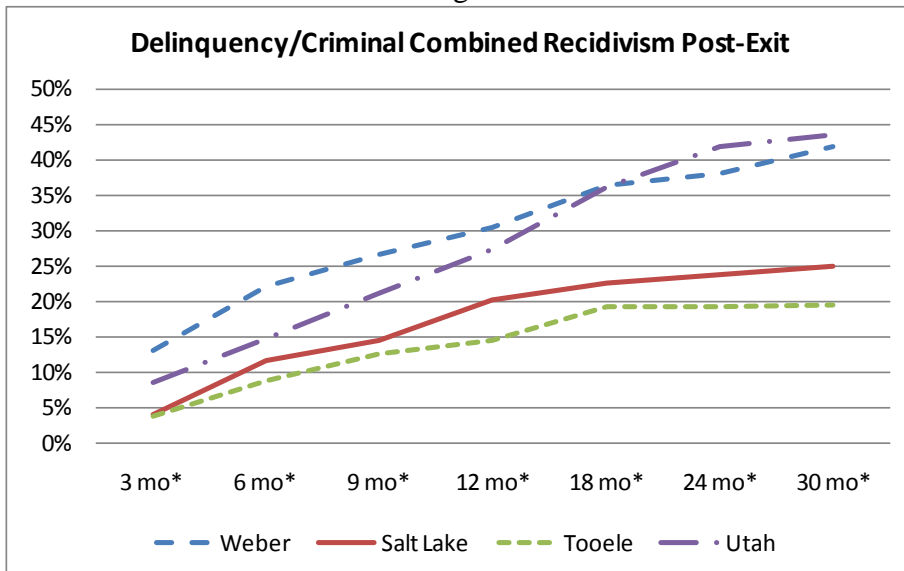
\*Difference between 4 JDCs statistically significant at  $p < .05$

**Figure 3** Combined AOD Recidivism Post-Exit for 4 Largest JDCs



\*Difference between 4 JDCs statistically significant at  $p < .05$

**Figure 4** Combined Delinquency and Criminal Recidivism Post-Exit for 4 Largest JDCs



\*Difference between 4 JDCs statistically significant at  $p < .05$

Kaplan Meier survival analyses were conducted to compare the four largest JDCs on estimated time to recidivism. The AOD recidivism survival analysis confirmed the visual difference in Figure 3 that shows significant group differences<sup>18</sup> in estimated time to AOD recidivism. Utah County JDC had the quickest estimated time to AOD recidivism, while Tooele JDC had the slowest estimated time to recidivism, at almost a year later than Utah County JDC. The survival analysis for delinquency/criminal recidivism also confirmed the findings presented in Figure 4, with estimated days to delinquency/criminal recidivism for Utah and Weber JDCs being the quickest and nearly identical, while Tooele again had the slowest estimated time to recidivism. This difference was statistically significant<sup>19</sup>.

The four JDCs also varied significantly on severity and number of new offenses among those participants who recidivated post-exit. As shown in Table 26, Utah JDC had significantly more participants with a new felony<sup>20</sup> than Salt Lake or Tooele. Of participants who had a new AOD offense post-exit, Utah JDC participants had significantly more on average than participants from all of the other three JDCs. However, the group differences on number of delinquency/criminal offenses among participants who had at least one were not statistically significant.

	Weber	Salt Lake	Tooele	Utah
N w/ combined post-exit recidivism	90	104	51	152
% w/ combined post-exit recidivism*	68	60	49	71
<i>Of those w/ combined post-exit recidivism</i>				
Most Severe new offense*				
% with MB or Misdemeanor	54	63	78	44
% with F2 or Felony	36	22	5	45
Of those w/ 1+ AOD post-exit offense, total (Mn)*	2.7	3.3	2.6	4.5
Of those w/ 1+ delinquency/criminal post-exit offense, total (Mn)	3.8	3.6	2.7	4.6

\*Difference between 4 JDCs statistically significant at  $p < .05$

**Pre-Post Changes in Offending by JDC.** Changes in offending for the 18 months prior to JDC start compared to the 18 months after JDC exit were examined for each of the four largest JDCs. Participants in all four JDCs showed significant reductions in average (Mn) AOD offending rates from 18 months prior to JDC to 18 months post-exit (see Figure 5). The four JDCs did not vary significantly from each other in the rate of reduction in AOD offending from pre- to post-JDC. All of the JDC participants, except Salt Lake, also showed a significant reduction in average (Mn) delinquency/criminal offending from pre- to post-JDC (see Figure 6). It is not surprising that Salt Lake JDC did not show a significant reduction since their delinquency/criminal offending rate was already very low prior to JDC participation. The rate of reduction in delinquency/criminal offending from pre- to post-JDC varied statistically significantly<sup>21</sup> by JDC.

<sup>18</sup> Log Rank Chi-Square = 16.8,  $p < .01$

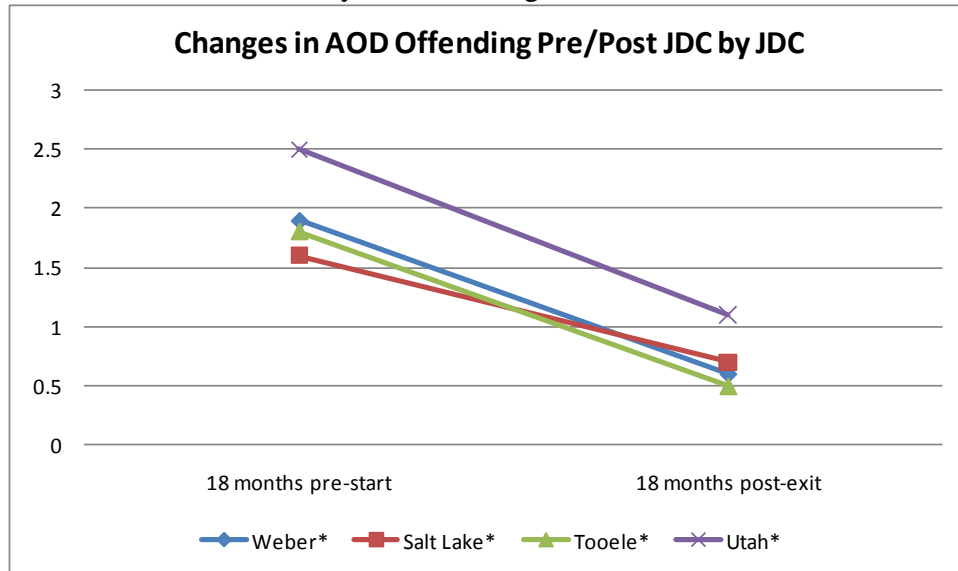
<sup>19</sup> Log Rank Chi-Square = 24.5,  $p < .01$

<sup>20</sup> In BCI arrest data, offense severity is often coded as simply “misdemeanor” or “felony.” Where this occurred, “misdemeanor” was grouped with Class B and “felony” with 2<sup>nd</sup> Degree felonies.

<sup>21</sup>  $F = 10.32$ ,  $df = 3, 618$ ,  $p < .01$

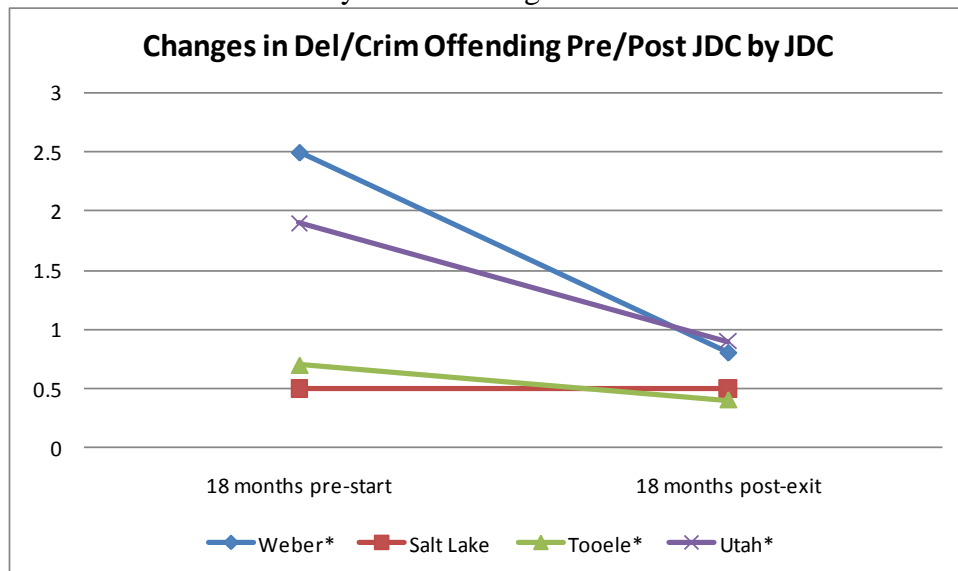
The rate of decline was significantly<sup>22</sup> faster for Utah and Weber JDCs than for Salt Lake and Tooele. As Utah and Weber JDCs served participants that had higher rates of delinquency offending prior to JDC intake, participants of those courts had the opportunity for a greater decline in delinquency/criminal offending post-exit.

**Figure 5** Changes in Average (Mn) AOD Offending Pre/Post JDC by the Four Largest JDCs



\*Difference between pre- to post-JDC statistically significant at  $p < .05$

**Figure 6** Changes in Average (Mn) Delinquency/Criminal Offending Pre/Post JDC by the Four Largest JDCs



\*Difference between pre- to post-JDC statistically significant at  $p < .05$

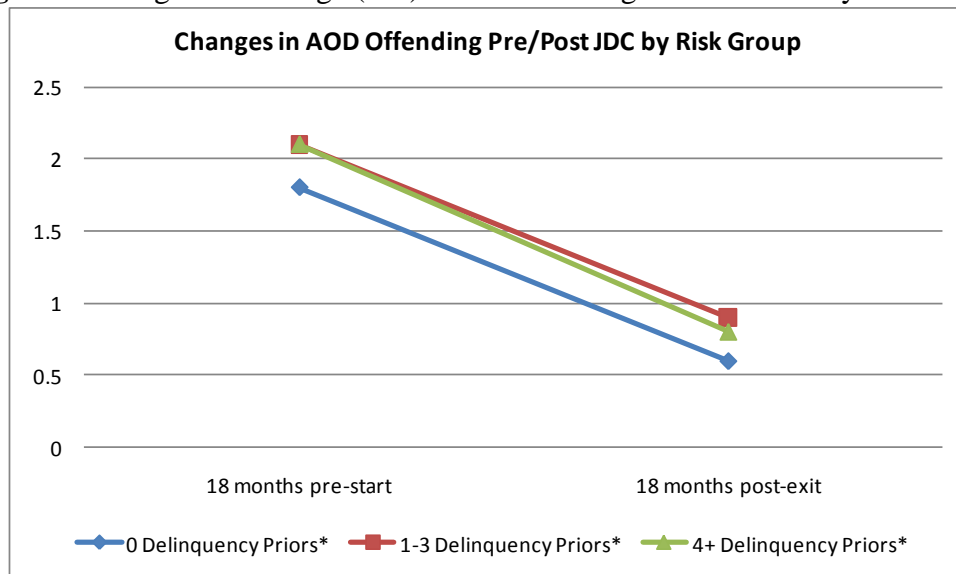
<sup>22</sup> Post-hoc Bonferonni  $p < .01$

**Pre-Post Changes in Offending by “Risk Group”.** JDC participants from the four largest JDCs from 2003-2007 were split into three groups based on number of delinquency incidents they had prior to JDC start. Since too few participants had PSRA risk assessments to analyze the relationship between risk level and change in recidivism, these categories were created as a proxy for risk level. As shown in Table 27, below, most JDC participants had three or fewer prior delinquency incidents.

	N	%
Group 1: 0 Delinquency Priors	213	34.2
Group 2: 1-3 Delinquency Priors	266	42.8
Group 3: 4+ Delinquency Priors	143	24.0

Changes in offending for the 18 months prior to JDC start compared to the 18 months after JDC exit were examined for each of the three risk groups defined in Table 27, above. As shown in Figure 7 all three groups improved significantly on their rate of AOD offending from pre-JDC to post-JDC. The rate of decline in AOD offending did not vary significantly by risk group. The two groups with delinquency incidents prior to JDC start also improved significantly on delinquency/criminal offending rates after exiting JDC (see Figure 8). The group with no delinquency incidents prior to JDC start *increased* their delinquency/criminal offending significantly following JDC participation, since some members of that group recidivated. As shown in Figure 8, the rate of change in delinquency/criminal offending from pre- to post-JDC varied statistically significantly<sup>23</sup> by risk group. The group with the most delinquency offenses prior to JDC had the greatest decline in delinquency/criminal offending following JDC exit, while those with one to three delinquency priors showed a slight decline post-exit, and those with no delinquency priors had a slight incline in delinquency/criminal offending after exiting JDC.

**Figure 7** Changes in Average (Mn) AOD Offending Pre/Post JDC by Risk Group

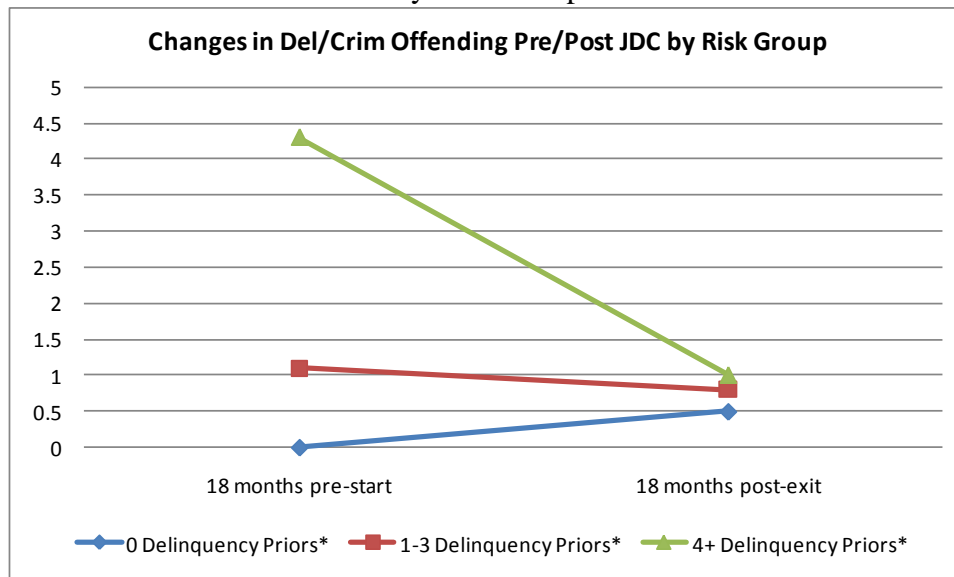


\*Difference between pre- to post-JDC statistically significant at  $p < .05$

<sup>23</sup>  $F = 108.5, df = 2, 619, p < .01$



**Figure 8** Changes in Average (Mn) Delinquency/Criminal Offending Pre/Post JDC by Risk Group



\*Difference between pre- to post-JDC statistically significant at  $p < .05$

### JDC Participants vs. AOD Probationers

As described in the *Methods* section of this report, JDC participants who were in the four largest JDC's (Weber, Salt Lake, Tooele, and Utah) from 2003-2007 ( $n = 622$ ) were compared with AOD probationers during the same time period ( $n = 596$ ) on post-program (JDC or probation) recidivism. In this section, recidivism is defined as *either* a new incident referred to the juvenile court *or* a new arrest in the adult criminal history record (BCI), unless otherwise specified.

Table 28 shows adult recidivism for the two groups. In this study, an absence of an adult BCI arrest record indicates that the youth did not have any adult offending in the state of Utah. As shown in Table 28, overall adult recidivism, AOD adult recidivism, and non-AOD criminal adult recidivism were all approximately equal for JDC participants and AOD probationers.

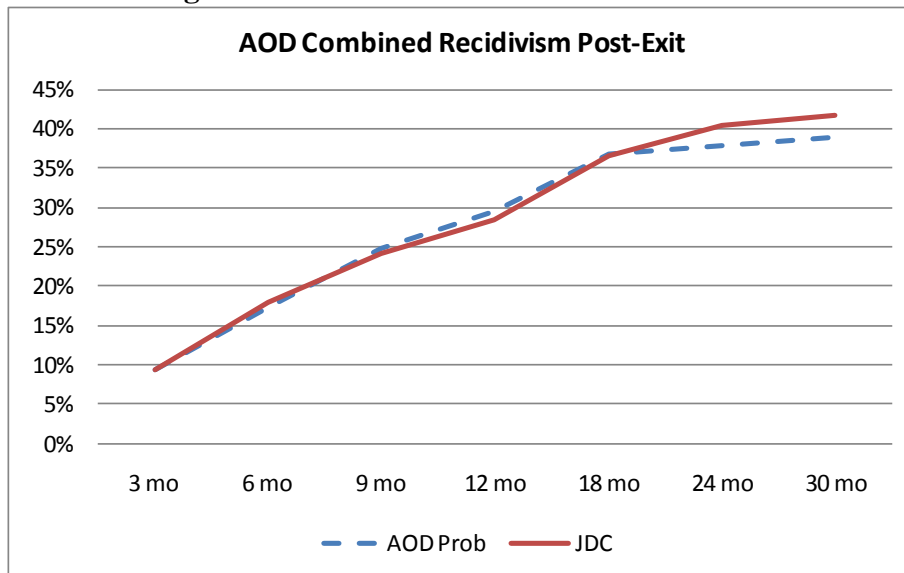
	4 Largest JDC's (2003-2007)	AOD Probationers (2003-2007)
N sent to BCI for match in adult arrest records	622	596
% with BCI adult arrest records	51	52
% with BCI adult AOD arrests	41	40
% with BCI adult non-AOD criminal arrests	35	39

\*Difference between JDC and AOD Probationers statistically significant at  $p < .05$

The following two figures compare JDC and AOD probationers on combined juvenile and adult recidivism post-exit by time period, of those who had each follow-up period. Because of the use of combined juvenile and adult recidivism records, the majority of the sample had the full follow-up period (93.4% of JDC had 30 months post-exit follow-up; 86.7% of AOD probationers had 30 months follow-up). As shown in Figure 9, AOD recidivism was nearly identical for the two groups at all time periods; however, as shown in Figure 10, AOD probationers had significantly higher delinquency/criminal recidivism rates than JDC participants at all follow-up points.

Kaplan Meier survival analyses were conducted to compare JDC participants and AOD probationers on estimated time to recidivism. The AOD recidivism survival analysis confirmed the statistics presented in Figure 9 that show no significant difference<sup>24</sup> in estimated time to AOD recidivism for the two groups. The survival analysis for delinquency/criminal recidivism also confirmed the findings presented in Figure 10, with estimated days to delinquency/criminal recidivism for AOD probationers being over a year sooner than JDC participants. This difference was statistically significant<sup>25</sup>.

**Figure 9 Combined AOD Recidivism Post-Exit**

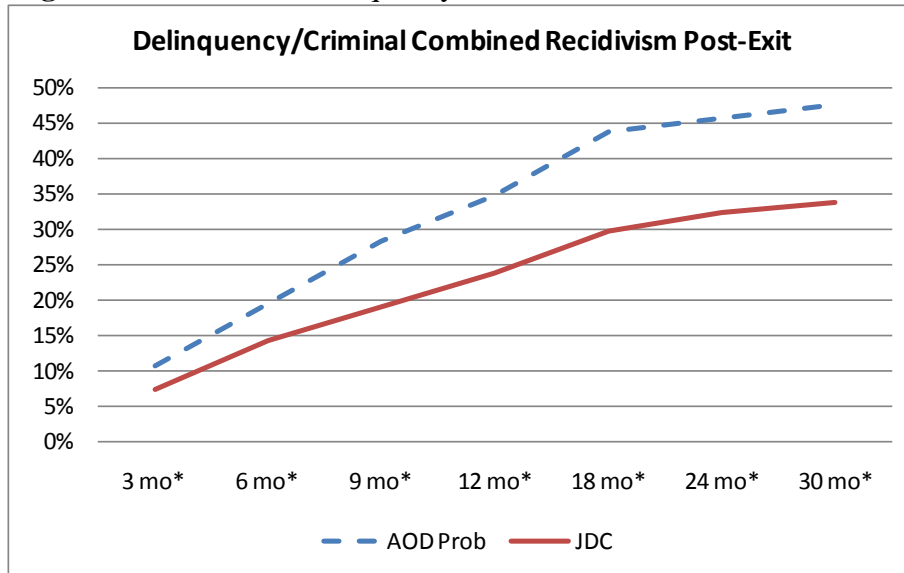


\*Difference between JDC and Prob statistically significant at  $p < .05$

<sup>24</sup> Log Rank Chi-Square = .59,  $p = .442$

<sup>25</sup> Log Rank Chi-Square = 32.6,  $p < .01$

**Figure 10** Combined Delinquency and Criminal Recidivism Post-Exit



\*Difference between JDC and Prob statistically significant at  $p < .05$

Of those who had new post-exit recidivism, there were no significant differences between JDC participants and AOD probationers on maximum offense severity, total number of AOD offenses, or total number of delinquency/criminal offenses. In Table 29, offense severity is presented for the two most frequent categories.<sup>26</sup>

**Table 29** Post-Exit Recidivism Detail

	4 Largest JDC's (2003-2007)	AOD Probationers (2003-2007)
N w/ combined post-exit recidivism	397	416
% w/ combined post-exit recidivism*	64	70
<i>Of those w/ combined post-exit recidivism</i>		
Most Severe new offense		
% with MB or Misdemeanor	56	50
% with F2 or Felony	31	35
Of those w/ 1+ AOD post-exit offense, total (Mn)	3.6	3.4
Of those w/ 1+ delinquency/criminal post-exit offense, total (Mn)	4.0	3.9

\*Difference between JDC and AOD Probationers statistically significant at  $p < .05$

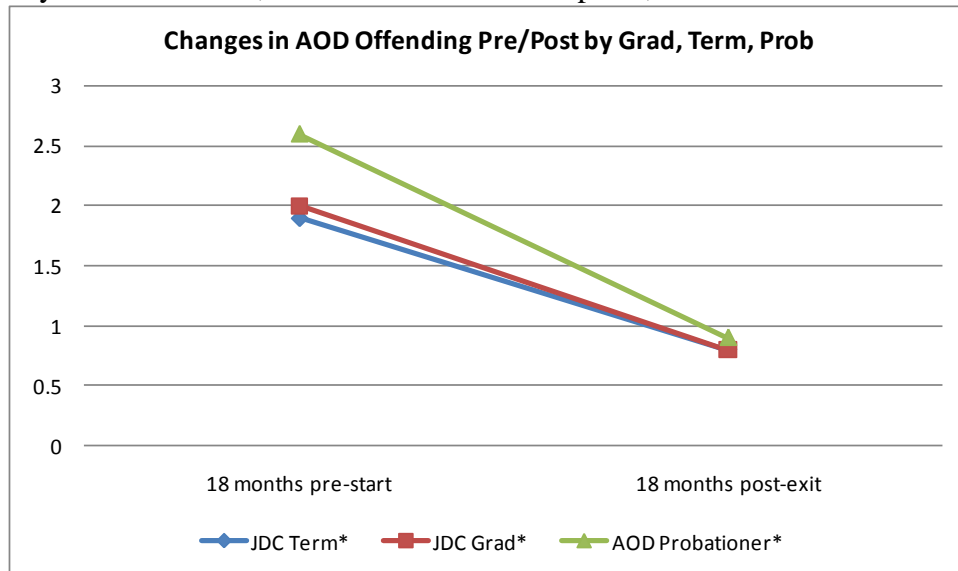
<sup>26</sup> In BCI arrest data, offense severity is often coded as simply “misdemeanor” or “felony.” Where this occurred, “misdemeanor” was grouped with Class B and “felony” with 2<sup>nd</sup> Degree felonies.

## Pre-Post Changes in Offending

Although approximately 40% of AOD probationers and JDC participants had a new AOD offense within 30 months of exiting their respective programs, overall AOD offending rates decreased significantly from pre-intake to post-exit for both groups (see Figure 11 below). In this section, JDC participants were split into two groups based on exit status (graduates and terminated clients) to determine if changes in recidivism varied by exit status. As shown in Figure 11, the rate of decline in AOD offending pre- to post-intervention was significantly<sup>27</sup> greater for AOD probationers than for JDC graduates or terminated clients (which did not differ significantly from each other).

JDC graduates, terminated clients, and AOD probationers' delinquency and criminal offending rates also all decreased significantly from pre-intake to post-exit (see Figure 12 on the following page). The difference in the rate of reduction varied statistically significantly<sup>28</sup> by group, with AOD probationers showing the largest decline in delinquency/criminal offending from pre- to post-intervention. JDC graduates showed the least reduction (although still statistically significant from pre- to post-JDC), as they had the lowest rate of delinquency offending prior to program start.

**Figure 11** Changes in Average (Mn) AOD Offending Pre/Post Intervention by JDC Graduates, Terminated JDC Participants, and AOD Probationers

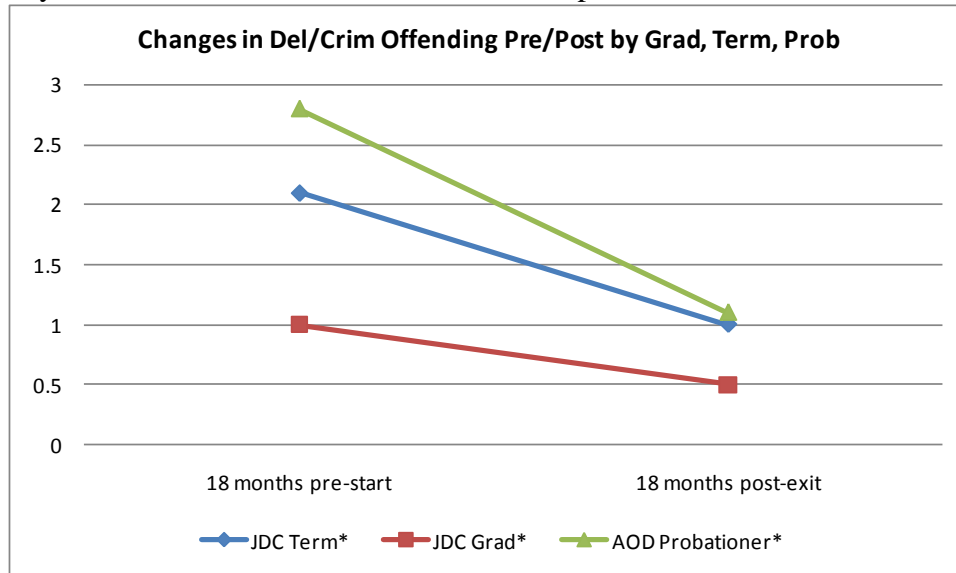


\*Difference between pre- to post-intervention statistically significant at  $p < .05$

<sup>27</sup>  $F = 9.45, df = 2, 1213, p < .01$

<sup>28</sup>  $F = 15.78, df = 2, 1213, p < .01$

**Figure 12** Changes in Average (Mn) Delinquency/Criminal Offending Pre/Post Intervention by JDC Graduates, Terminated JDC Participants, and AOD Probationers



\*Difference between pre- to post-intervention statistically significant at  $p < .05$

## Factors Predicting Success

### JDC Graduation

Graduates were compared with terminated participants (“Term” in Table 30, includes all negative exit status participants) across all six JDCs combined (see Statewide column in Table 30 on the next page). Some pre-JDC factors were significantly related to exit status in bivariate analyses; for example, female and White participants were significantly more likely to graduate than male or minority participants. While those who had greater involvement with the juvenile justice system (e.g., earlier age at first incident, more prior incidents, having delinquency priors (offenses other than AOD, status, traffic), and higher PSRA scores) were less likely to graduate. Although there were several statistically significant predictors, the relationship between pre-JDC factors and graduation was weak.<sup>29</sup> The only exception was the relationship between PSRA at intake and exit status in Utah County JDC, where the strength of the relationship remained low.<sup>30</sup>

Table 30 also compares the relationship between pre-JDC predictor variables and graduation status for the four largest JDCs. Dashed lines (--) indicate insufficient sample size or variation to compare a factor for that JDC. For the most part, the trends within the four largest JDCs were similar to the findings for all six (6) JDCs combined; however, sometimes group differences failed to reach statistical significance due to small sample size (e.g., minority status in Tooele).

<sup>29</sup>  $\phi < .30$

<sup>30</sup>  $\phi = .35$

	Weber	Salt Lake	Tooele	Utah	Statewide
<b>Demographics</b>					
Age at Intake (Mn)					
Term	16.6	16.1	16.0	16.6	16.3
Grad	16.8	16.0	15.9	16.6	16.2
Gender (% Graduated)					
Female	61*	84	73	70	76*
Male	42*	78	62	68	70*
Minority Status (% Graduated)					
White	52	78*	68	67	71*
Minority	33	62*	49	62	56*
<b>Court History</b>					
Age at First Incident (Md)					
Term	13.5	14.5	14.2	14.3*	14.2*
Grad	13.8	14.5	14.1	14.8*	14.5*
Total Lifetime Prior Incidents (Md)					
Term	9.5	3.0*	3.0*	6.5*	5.0*
Grad	7.5	2.0*	2.0*	5.0*	3.0*
Severity of Priors (Md)					
Term	F3	MB	MB	MA	MA
Grad	MA	MB	MB	MA	MB
Delinquency Priors (% Graduated)					
No	--	83*	73*	77*	79*
Yes	--	74*	58*	65*	65*
On Probation Prior to JDC (% Graduated)					
No	--	--	--	--	71
Yes	--	--	--	--	59
PSRA at Intake (% Graduated)					
Low	--	--	--	80*	73*
Moderate	--	--	--	78*	70*
High	--	--	--	40*	43*

\*Difference between Graduates and Terminated Clients statistically significant at  $p < .05$

The next table (Table 31) examines the relationship between during-JDC factors and exit status. Statewide, those who were on probation during JDC were less likely to graduate than those who were not on probation during JDC. More frequent treatment provider UAs and all five non-compliance measures (e.g., positive drug tests, new incidents during JDC) were also significantly related to lower graduation rates. However, the relationship between negative exit status and more frequent drug testing may represent treatment provider testing policies, where those who are suspected of using are tested more frequently. New incidents occurring during drug court were examined by offense type (AOD-specific and delinquency-specific). Having either an AOD or delinquency offense was related to negative exit status. Again, although there were several statistically significant predictors, the relationship between during JDC factors and graduation was weak for most factors.<sup>31</sup> A couple exceptions were any during JDC new incidents and AOD-

<sup>31</sup>  $\phi < .30$

specific incidents for Tooele, where the relationship between those noncompliance factors and exit status was low.<sup>32</sup>

For the four largest JDCs, similar trends emerged (see Table 31), with noncompliance being related to termination. One finding that was contrary to the statewide analysis was being on probation during drug court in Utah County, where those on probation were *more* likely to graduate. This may represent a different use of probation during drug court in Utah County compared to the other JDCs. Another finding that was unique to a single JDC was found in Weber, where graduates spent a significantly longer amount of time in the program, on probation while in the program, and in treatment, compared to terminated clients. This may demonstrate that in Weber County terminated clients are removed from the program somewhat earlier in the process than in other JDCs. It should be noted that although higher rates (average percent) of high drug tests were significantly related to negative exit status for statewide analyses and several of the individual drug courts, all programs graduated people who had high tests and terminated people who never had a positive drug test. Plainly, drug relapse during drug court is not a necessary or sufficient condition for termination; however, a greater proportion of high tests are related to a greater likelihood of termination.

**Table 31** During JDC Factors' Relationship with Graduation Status

	Weber	Salt Lake	Tooele	Utah	Statewide
<b>JDC Participation</b>					
Days in JDC (Mn)					
Term	245*	241	181	237*	234
Grad	345*	217	182	281*	243
On Probation During JDC (% Graduated)					
No	--	81*	--	64*	75%*
Yes	--	35*	--	72*	62%*
Of those, Days on Probation During JDC (Mn)					
Term	276*	--	--	244	253
Grad	338*	--	--	265	284
Treatment Duration (Mn)					
Term	254*	--	--	200	208
Grad	397*	--	--	190	235
Average Days between Treatment Services (Mn)					
Term	5.8	--	--	2.8	5.9
Grad	5.0	--	--	2.6	5.1
Average Days between Treatment Provider UAs (Mn)					
Term	4.2	--	--	7.2	5.2*
Grad	4.8	--	--	6.6	7.0*
Average Days between Court UAs (Mn)					
Term	13	19	28*	27	22
Grad	25	17	17*	36	24
<b>During JDC Compliance</b>					
Percent High Tx Provider UA(s) (Mn)					
Term	9*	--	--	12	10*
Grad	1*	--	--	9	4*

<sup>32</sup> Any new incident phi = -.385; AOD new incident phi = -.402

	Weber	Salt Lake	Tooele	Utah	Statewide
Percent High Court UA(s) (Mn)					
Term	21	26	19*	26	23*
Grad	12	15	4*	19	12*
Any New Incident During JDC (% Graduated)					
No	58*	86*	79*	75*	80*
Yes	35*	59*	39*	60*	55*
AOD New Incident During JDC (% Graduated)					
No	51	83*	75*	71*	75*
Yes	33	54*	24*	61*	53*
Delinquency New Incident During JDC (% Graduated)					
No	54*	84*	68	73*	76*
Yes	32*	54*	50	52*	50*

\*Difference between Graduates and Terminated Clients statistically significant at p < .05

### Post-Exit Recidivism

Factors that were related to post-exit recidivism were examined for JDC participants from the four largest JDCs (Weber, Salt Lake, Tooele, and Utah) from 2003-2007 and the comparison group of AOD probationers from 2003-2007. Post-exit recidivism includes having *either* a new incident in CARE after exiting JDC or probation *or* a new adult arrest record in BCI after exiting the programs. Factors were first examined in relation to presence or absence of recidivism for both groups combined. Then group membership (JDC vs. AOD probation) was added as a final factor to see if differences between the two groups were statistically significant after controlling for other factors that were related to recidivism.

**AOD Recidivism.** Several factors were examined in relation to post-exit AOD recidivism in bivariate analyses. As shown in Table 32, male JDC and probation participants, as well as those with more severe delinquency histories prior to participation and those with more violations during participation, were more likely to have a new AOD offense after exiting JDC or probation.

	Non-Recidivists	AOD Recidivists
<b>Demographics</b>		
Age at Intake (Mn)	16.5	16.5
% Male*	68	83
% Minority	25	25
<b>Court History</b>		
Age at First Incident (Md)	14.5	14.4
Delinquency Priors pre/at first AOD Incident* (Mn)	1.9	2.2
Pre-Start Delinquency Priors* (Mn)	3.2	3.6
Pre-Start AOD Priors* (Mn)	2.4	2.7
Pre-Start Person Priors (Mn)	0.4	0.5
Severity Pre-Start Max (Md)	MA	MA



**Table 32** Factors' Relationship with Post-Exit AOD Recidivism  
for 4 Largest JDCs and AOD Probationers 2003-2007

	Non-Recidivists	AOD Recidivists
Program Compliance		
Contempt and Violations* (Mn)	0.9	1.2

\*Difference between AOD recidivists and non-recidivists statistically significant at  $p < .05$

The five factors that were significantly related to post-exit AOD recidivism in the bivariate analyses presented in Table 32, above, were included in a logistic regression analysis predicting AOD recidivism. In addition, group membership (JDC vs. AOD probation) was added to this analysis to determine if these two groups differed significantly on the likelihood of having a new AOD offense after exiting their programs, after controlling for other significant factors.

Table 33, below, presents the three factors that were significantly related to AOD recidivism after controlling for each other. The odd's ratios (OR) presented in Table 33 indicate that male participants are 2.2 times more likely to be AOD recidivists than female participants, while each additional AOD incident prior to JDC or probation start and each additional contempt or violation during JDC or probation are each associated with a 10% increase in the likelihood of post-exit AOD recidivism (ORs = 1.1). Group membership was not significantly related to AOD recidivism, meaning that there was no significant difference between JDC and AOD probation youth on AOD recidivism after controlling for the three factors in Table 33. The logistic regression model was statistically significant and did not depart significantly from an ideal model. However, it only accounted for approximately 6% of variance in recidivism. This indicates that several other important factors in determining AOD recidivism were not included in the model. The model correctly predicted 80% of AOD recidivists, but only 36% of non-recidivists.

**Table 33** Factors Significantly Related to Post-Exit AOD  
Recidivism in a Logistic Regression Analysis

Factor	Odd's Ratio
Male	2.2
Pre-Start AOD Priors	1.1
Contempt and Violations	1.1

***AOD Recidivism for 4 JDCs only.*** The same process that was undertaken to examine the factors related to AOD recidivism for JDC and AOD probationers combined was also conducted with participants from the four largest JDCs alone. This process was replicated with JDC participants alone to determine if certain factors that were only available for this subset of youth (e.g., graduation status, which JDC the youth participated in) were significantly related to the likelihood of AOD recidivism. This process could also identify if certain factors were only significantly related to recidivism within the JDC population, but not with AOD probationers (e.g., severity of prior offenses). As shown in Table 34 on the next page, similar factors were related to AOD recidivism for JDC participants (such as gender, total delinquency priors, and contempt/violations), as were related to AOD recidivism among the combined JDC and AOD probationer sample reported in Table 32. Severity of priors before starting JDC also significantly differed between AOD recidivists and non-recidivists. Although the median was equivalent to a Class A Misdemeanor for both groups (MA in Table 34 on the next page), the average was

slightly more severe than a Class A for AOD recidivists and slightly less severe than a Class A for non-recidivists.

**Table 34** Factors' Relationship with Post-Exit AOD Recidivism for 4 Largest JDCs 2003-2007

	Non-Recidivists	AOD Recidivists
<b>Demographics</b>		
Age at Intake* (Mn)	16.4	16.6
% Male*	64	78
% Minority	13	13
<b>Court History</b>		
Age at First Incident* (Md)	14.9	14.6
Delinquency Priors pre/at first AOD Incident* (Mn)	1.1	1.9
Pre-Start Delinquency Priors* (Mn)	2.0	2.7
Pre-Start AOD Priors (Mn)	2.1	2.3
Pre-Start Person Priors (Mn)	0.2	0.2
Severity Pre-Start Max* (Md)	MA	MA
<b>% Recidivists by JDC^</b>		
Weber	46	54
Salt Lake	47	53
Tooele	63	38
Utah	38	62
<b>Program Compliance</b>		
Contempt and Violations* (Mn)	0.8	1.0
% Graduated*	66	57

\*Difference between AOD recidivists and non-recidivists statistically significant at  $p < .05$   
^Percent recidivists significantly different by JDC

Factors that were significantly related to AOD recidivism in the bivariate analyses presented in Table 34, above, were loaded into a logistic regression model. The final model contained only the variables that remained significantly related to AOD recidivism in the logistic regressions, with JDC location (e.g., Tooele, Utah) added to see if JDC location was a significant predictor of AOD recidivism on top of the other significant factors. As shown in Table 35 on the next page, four factors remained significantly related to AOD recidivism when the unique contribution of each was measured. The odd's ratios in Table 35 demonstrate that male JDC participants were almost twice as likely (OR = 1.9) as female participants to have a new AOD offense after leaving JDC. Having more severe prior offenses (e.g., having a Class A misdemeanor over a Class B) was associated with a 30% increase in the likelihood of AOD recidivism after leaving JDC. Each year older a participant was at intake and graduating from JDC were associated with a 20% and 30% reduction in likelihood of AOD recidivism, respectively. After controlling for these four significant factors, JDC location (e.g., whether a youth participated in Utah or Tooele JDCs) was not significantly related to AOD recidivism. This confirms that the differential recidivism rates among the JDCs is due to differences in participant characteristics and individuals' graduation statuses, rather than different levels of success among the four largest JDCs. The model presented in Table 35 was statistically significant, didn't depart significantly from an ideal model, and accounted for approximately 9% of variance in AOD recidivism. It correctly predicted 52% of non-recidivists and 70% of AOD recidivists.

**Table 35** Factors Significantly Related to Post-Exit AOD Recidivism for JDC Participants in a Logistic Regression Analysis

Factor	Odd's Ratio
Male	1.9
Age at Intake	0.8
Severity Pre-Start Max	1.3
Graduated	0.7

**Delinquency and Criminal Recidivism.** Factors that were examined in relation to post-exit delinquency and criminal recidivism in bivariate analyses for JDC and AOD probationers combined are presented in Table 36. JDC and probation participants who were younger at intake, male, and minority, were more likely to have a new delinquency or criminal offense after exiting those programs. Several factors representing severity of delinquency prior to JDC/probation start were also associated with greater likelihood of delinquency/criminal recidivism post-exit.

**Table 36** Factors' Relationship with Post-Exit Delinquency/Criminal Recidivism for 4 Largest JDCs and AOD Probationers 2003-2007

	Non-Recidivists	AOD Recidivists
<b>Demographics</b>		
Age at Intake* (Mn)	16.6	16.4
% Male*	68	84
% Minority*	20	30
<b>Court History</b>		
Age at First Incident* (Md)	14.8	14.2
Delinquency Priors pre/at first AOD Incident* (Mn)	1.7	2.4
Pre-Start Delinquency Priors* (Mn)	2.8	4.0
Pre-Start AOD Priors (Mn)	2.5	2.6
Pre-Start Person Priors* (Mn)	0.4	0.5
Severity Pre-Start Max (Md)	MA	MA
<b>Program Compliance</b>		
Contempt and Violations* (Mn)	0.9	1.3

\*Difference between delinquency/criminal recidivists and non-recidivists statistically significant at  $p < .05$

The significant factors related to delinquency/criminal recidivism in the bivariate analyses in Table 36 were loaded into a logistic regression model predicting delinquency/criminal recidivism. Minority status, however, was removed from the model due to too many cases with missing data. Group membership (JDC vs. probation) was also added to the model. Table 37 on the next page, presents the variables that were significantly related to delinquency/criminal recidivism in the final logistic regression model. Males were over twice as likely as females to have delinquency/criminal recidivism post-exit (see Odd's Ratio (OR) = 2.1 in Table 37), while each year older a youth was at their first incident was related to a 10% decrease in the likelihood of delinquency/criminal recidivism (OR = 0.9) Each additional contempt or violation during JDC or probation increased the likelihood of post-exit recidivism by 20%. Lastly, after controlling for all of these significant factors, JDC participation was associated with 30% less likelihood of delinquency and criminal recidivism. This means that JDC participants are significantly less likely than AOD probationers to have delinquency and criminal recidivism, even after

controlling for these other factors. There was a concern that JDC status was highly correlated with number of delinquency priors, since probationers had significantly more delinquency priors than JDC youth. An additional logistic regression was run with JDC status removed to see if delinquency priors became a significant predictor of recidivism. Delinquency priors failed to reach statistical significance in this follow-up model, while gender, age at first offense, and contempt/violations remained significantly related to delinquency/criminal recidivism. The model presented in Table 37 was statistically significant, didn't depart from an ideal model, and accounted for approximately 10% of variance in delinquency/criminal recidivism. Although this is an improvement over the AOD recidivism model, there is still substantial variance in recidivism that is not explained by the variables that are included in the model. The model in Table 37 correctly identified just over 60% of both recidivists and non-recidivists.

**Table 37** Factors Significantly Related to Post-Exit  
Delinquency/Criminal Recidivism in a Logistic Regression Analysis

Factor	Odd's Ratio
Male	2.1
Age at First Incident	0.9
Contempt and Violations	1.2
JDC Membership	0.7

***Delinquency and Criminal Recidivism for 4 JDCs only.*** The same process that was undertaken to examine the factors related to delinquency/criminal recidivism for JDC and AOD probationers combined was also conducted with participants from the four largest JDCs alone. Table 38, below, shows the factors that were examined in relation to delinquency/criminal recidivism following JDC exit for the four largest JDCs. Those who had new delinquency and criminal offenses after exiting JDC were more likely to be male, younger at JDC intake, and have more severe juvenile court histories. Although both non-recidivists and delinquency/criminal recidivists had a median of a Class A Misdemeanor as their most serious offense prior to program start, the average was slightly more severe than a Class A for recidivists, and slightly under a Class A for non-recidivists. Delinquency/criminal recidivists also had more contempt/violations during JDC participation and lower graduation rates than non-recidivists. Delinquency/criminal recidivism rates also varied by court location (e.g., Weber vs. Salt Lake).

**Table 38** Factors' Relationship with Post-Exit Delinquency/Criminal Recidivism  
for 4 Largest JDCs 2003-2007

	Non-Recidivists	Del/Crim Recidivists
<b>Demographics</b>		
Age at Intake* (Mn)	16.5	16.4
% Male*	65	79
% Minority	11	15
<b>Court History</b>		
Age at First Incident* (Md)	14.9	14.3
Delinquency Priors pre/at first AOD Incident* (Mn)	1.2	1.8
Pre-Start Delinquency Priors* (Mn)	1.9	3.0
Pre-Start AOD Priors (Mn)	2.2	2.3

**Table 38** Factors' Relationship with Post-Exit Delinquency/Criminal Recidivism for 4 Largest JDCs 2003-2007

	Non-Recidivists	Del/Crim Recidivists
Pre-Start Person Priors (Mn)	0.2	0.3
Severity Pre-Start Max* (Md)	MA	MA
<b>% Recidivists by JDC<sup>^</sup></b>		
Weber	52	49
Salt Lake	63	38
Tooele	73	27
Utah	46	56
<b>Program Compliance</b>		
Contempt and Violations* (Mn)	0.7	1.2
% Graduated*	69	51

\*Difference between AOD recidivists and non-recidivists statistically significant at  $p < .05$   
<sup>^</sup>Percent recidivists significantly different by JDC

The factors that were significantly related to delinquency/criminal recidivism in the bivariate analyses presented in Table 38, above, were loaded into a series of regression analyses that examine the unique contribution of each variable on the likelihood of delinquency/criminal recidivism post-JDC. As shown in Table 39, three variables remained significantly related to delinquency/criminal recidivism after the unique contribution of each one was considered. Male JDC participants were twice as likely (OR = 2.0) as female JDC participants to have a new delinquency or criminal recidivism event after exiting the program. Each additional contempt or violation during JDC increased the likelihood of post-JDC delinquency/criminal recidivism by 40% (OR = 1.4), while graduating from JDC decreased the likelihood of recidivism by 40% (OR = 0.6). The model presented in Table 39 was statistically significant, didn't depart significantly from an ideal model, and accounted for 10% of variance in recidivism. It correctly identified 85% of non-recidivists and 41% of recidivists. An additional logistic regression model was run with the three significant variables from Table 39, plus JDC location (e.g., Weber, Salt Lake) added as a final factor. The addition of this variable caused the model to depart significantly from the ideal model, indicating that the numeric results of this test are not trustworthy to report.<sup>33</sup> Therefore, Table 39 only reports on the previous significant model that did not include JDC location.

**Table 39** Factors Significantly Related to Post-Exit Delinquency/Criminal Recidivism for JDC Participants in a Logistic Regression Analysis

Factor	Odd's Ratio
Male	2.0
Contempt and Violations	1.4
Graduated	0.6

<sup>33</sup> However, the addition of JDC location did not change the relationship between the other three variables and delinquency/criminal recidivism. JDC location was not significantly related to delinquency/criminal recidivism in this model either.

## Discussion and Conclusion

The six JDCs examined in this study varied widely in years of operation, number and type of youth served, and length and type of services provided. Due to the great variance between the JDCs in both operations and type and quality of records, the majority of analyses were limited to data that could be pulled from the state juvenile court database, CARE. From these records JDC participants were examined by pre-JDC court involvement and demographics, during-JDC recidivism (new incidents), and post-JDC juvenile recidivism. CARE data were also used to identify a comparison group of AOD probationers. Adult recidivism analyses were conducted for the four largest JDCs (Weber, Salt Lake, Tooele, and Utah) versus the AOD probationers.

Across all six JDCs, the majority of participants had both AOD and delinquency priors, except in Salt Lake and Tooele JDCs where over half had only AOD offenses prior to JDC start. The most commonly used substances were marijuana and alcohol, although SASSI results indicate that not all youth met criteria for dependence. All courts had some youth who had new incidents during participation, ranging from 25% in Salt Lake to 47% in Utah. During-JDC recidivism rates reported in this study are comparable to past studies of Utah JDCs. For example, in a study of Weber JDC by Byrnes (n.d.), 25% of JDC youth had a new AOD incident one year following program intake. Findings in this report are that approximately 18% of Weber youth had a new AOD offense while active in the program (and average program length was just over 9 months). Post-JDC juvenile recidivism ranged from 18% in Grand to 41% in Tooele, however, opportunity for accruing post-JDC juvenile recidivism varied significantly by JDC, due to the age of participants at program exit.

The examination of adult data allowed for a clearer picture of long-term recidivism and some general themes developed:

- Individuals and groups who were **more court-involved prior** to JDC/probation start **remained more** likely to continue with juvenile and adult criminal justice involvement (e.g., AOD probationers vs. JDC participants; Weber and Utah vs. Salt Lake and Tooele, Terminated clients vs. Graduates).
- Those with **more court involvement prior** to intervention were also more likely to **show the greatest reductions** in offending (e.g. AOD probationers, Weber and Utah participants).
- There were **no differences** between AOD probationers and JDC participants (from the four largest JDCs) **on AOD recidivism**, even after controlling for other significant factors (gender, AOD offense history, and contempt/violations). It should be noted that AOD probationers may also receive some form of substance abuse treatment, often as a condition of probation.
- There was a **significant difference** between AOD probationers and JDC participants **on delinquency/criminal recidivism**, and this significant difference remained even after controlling for other factors related to delinquency/criminal recidivism (gender, age at first incident, and contempt/violations).

This final finding is an important one, as other analyses suggested that lower rates of delinquency/criminal recidivism for JDC participants was primarily related to their status as less involved with delinquency prior to JDC start. This finding suggests that even when JDC participants are similar to AOD probationers in gender, age at first incident, and violations during participation, JDC involvement still offers some protection against future delinquency/criminal offending.

Recidivism results in this study are comparable to findings in other JDC studies. One previous unpublished dissertation study of the Salt Lake JDC examined post-exit recidivism in both juvenile and adult records (Tranchita, 2004), and reported similar findings to this study. For instance, during JDC, 20% of participants had a new arrest, compared to 25% of the Salt Lake JDC participants in this study who had a new during-JDC incident. Followed for an average of 4.26 years after exiting JDC ( $SD = 1.8$ ), Tranchita found that just over 50% of his Salt Lake JDC sample had a new arrest. This study's findings were that 47% of Salt Lake JDC participants had a new offense in the 30 months following JDC exit when juvenile and adult records were combined. A single study of JDCs found in the published literature examined recidivism into the adult system. In this study, JDC recidivism varied from 44% to 60%, depending upon exit status (graduate vs. terminated) and JDC (this study also examined multiple JDCs within a state) (Thompson, 2004). These results are similar to the combined juvenile and adult recidivism rates of 44% to 63% for the participants of the four largest JDCs in Utah. Two other JDC studies showed no better outcomes on some recidivism measures for JDC participants than comparison groups at one year (Gilmore et al., 2005) and two year follow-up periods (Sloan, Smykla, & Rush, 2004). Lastly, a final study showed significant improvements on recidivism from pre- to post-JDC; however, there was not a significant difference between JDC participants and opt-outs on the level of improvement (Hartmann & Rhineberger, 2003). This is similar to the findings in this study of significant reductions in AOD and delinquency/criminal recidivism rates from pre- to post-JDC for graduates and terminated clients, but no difference in the rate of improvement on AOD offending by JDC exit status.

### **Strengths**

The main strengths of this study relate to the amount and quality of data that were available for inclusion in the study. CARE data was available on all of the JDC participants and allowed for detailed examination of pre-JDC court histories and demographics, as well as during and post-JDC juvenile recidivism. Because all participants from inception until spring of 2007 from all six JDCs were included in the study, the sample size was sufficient for reliable and detailed statistical analyses. Inclusion of adult data was necessary, as several JDC participants were near or over 18 years of age at program exit, but also a major strength of this study. The inclusion of adult data demonstrated that using juvenile recidivism alone over estimates recidivism rates by only examining youth who were younger at JDC start and exit, and, therefore, more likely to recidivate by the life-course-persistent model (Moffitt, 1993; those who start younger often continue offending longer and more severely). Cooperation of all parties involved also strengthened this study and allowed for the inclusion of the most comprehensive and best data available at each of the JDCs.

## Limitations

A primary limitation of this study was the variety and quality of data available from each of the six JDCs, as well as the types of services that each offered. This mix in both data quality/availability and services offered made it difficult to analyze exactly “what worked” and “what did not work.” Essentially, results demonstrated that youth who are more delinquent at JDC start remain more likely to be involved in the criminal justice system after JDC exit, although they show a more marked decline in offending rates after participation. However, the lack of detailed JDC service data means we could not get inside the “black box” of JDC participation. It does appear that JDC participation (and juvenile probation for that matter) is associated with significant improvements in AOD and delinquency/criminal recidivism; however, a proportion of youth do continue with illegal behavior after participation.

The next important limitation of this study was the lack of an appropriate comparison group. As detailed in Appendix C, several attempts were made to identify a similar comparison group in juvenile court records; however, JDC youth seem to be a unique sample within the juvenile court population. This may be viewed as a strength of the Utah JDCs, and suggest that they are serving a group of youth who are different than probationers and youth who participate in different juvenile court programs; however, it makes evaluating the effectiveness of JDCs more difficult.

## Recommendations

Results of this study indicate a couple of clear areas where JDCs can improve their outcomes:

- First, it is recommended that JDCs **target higher risk youth**, where they can have a larger impact on reductions in recidivism. Salt Lake has already begun this shift to high risk youth; however, the youth included in this study were from prior to that change in policy.
- As the JDCs target higher risk youth, they should also **focus on intensity of treatment dosage**, such as intense interventions at the beginning of the programs (like Weber).
- It is also recommended that the JDCs work to further **refine their programs**, providing similar **services that are targeted and appropriate to their populations**, as well as in **compliance with best practices** for juvenile drug courts. Again, work on this recommendation has already begun, with retired adult drug court Judge Dennis Fuchs conducting adult and juvenile drug court site visits to provide feedback on compliance with the key principles, such as courtroom conduct and legal representation.

Other areas for improvement relate to discrepancies or deficiencies that were uncovered during the evaluation process:

- Some of the JDCs did not have participant manuals or formalized program descriptions, others were outdated. It is important to **create written manuals, policies, and procedures** and keep them up-to-date.



- Some of the JDCs struggled to provide clean and readily available records on participants' names, juvenile court IDs, and start and end dates and statuses. This most basic information is the building block of all examinations of programs' effectiveness. It is necessary for programs to keep **comprehensive, accurate client lists**. If they have the resources, they should also track all screened participants and the reasons for inclusion or exclusion.
- JDCs should also work with their **treatment providers** to ensure that those **records are available and useful for examination**. The quality of records at treatment providers varied so greatly, and records were quite difficult to access in many occasions, as to be of minimal use in this study. As part of their contract with treatment providers, JDCs should have access to data that will allow them to examine the variance in treatment usage and effectiveness for their participants.
- Lastly, we suggest that across JDC, CARE, and treatment provider records that a **basic set of records** be kept that allow for future process and outcome evaluations. A recommended list developed by the National Drug Court Institute (NDCI; Heck, 2006) is provided in Appendix E. This list was developed for adult drug courts; therefore, not all of the measures will be relevant to JDCs. Most of the NDCI recommendations on personal data and post-program measures can be found in CARE. The "In-Program Documentation" section describes records that should be kept at the local JDC level, such as hearings, sanctions/incentives, and services.

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**Appendix A** Brief Summary and Comparison of Utah Juvenile Drug Courts

	<b>2nd District-Weber</b>	<b>3rd District-Salt Lake</b>	<b>3rd District-Tooele</b>	<b>4th District-Utah</b>	<b>7th District-Emery</b>	<b>7th District-Grand</b>
<b>Year Began<sup>1</sup></b>	2003	1995	1999	1998	2000	2003
<b>Average Youth per Year<sup>1</sup></b>	31	53	22	60	1	11
<b>Graduation Rate<sup>1</sup></b>	48%	79%	66%	68%	70%	74%
<b>Referral Source</b>	Probation Officers	Probation Officers	Judge and other sources	Probation Officers	Defense Attorney	Judge
<b>Use PSRA/PRA?</b>	Yes	Yes	Yes	No	Yes	Yes
<b>Use SASSI?</b>	Yes	Yes	Yes	Yes	No	Yes
<b>Use Teen ASI?</b>	No	Yes	Yes	Yes	Yes	Yes
<b>Participant Handbook?</b>	Yes	Yes	Yes	No	Yes	No
<b>Participation Tracks</b>	Probation	Plea in Abeyance and Probation (only Probation currently)	Plea in Abeyance and Probation	Plea in Abeyance	Plea in Abeyance	Plea in Abeyance and Probation
<b>Parents' Involvement Required?</b>	Yes	Yes	Yes	Yes	Yes	Yes
<b>Number of Phases</b>	4	3	No Phases	4	4	1 (2nd phase proposed)
<b>Program Length</b>	12 months	6 months	4-6 months	up to 15 months	9-12 months	3-4 months
<b>Random UA Testing?</b>	Yes	Yes	Yes	Yes	Yes	Yes
<b>Frequency of UA Testing</b>	Varies by Phase: 3 x per week in P1 to 1 x per week in P4	Varies by priority assignment: low 2 x per month to high 5-6 times per month	3 x per month	Varies by priority assignment: low 4-6 x per month to high 10-12 x per month	Varies by Phase: 3 or more x per week in P1 to 1 x per week in P4	1 x per week

	<b>2nd District- Weber</b>	<b>3rd District- Salt Lake</b>	<b>3rd District- Tooele</b>	<b>4th District- Utah</b>	<b>7th District- Emery</b>	<b>7th District- Grand</b>
<b>Judicial Hearing Frequency</b>	Every other week	Bi-monthly	Once a month minimum	4 courtrooms: 2 meet every other week, 2 meet once per month	Every other week	Once a week
<b>Use Sanctions?</b>	Yes	Yes	Yes	Yes	Yes	Yes
<b>Use Incentives?</b>	Yes	Yes	Yes	Yes	In process of implementing	Yes
<b>Treatment Provider</b>	Weber Human Services	Salt Lake County Substance Abuse Authority contracting agencies	Tooele unit of Valley Mental Health	Intermountain Center for Cognitive Therapy contracted by Utah County Division of Substance Abuse	Four Corners Community Behavioral Health	Four Corners Community Behavioral Health
<b>Treatment Costs</b>	\$1,500/month	Current Not Available	\$3,100 per person (includes court & tx)	\$4,987 per person (includes court & tx)	\$160/month	Not Available
<b>Additional Funding Sources</b>	Utah Department of Human Services; Weber Human Services	Utah Department of Human Services	Tobacco Settlement Funds	Federal Youth Court and GPRA Grants	State Substance Abuse Funds; Health Department Supplements; Emery School District Funds	Not Available

<sup>1</sup>Results in these rows from data calculations by UCJC. Remainder of information provided by JDCs.

## Appendix B Juvenile Drug Court Literature Review

### Literature Background

Juvenile drug courts were created in the mid-1990s, following the initial success of problem-solving courts in the criminal courts and an overall shift toward therapeutic justice (American University, 1999; Applegate & Santana, 2000). As of December 2007, there were 455 juvenile drug courts in operation throughout the country (Huddleston, Marlowe, & Casebolt, 2008). Although the specific treatment and content of the programming is different for each of these problem-solving courts, the primary drug court philosophy and components are relatively consistent across each. There are a number of elements to the drug court model. These include: 1) screening and assessment, 2) individualized treatment plans, 3) judicial supervision, 4) community-based treatment, 5) a designated courtroom, 6) regular status hearings, 7) accountability and compliance monitoring, 8) sanctions and incentives, 9) comprehensive services, 10) non-adversarial team approach, and 11) case dismissal or reduction for successful completers (NADCP, 1997; Office of Justice Programs, 1997). In the case of juvenile drug courts, however, a number of changes had to be made to the model in order to address the differences between juveniles and adults. While the model still emphasizes addressing the underlying issues, these issues are often significantly different among adolescent populations.

Some of these juvenile specific issues include: 1) the conflict between a desire for independence and the juvenile's dependence on their family, 2) physical and emotional maturation and development, and 3) the important role that peers and peer pressure play (Belenko & Dembo, 2003). The juvenile's desire for independence is one of the challenges faced by treatment professionals when working with juveniles. Treatment professionals often find it difficult to convince juveniles to change their behavior. This lack of a desire to change may be largely due to the juvenile's immaturity and overall feeling of invincibility. However this resistance can pose a problem due to the importance that the participants make the decision to change and do not feel they are being forced to do so. Some research has shown that drug addiction cannot be successfully addressed and treated until the person receiving the treatment is ready to change (DiClemente & Prochaska, 1998).

### Juvenile Drug Court Evaluations

#### Graduates vs. Terminated Clients

In general, JDC evaluations have shown that program graduates tend to do better both during and after program exit than those who are terminated from the program.

Evaluations of the **Santa Clara County Juvenile Drug Treatment Court** and the **Delaware Juvenile Drug Court Diversion Program** were the first published JDC evaluations. Considering the relative infancy of JDCs, results in Santa Clara County were limited but promising. Due to small sample sizes, statistical significance was not observed on a number of variables including clinical progress (as indicated by the Adolescent Drug Abuse Diagnosis (ADAD) instrument) and stability (as indicated by placement in residential facilities as opposed to community facilities). Despite the limitations of this study, marginal success was noted. For

instance, decreased positive drug screens and criminal citations were observed in those who graduated from the programs as compared to those who were unsuccessfully terminated. Specifically, those who graduated had nearly 10 months of consecutively clean drug tests during the study period. Additionally, graduates averaged 0.44 criminal citations during program participation (lasting one year) which was almost half the number for juveniles who did not graduate (0.77). Success was also observed in the courts' ability to retain participants. In fact, the researchers noted that the JDCs had a retention rate of 67%, which was only 4% lower than the national average for adult drug courts (71%) (Shaw & Robinson, 1998).

Applegate and Santana (2000) also demonstrated the influence treatment compliance plays in recovery in their evaluation of the **Orange County Juvenile Substance Abuse Treatment Court (JSATC)**. The JSATC program offers outpatient (individual, group, and family therapy and education), and in some cases residential substance abuse services, as an alternative to prosecution. Nearly half (42%) of all JSATC participants successfully completed the program and these graduates fared considerably better than unsuccessfully terminated participants on a number of variables. Specifically, graduates' level of functioning, as indicated by the Children's Global Assessment Scale, increased by 17.9 points compared to a 1.6 decline in unsuccessfully terminated participants. Additionally, graduates recidivated at a significantly lower rate than unsuccessfully terminated participants (7% compared to 21%). Time to re-arrest was also much sooner for non-graduates. These findings strongly suggest that treatment compliance is a significant factor in court success.

The above studies provide insight into the short-term effectiveness of JDC's. Only one study was identified as assessing JDC recidivism rates in participants once they had reached adulthood. This study assessed participants in two juvenile drug courts in North Dakota, the **East Central Judicial District (EC)** and the **Northeast Central Judicial District (NEC)** (Thompson, 2004). Arrests and convictions of the JDC participants (both graduates and terminated) were tracked for four years following court completion in an effort to determine if JDC participation decreased recidivism rates into adulthood. The answer to this question appears to be mixed. One of the JDCs, the NEC, proved effective in reducing the probability that juvenile drug court graduates would re-offend as adults. Specifically, graduates of the NEC court recidivated at a lower rate (44%) than similar offenders who were terminated from the EC court (52%), or graduated from the EC JDC (60%). NEC participants also had fewer felony convictions than terminated and graduated EC participants (7%, 12% 10% respectively), were less likely to have a substance use related charge (21%, 48%, 50% respectively), and averaged fewer offenses than the comparison group and those who opted-out of the program. While these results are promising, they highlight the less than encouraging recidivism rates of participants in the EC. As previously mentioned, graduates of the EC JDC recidivated at a higher rate (60%) than individuals who were terminated from the same program (52%). The authors provided explanations for the failed objectives seen in EC as compared to NEC: 1) length of stay in the EC drug court was much briefer than in the NEC JDC (7.8 versus 11.1 months) and 2) juveniles who were admitted to the EC were older than those admitted to the NEC (average age at admission is recommended to be between 15 ½ and 16 ½ years).



## **Juvenile Drug Court Participants vs. Comparison Youth**

Because JDCs vary widely, their relative success compared to youth processed through traditional court procedures also varies. The general trend is that JDC youth fare better on measures of during and post-program recidivism than non-JDC youth; however, exceptions exist, particularly where increased supervision among JDC youth leads to increased detection of substance use and delinquent behaviors.

When **Summit County Ohio Juvenile Drug Court** participants were compared to similar offenders randomly assigned to normal court processes, it was found that drug court participants experienced fewer re-arrests and new charges than the comparison group. Specifically, JDC participants averaged one (1) arrest six months post program compared to 2.3 average arrests for the comparison group. Also, only 11% of drug court participants had three or more new charges during this time, compared to 46% of the comparison group (Dickie, 2000). It should be noted that the results were preliminary due to small sample sizes and short follow-up length.

Successful recidivism rates were observed in juvenile offenders in **three Ohio** juvenile drug courts (in Belmont, Summit, and Montgomery counties). When participants were compared to similar offenders who were not treated in a drug court, there was a statistically significant difference between the groups' re-arrest rates. Specifically, three-quarters (75%) of the comparison group was re-arrested, compared to 56% of the drug court group during JDC participation. Although not statistically significant, the drug court group also reported fewer arrests with multiple offenses (55% versus 69% for the comparison group) (Latessa, Shaffer, & Lowenkamp, 2002).

In an evaluation of **Maine's Statewide Juvenile Drug Treatment Court**, it was found that fewer JDC participants (44%) than a matched probationer comparison (52%) were re-arrested in the year following program exit; furthermore, JDC participation was a significant factor in a logistic regression indicating decreased risk of re-offending (Anspach & Ferguson, 2005).

Willard and Wright (2005) showed a lower re-arrest rate for JDC participants (43%) than juvenile drug offenders in jurisdictions without JDCs (60%); however, statistical significance on this difference was not reported.

A one-year juvenile recidivism study of North Dakota's **East Central Judicial District (EC)** and the **Northeast Central Judicial District (NEC)** drug courts found that JDC participants had significantly fewer referrals (for criminal charges) than a group of substance abusing juveniles not participating in drug court (Thompson, 2001).

A three year evaluation of the **Maricopa County Juvenile Drug Court** revealed mixed findings of effectiveness when compared to similar juvenile offenders assigned to standard probation in the county. The Maricopa County JDC combines case management, court hearings, and mandatory drug testing in the treatment of substance abusing juvenile offenders. Results were derived from a number of instruments and records for both groups over the first three years of the courts operation. In terms of recidivism, findings revealed that court participants were less likely to commit a subsequent criminal act than those receiving probation. While this finding is

promising; it was also found that drug court participants were using marijuana *as much* as probation juveniles and using cocaine 2.7 times *more than* probation participants (as indicated by drug screenings). However, this finding could indicate an increase in supervision and therefore detection, rather than an actual higher rate of drug use among the drug court participants. Additionally troubling, release data showed that the JDC directly committed participants into state facilities following court participation two times more often than probation participants suggesting that probation participants were much more likely to be successfully released into a community setting (Rodriguez & Webb, 2004).

The mixed effectiveness seen in the previous evaluation was also mirrored in a subsequent evaluation of the **Maricopa County Juvenile Drug Court** conducted by Gilmore, Rodriguez, and Webb (2005). In this evaluation, JDC participants were once again compared to similar offenders on standard probation in Maricopa County. As in the previous evaluation, it was found that JDC participants fared worse than other juvenile offenders on a number of variables. Specifically, JDC participants were nearly 4 times more likely to test positive for drugs while in the program. JDC participants were also less likely to successfully complete program requirements. In addition, subsequent delinquency, the only variable that drug court participants improved on more than probation delinquents in the initial evaluation, was no longer improved one year later. Taken as a whole, the studies' results suggest that drug court participation has no effect on reducing delinquency or drug use during treatment. The authors provided a number of explanations for these findings: that JDC participants are screened for drugs more often, that JDC participants are exposed to more social pressure to use drugs, and that the two groups are just not comparable. Regardless, the results highlight concerns regarding the effectiveness of JDCs.

Sloan, Smykla, and Rush's (2004) evaluation of the **Jefferson County Alabama Juvenile Drug Court** found JDC participation did not lead to better outcomes than a comparison intervention: Adolescent Substance Abuse Program (ASAP). Both groups included youth who were successfully, unsuccessfully, and neutrally terminated from their respective programs. When the significant effects of age, criminal history, ethnicity, gender, and termination status were partitioned out, group membership (JDC versus ASAP) was not a significant predictor of re-arrest during the 24 months following program exit. However, average time to re-arrest for the JDC group (Md = 8 months) was significantly shorter than for the ASAP group (Md = 15).

Marginal success was also observed in an evaluation of the **Kalamazoo County Juvenile Drug Treatment Court Program**. While the court did demonstrate that participant recidivism was reduced both during and one year after exiting the program for all participants (N=89), regardless of exit status (146 crimes initially, compared to 45 crimes during the program and 52 crimes one year later), they were not able to demonstrate that JDC participants fared better than similar offenders who opted-out of JDC participation. For instance, JDC participants had a pre-program crime rate of 1.64 and a post-program crime rate of 0.62, compared to a pre-program crime rate of 1.67 and post-program rate of 0.49 for those who opted-out of the JDC. In fact, it appears that those who opted-out of the court actually committed fewer crimes than those participating in the JDC. Results suggest that although JDCs are capable of reducing criminal offending among participants both during and after exiting the program (compared to pre-JDC crime rates), these

differences appear to be no greater than those observed among youth processed through regular courts (Hartmann & Rhineberger, 2003).

### **Graduates vs. Terminated Clients vs. Comparison Youth**

The most comprehensive JDC studies examine JDC youth, both graduates and unsuccessful clients, compared to traditionally processed youth. They have demonstrated that JDC graduates usually fare better than both comparison youth and those terminated from JDCs. Trends indicate that youth terminated from JDCs can have worse outcomes than comparison youth.

Studies of the **Delaware Juvenile Drug Court Diversion Program** comparing JDC youth to untreated juvenile offenders with substance abuse issues found that during-program recidivism was somewhat lower for JDC youth and post-program recidivism was best for JDC graduates and worst for terminated JDC youth, with comparison youth in the middle. Comparing new arrests during the four-month treatment period, JDC participants recidivated at a rate of 21% compared to a rate of 30% for the comparison group. While the difference was not significant, it did represent a 30% reduction in recidivism for the JDC group. Furthermore, recidivism comparisons for 12-months following program completion showed that the treatment compliant group (graduates) recidivated at the lowest rate. While this result is promising, it was also found that JDC participants who were not compliant (unsuccessfully terminated) recidivated at a higher rate (75%) than the comparison group (51%) that never received services. Despite this finding, evaluators noted that those who successfully completed the program recidivated at such a low rate that even if rates of graduates and unsuccessfully terminated participants were combined; recidivism rates were still significantly lower than those of the comparison group. In addition to demonstrating preliminary success, these results suggest that treatment compliance is perhaps the most important factor in determining JDC success (Belenko et al., 1998; Miller, Scocas, & O'Connell, 1998).

Likewise, in a follow-up to the 1998 study of the **Delaware Juvenile Drug Court Diversion Program**, O'Connell, Nestlerode, and Miller (1999) compared larger groups of successful JDC participants (n = 88), unsuccessful JDC participants (n = 52), and comparison youth (n = 81) with misdemeanor drug charges who did not enter treatment and who had similar criminal histories. At 18-months following the end of the treatment period, 67.3% of comparison youth recidivated, compared to 60.5% of unsuccessful participants and 47.7% of successful participants. The recidivism rate between successful JDC youth and the unsuccessful and comparison groups was statistically significant at 9 and 12 months following treatment exit, but did not meet statistical significance at the 18-month period.

### **Conclusion**

Results from the previously mentioned studies highlight the stark differences between individual JDCs and provide limited support for their ability to provide lasting effects and decreased recidivism. Taken as a whole, the literature provides mixed findings and is unable to clearly demonstrate support for the overall efficacy of JDCs. While this is due in part to the relative infancy of JDCs and a limited number of rigorous evaluations, even the best studies have only demonstrated mixed success over that of traditional probation. Despite this, the literature

suggests that compliance plays a crucial role in JDC success and that preliminary observations of success may advance with time.

## **Variables Associated with JDC Completion**

### **Participant Characteristics**

#### **Demographics**

There appears to be no clear relationship between **age** and graduation, with one study showing a slight advantage for younger participants (Thompson, 2004), one for older (Shaw & Robinson, 1998), and one showing no relationship (Latessa et al., 2002). Similarly, certain **minority** statuses were associated with negative JDC outcomes in two studies (Rodriguez & Webb, 2004; Thompson, 2004), but had no relationship to graduation in another (Latessa et al., 2002). **Gender** appears to have a somewhat clearer relationship with JDC outcomes, with four studies indicating somewhat worse during and post-program outcomes (recidivism, termination) for male participants (Gilmore et al., 2005; Latessa et al., 2002; Rodriguez & Webb, 2004; Thompson, 2004).

#### **Risk Factors**

Some risk factors seem to be related to decreased likelihood of JDC success; however, the evidence is not conclusive at this point.

More severe **delinquency histories** are generally associated with worse outcomes, but exceptions exist. One court found that participants who had even one previous arrest prior to the arrest leading to participation were significantly more likely to be terminated unsuccessfully from the program than those with no priors. This court also found that participants who had a lengthier court history, among those with more than two priors, were less likely to graduate from the court successfully (5.9 court referrals vs. 4.7) (Thompson, 2004). Participants of the Maricopa County JDC were also found to be at an increased risk of re-offending if they had experienced prior contact with the juvenile justice system (Rodriguez & Webb, 2004). However, the negative impact of prior contact(s) with the juvenile justice system on program completion is not absolute, as a latter evaluation of the Maricopa JDC found that criminal history did not significantly impact likelihood of program completion (Gilmore et al., 2005). Another JDC found that if a participant's most serious offense in their prior record was a drug offense, their likelihood of graduating was increased, suggesting that past drug offending vs. general delinquency is related to program success (Rodriguez & Webb, 2004).

No studies included in this review examined the relationship between **drug abuse severity** and JDC outcomes. One study did show that increased use prior to entering the program (as indicated by a higher proportion of positive drug tests) was associated with less likelihood of successfully completing the program (Gilmore et al., 2005). The literature does demonstrate that participants need to establish periods of abstinence during JDCs in order to be successful in the program (Belenko et al., 1998).

Because juveniles are not independent adults and are under the custody of an adult, **family issues** become even more important for juvenile drug courts than for their adult counterparts. Additionally, while familial stability has been assumed to play an integral role in recovery, the literature specific to JDC participants is mixed on this issue. A study of two JDCs in North Dakota found that living with both parents increased likelihood of graduation (69% of graduates lived with both parents and 71% of terminated youth lived with one parent) (Thompson, 2004). Similarly, JDC graduates in Kentucky averaged a significantly higher score on the family support of addiction recovery index of the Addiction Severity Index (ASI) than non-graduates of the JDC (Logan, Williams, Leukefeld, & Minton, 2000). However, two separate analysis of the Maricopa County JDC found that changes in guardianship did not impact program completion. Here it was found that parents' criminal history were not significant predictors of program completion, except when at least one parent was using illegal drugs. These juveniles were 3.1 times more likely to test positive for drugs than were juveniles who did not have a drug abusing parent (Gilmore et al., 2005; Rodriguez & Webb, 2004).

One JDC study found that **mentally ill** participants had a decreased likelihood of graduating from the program: 59% of JDC graduates had a mental health diagnosis compared to 90% of those terminated from the court (Thompson, 2004). Another single study demonstrated that JDC youth who had a higher **motivation level** and a greater level of self disclosure (per therapists rating) were found to be more likely to complete the program successfully (Belenko et al., 1998). Only one study examined **gang membership** in relation to JDC outcomes. It did not clearly demonstrate what role, if any, gang membership had on JDC or probation completion (Gilmore et al., 2005).

### **JDC Program Characteristics**

**Supervision intensity** has been minimally assessed for its impact on program completion. One study noted that increased supervision led to better detection of reoffending in the JDC sample, rather than representing worse outcomes for JDC youth. Participants in Maricopa County improved over individuals on probation on most measures (i.e. recidivism rates) but were found to use marijuana more often (Rodriguez & Webb, 2004). One interpretation of these findings is that supervision was one element that led to overall improvements but that it also brought an accurate portrayal of substance abuse into light that was perhaps not apparent in comparisons. One court found that **supportive comments** provided within court monitoring impacted program success (Gilmore et al., 2005). Another found that the ratio of total supportive court monitoring comments to total comments received (positive reinforcement statements made by judges, etc.) significantly impacted the likelihood of completion (Senjo & Leip, 2001). A couple of studies reported that **increased drug screenings and time spent in the program** positively impact program completion (Belenko et al., 1998 & Senjo & Leip, 2001).

In order for the juvenile to succeed in treatment, their family must be able to provide the support and structure that the youth needs (Belenko & Dembo, 2003; Bureau of Justice Assistance, 2003; Cooper, 2002). Family risk and protective factors play an important role in a juvenile's successful transition to adulthood, especially when the juvenile is battling drug addiction (Denton & Kampfe, 1994). Inclusion of families in the juvenile drug court process may be the key to successful juvenile outcomes. Because of this, some juvenile drug courts require

**mandatory family participation** and sanction family members for non-compliance or non-participation, while other programs do not require family participation, but make services available to the members of the juvenile's family and encourage their participation (Belenko & Dembo, 2003). Although the influential role of parents in the juvenile justice system has been well documented, research on their importance within the context of JDCs has been limited. No outcome studies linking mandatory family participation to JDC success were found.

The literature does not clearly indicate what effect **employment** has on program success. However, what little data does exist on this topic does not support the hypothesis that employment improves program success in JDCs. In Maricopa County, it was found that JDC participants who were employed upon entering the program were *less* likely to successfully complete program requirements (Rodriguez & Webb, 2004). However, another study found that employment was not a significant predictor of recidivism 12 months following program completion (Gilmore et al., 2005). These studies suggest that employment is not a crucial factor in program success and may not deter later delinquency. In fact, Gilmore and colleagues (2005) suggest that perhaps the added stress of employment is too much for juvenile drug court participants to handle. It has also been suggested that employment may lend access to social and environmental pressures to continue drug use and delinquency behaviors. However, it should be noted that these studies are not clearly representative of all JDCs and further research is needed on the topic before definitive conclusions can be made.

Most juvenile drug courts require regular **school attendance** and high school graduation or GED completion, for older youth, in order to graduate from the program (Belenko & Logan, 2003). Not surprisingly, as they are often requirements of JDC programs, being enrolled in school, having low rates of truancy, and having a high school diploma are all factors associated with successful program completion. For example, two JDCs in North Dakota found that only 60% of those who were unsuccessfully terminated were enrolled in school compared to 90% of graduates (Thompson, 2004). Unsuccessfully terminated participants in the Fairfield County JDC were also found to have higher rates of truancy than those who successfully completed the program (Belenko & Dembo, 2003). Similarly, an evaluation of the Maricopa County JDC found that juveniles with school problems were less likely to successfully complete the program than were offenders with no reported school problems (Gilmore et al., 2005). Lastly, JDC participants in another Ohio JDC who had a high school diploma had a significantly higher probability of completing the program, compared to those lacking a diploma (Latessa et al., 2002). Studies have shown that by increasing school attendance among their participants, juvenile drug courts have been able to drastically reduce truancy (Thomas, 1999), which has been shown to be an indicator of future behavioral and adjustment issues in adulthood (Loeber, 1996). In support of this, JDC participants in Maricopa County who were not attending school had a higher number of delinquent complaints (new charges and arrests) than those attending school (Rodriguez & Webb, 2004). This suggests that school attendance can also help reduce recidivism in the short-term.

## Evidence-Based Practices for Substance Abusing Youth

### Best-Practice Guidelines

Guidelines for establishing treatment practices for drug court participants can be found in a report by a panel of national adolescent substance abuse experts. This panel identified nine key elements of effective treatment for adolescents (Drug Strategies, 2003). Nissen (2006) then applied these elements to adolescent substance abuse treatment in juvenile justice settings. Critical elements identified include:

- 1) **Assessment and matching** - Courts are encouraged to conduct intake assessments upon adjudication or develop Juvenile Assessment Centers (JAC's) where participants can be screened using standardized measures.
- 2) **Comprehensive, integrative approach to treatment** - Case management should be provided to support collaboration and information exchange between all systems involved (e.g., substance abuse treatment, criminal justice, educational systems).
- 3) **Family involvement** - Families should be in close contact with youth in the juvenile justice system in order to provide support and receive their own treatment, if necessary.
- 4) **Age-appropriate services** - Youth should be provided with services that prepare them for adulthood such as increasing accountability and involving them in treatment planning.
- 5) **Engage and retain participants** - Treating youth with respect and acknowledging their struggles is key to retention. A minimum of 90-days in treatment has been found necessary for decreased drug usage.
- 6) **Qualifications of staff** - Staff should be trained in best practice strategies and in-house quality assurance meetings should ensue.
- 7) **Aftercare** - Courts should encourage and facilitate aftercare services, such as the Assertive Aftercare model.
- 8) **Cultural and Gender Appropriateness** - Services should be modified to address the cultural and gender-specific issues of females and non-white youth in the juvenile justice system.
- 9) **Outcomes** - Juvenile justice programs should use evidence-based practices to produce positive outcomes and to decrease community safety concerns.

### Treatment Models

Another way to understand evidence-based practice for youth in drug courts is to look at the effectiveness research on treatment for all juveniles with substance abuse problems and criminal justice involvement. In a report prepared for the Governor's Conference on Substance Abuse Prevention, Intervention, and Treatment for Youth, researchers compiled a literature review of all available research on treatment for adolescents (Titus & Godley, 1999). Summaries of the most commonly reported models for treating substance abusing juveniles follow.

**12-Step programs** typically include individual therapy, guest speakers from Alcoholics Anonymous (AA), and writing assignments centered on AA teachings. These types of programs can be delivered in inpatient or outpatient settings. *Research on the effectiveness of 12-Step programs is mixed.* For example, studies of 12-Step inpatient programs, halfway house

programs, and outpatient programs have demonstrated that completers of the programs fair better in the areas of abstinence and functionality (at school, work, and home) than those who drop out (Alford, Koehler, & Leonard, 1991). While these results are promising, one study found that 85% of adolescents returned to substance abusing in the two years following inpatient 12-Step treatment (which includes individual counseling, group counseling, therapeutic recreation, school programs, and family meetings modeled after twelve step philosophies), suggesting that 12-Step programs may have limited long term effects on adolescent substance abusers (Brown, Myers, Mott, & Vik, 1994). Additionally, Belenko and Dembo (2003) have argued that 12-Step programs are not developmentally appropriate for adolescents and should not be used with this population.

**Behavioral and Cognitive-Behavioral Therapy (CBT)** programs have demonstrated effectiveness with adolescent populations. These programs are generally delivered on an outpatient basis with highly prescriptive individual therapy that focuses on the problematic beliefs and behaviors of the adolescent. Some interventions include therapist modeling, rehearsal, self-recording of behavior between sessions, written therapy assignments, and positive reinforcement. *The effectiveness of CBT programs is mostly supported in studies that have compared CBT programs to various other therapeutic modalities*, such as insight-oriented therapy and psychoeducational treatment on the dangers of using drugs and alcohol. CBT programs have also demonstrated improvements in abstinence rates (both during and post-treatment), school attendance, parent and adolescent satisfaction, and decreased severity of peer issues. For detailed information regarding these studies refer to the following: Azrin, Donohue, Besalel, Kogan, & Acierno, 1994; Gilmore, et al., 2005; Kaminer, Burlison, & Jadamec, 1999; and Kaminer, Burlison, Blitz, Sussman, & Rounsaville, 1998.

**Family Therapy** models have gained increased attention in the treatment of juvenile substance abusers over recent years and have been found to be more effective than various other types of interventions. **Functional Family Therapy** (interventions such as relabeling, reattributing family patterns, and improving communication), **Family Systems Therapy** (combination of Structural Family Therapy and Strategic Family Therapy), **Brief Family Therapy** (integration of Structural, Strategic, Functional, and Behavioral Family Therapy models), and **Multidimensional Family Therapy** (addresses functioning within the individual, family, peer, and community) are all models of Family Therapy that have demonstrated effectiveness over other models<sup>34</sup>. *Variations of family therapy have proven more effective in general than parent-only focused interventions or group therapy* on a number of variables including drug use (self report and drug testing), parent-adolescent communication, family behavior, adolescent psychiatric symptoms, acting out behaviors, and school performance. This research suggests that family therapy can be very effective in improving a number of outcomes over other models (group therapy). For detailed information regarding these models, see the following: Concannon, McMahon, & Parker, 1990; Lewis, Piercy, Sprenkle, & Trepper, 1990; Liddle, Dakof, & Diamond, 1991; Liddle, Dakof, Parker, Diamond, Barrett, & Tejada, 2001; and Schmidt, Liddle, & Dakof, 1996. Family therapy however, is not always clearly more effective

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<sup>34</sup> Examples include: **Training in Parenting Skills (TIPS) program**: didactic family treatment and education; **Family Drug Education (FDE)**: groups of families meet for education about the effects of drugs on the individual and family; and **Adolescent Group Therapy**: standard group therapy providing social skills training, social support, and discussion



than other models. For example, Friedman (1989) compared individuals receiving functional family therapy to a group randomly assigned to parent training<sup>35</sup> and found that while both groups reported significant improvements in adolescent drug use, parent-adolescent communication, and psychiatric symptoms, there was no difference between the groups.

**Multisystemic Therapy (MST)** is an intervention strategy that addresses systematic functioning within all aspects of a child's life including family, school, peers, work, and community. MST can encompass a number of service delivery options including individual and family therapy and psychoeducational programs. *This model has been proven to be more effective than less intensive "treatment as usual" interventions*, such as standard individual counseling (an eclectic blend of psychodynamic, behavioral, etc.), Department of Youth Services interventions (usual treatment for a serious adolescent offender including probation, court attendance, and other sanctions such as a curfew), and usual Community Services (standard requirements for youth offenders including outpatient substance abuse treatment, 12-Step attendance, and possible inpatient treatment if needed). Additionally, MST has contributed to increased treatment, decreased use of alcohol, marijuana, and other drugs, and reduced arrests (both criminal and substance-related), incarcerations, and out-of-home placements compared to standard interventions for adolescent drug offenders. For further information regarding these interventions and studies refer to the following: Borduin, 1999; Henggeler, Borduin, Melton, et al., 1991; Henggeler, Pickrel, & Brondino, 1999; Henggeler, Pickrel, Brondino, & Crouch, 1996; and Schoenwald, Ward, Henggeler, Pickrel, & Patel, 1996.

## **Treatment Provision**

Few evaluations of JDC's have focused on examining which treatment elements contribute to success. Despite this, a few commonalities were observed in the literature. Treatment and support services for JDC youth should include (1) comprehensive psychosocial services, (2) sufficient resources to allow immediate referral into treatment, and (3) community-based services.

### **Comprehensive Psychosocial Services**

A review of three juvenile drug courts in Ohio found that the majority of JDC youth reported chronic or frequent disruption in areas of employment, family, and other psychosocial issues significantly more often than similar juvenile offenders not in drug court. Due to these findings and an analysis of the typical types of referrals for treatment made across courts, it was recommended that courts facilitate comprehensive psychosocial treatment for a number of areas, such as employment, education, housing, family, medical, and mental health services, in addition to substance abuse treatment (Latessa et al., 2002).

### **Resources for Treatment**

The Delaware County JDC court team (comprised of intake officers, drug court coordinator, drug court clinician, family assessor/clinician, magistrate, probation officer, and program

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<sup>35</sup> **Parent Group Model:** 24 sessions of parent training education for the parent using the Parent Effectiveness Training (PET) method and other parental training programs

director) was asked to rate the effectiveness of their alcohol/drug treatment and aftercare. Almost unanimously, treatment teams reported that a lack of resources and funding severely limited the effectiveness of treatment. It was observed that limited space and variability in treatment limited the courts ability to provide timely and effective services to all members. It was also recommended that courts improve communication between systems of care (Shaffer & Latessa, 2002).

### **Community-Based Services**

The literature on substance abusing offenders strongly suggests that treatment, for both juveniles and adults, is most effective in community settings, as opposed to residential settings. Whitehead and Lab (1989) compared the effectiveness of five types of treatment by looking at recidivism rates in 50 studies. The types of treatment programs compared included: non-system diversion, system diversion, community corrections (including probation and parole), institutional/residential treatment programs, and specialty programs (e.g., Outward Bound). Results from this meta-analysis indicated that community corrections programs had more improved outcomes than institutional/residential treatment programs. Similarly, Andrews and colleagues (1990) meta-analysis of “what works” for juvenile and adult offenders recommended the following (1) delivery of service to higher risk cases, (2) targeting of criminogenic needs, and (3) use of styles and modes of treatment (e.g., cognitive and behavioral) that are matched with client need and learning styles (Andrews, Zinger, Hoge, Bonta, Gendreau, & Cullen, 1990). Izzo & Ross (1990) conducted a meta-analysis on interventions for juvenile delinquents that also supported the use of community-based treatment, specifically CBT (cognitive behavioral therapy). Community corrections programs that have demonstrated success endorse the following treatment strategies: promoting a positive peer culture; token economies; individual, group, and family therapy; classroom and vocational education; drug and alcohol counseling; skills training; drug education skills training; academic tutoring; and community aftercare (Belenko, Spratt, & Petersen, 2004). For detailed information regarding promising community corrections programs see the following: Greenwood & Turner, 1993; Jainchill, Hawke, DeLeon, & Yagelka, 2000; and Sabatier, Bright, Glaviano, & Robinson, 1999.

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## Appendix C Comparison Group Selection Process

Four attempts at finding an appropriate comparison group were made with diverse methodology:

### 1. AOD Probationers:

Identified youth who had a probation placement ordered for an AOD/DUI incident from 2003-2007. For those that had more than one, one was randomly selected. Youth who had ever participated in a JDC were removed. Final sample size was N= 609. This group was ultimately selected as the comparison group for this study after meeting with Susan Burke and Cary Freeman at the AOC on August 20, 2009. Although AOD probationers begin offending at an earlier age and remain more delinquent than JDC participants, a more appropriate comparison group could not be identified.

### 2. State Supervision “Nearest Neighbors”:

Matched JDC youth with youth who eventually had a state supervision placement using nearest neighbor technique, matching on demographics, PSRA, and referral history. Those who did not have an AOD/DUI prior to their cut-date were removed. Final sample size was N = 399. Because this technique matched one comparison youth to one JDC youth, this process resulted in only 399 of 1524 JDC youth having a comparison case. Therefore, the resulting JDC cases were not representative of the larger JDC sample.

### 3. Matched AOD Offenders:

Process was to match JDC youth with an AOD offender who had a similar juvenile court history, rather than match to a youth who had an alternative intervention (i.e., probation). JDC youth were matched with AOD/DUI offenders from 2001-2009 on their early court history (e.g., age at first incident and AOD/DUI incident, priors leading up to first AOD/DUI). Although some youth matched with JDC participants on early court history, their court involvement trajectories differed significantly. This process resulted in too few comparison cases matching with JDC participants.

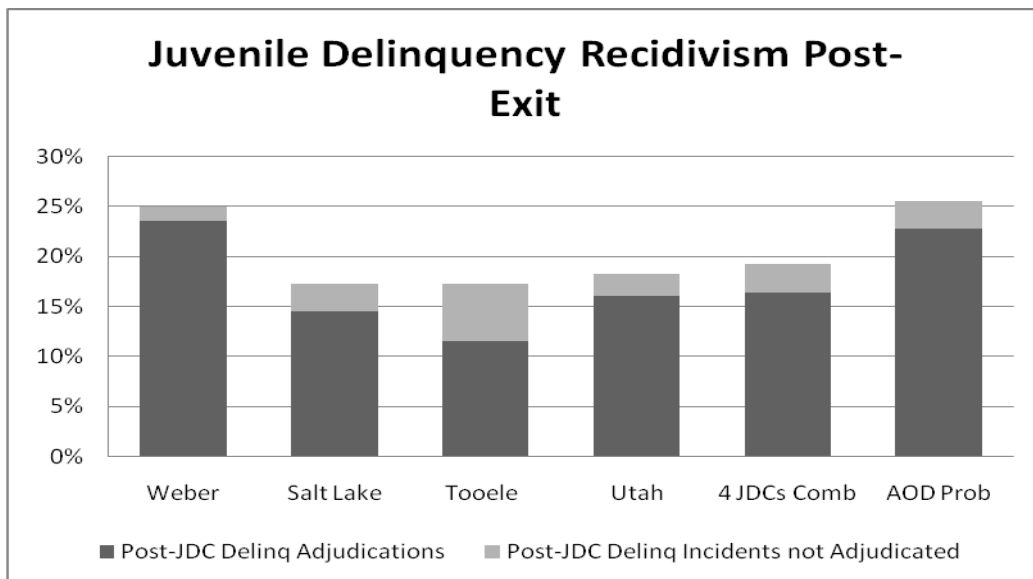
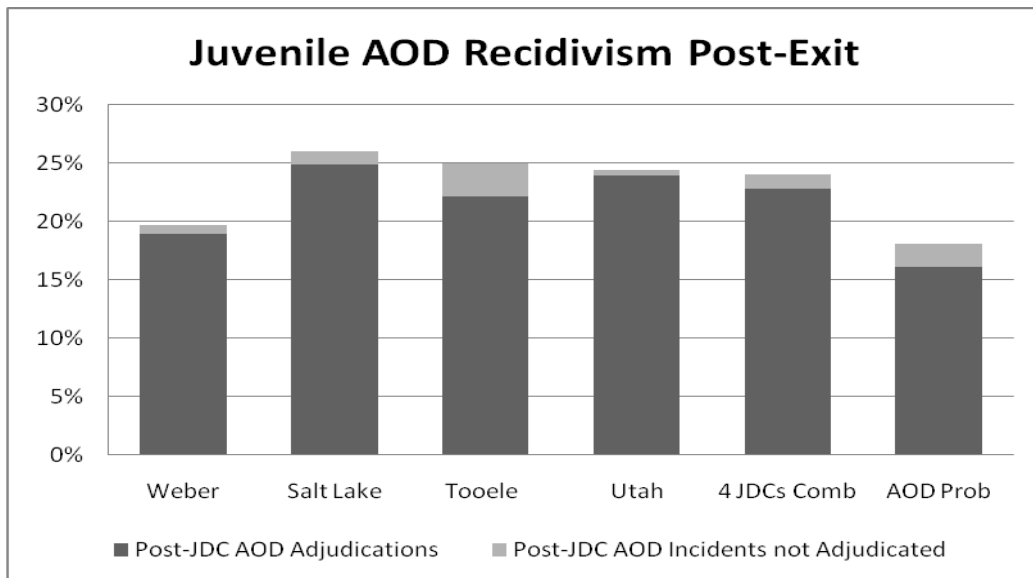
### 4. AOD Offender Population:

Randomly selected an AOD/DUI incident for each youth who had an AOD/DUI offense from 2001-2009. This became their cut-date and AOD/DUI and delinquency priors and recidivism were calculated off of this cut-date. Youth who had ever participated in a JDC and youth who were in the AOD/DUI Probationer Group (see #1 above) were removed from the sample. Final AOD/DUI Population size was N = 28,547.



## Appendix D Juvenile Recidivism Incidents and Adjudications

The following figures present the percent of youth who participated in each of the four largest JDCs from 2003-2007, as well as AOD Probationers during that same time, who had a new AOD or delinquency incident following program exit. These figures *do not* take into account varying lengths of follow-up time for each of the groups. As shown in the AOD recidivism figure below, the majority of AOD incidents resulted in adjudication. The lowest rate was in the Tooele JDC, where 23 of 26 (88.5%) former participants with a new AOD incident after exiting JDC had those incidents adjudicated. In the remaining JDCs, over 90% of AOD incidents were adjudicated. Approximately 89% of AOD recidivism incidents among AOD Probationers were adjudicated. As shown in the delinquency recidivism figure at the bottom of the page, Tooele also had the lowest adjudication rate at 67% (12 of 18 youth). The remaining JDCs and AOD Probationers had an adjudication rate on delinquency recidivism of 90% and higher.



## Appendix E Suggested Drug Court Measures

Recommended list of drug court measures for process and outcome evaluations from:

Heck, C. (2006). *Local Drug Court Research: Navigating Performance Measures and Process Evaluations*. Alexandria, VA: National Drug Court Institute.

The following list of data elements is recommended for collection by drug court programs. While all of these elements might not be readily available at program onset, it is valuable to consider the broad scope of variables that could be useful for program evaluation and research.

### I. Guidelines for Data Collection:

1. All events and activities should be tracked by date.
2. Programs can use paper to track these variables, but an automated system is preferred.
3. There are both client level and program level data elements that require tracking.
4. Baseline data should be collected on criminal history, drug use (including frequency, duration, and drug(s) of choice), and personal information (including employment, educational history, and family relationships). This information should be collected again at program completion to document change.
5. Addiction severity should be measured at program admission as well as intervals during the program and at completion to document improvement.
6. Exit interviews are valuable for both absconders and graduates.

### II. Personal Data at or Near Intake

1. Name
2. Unique System Identifier
3. Age
4. Date of Birth
5. Gender
6. Race
7. Source of Referral
8. Coercive Factors
  - a. Current Offense
  - b. Likely Sentence
  - c. Open Cases
  - d. Bench Warrants
  - e. Suspended Sentences
9. Risk Factors
  - a. Previous Offenses (misdemeanors or felonies)
  - b. Arrests
  - c. Convictions
  - d. Total Time Served
    - i. Jail
    - ii. Prison
10. Substance Abuse Factors
  - a. Primary, Secondary and Tertiary Drug of Choice

- b. Length of Use
- c. Use in Last 30 Days
- d. Age at First Use
- e. Prior Treatment Episodes
- f. 12-Step Participation
- g. Last Treatment Episode
  - i. Inpatient
  - ii. Outpatient
- h. Adult or Juvenile Treatment
- 11. Health Factors
  - a. Historical Services/Disabilities
  - b. Pregnancy
  - c. Detox Questions
  - d. Co-Occurring Disorders
  - e. Psychotropic Medications
  - f. Other Prescription Medications
- 12. Educational Factors
  - a. Years of Formal Education
  - b. GED
  - c. High School Diploma
  - d. College
- 13. Family Factors
  - a. Marital Status
  - b. Children
    - i. Custody
  - c. Welfare Status
  - d. Family Drug and Alcohol Use History
    - i. Current Use in Immediate Family
  - e. Homelessness
  - f. English as a Second Language

### **III. In-Program Documentation**

- 1. Treatment
  - a. Attendance
  - b. Type
  - c. Organization Providing Treatment
  - d. Inpatient
    - i. Time Spent in Treatment (recorded in days)
    - ii. Halfway Houses (recorded in days)
  - e. Outpatient (recorded in hours)
  - f. Participation
  - g. Progress
- 2. Court Process
  - a. Screening
  - b. Assessment
  - c. Drug Testing

- i. Scheduled
      - A. Absent
      - B. Administered
    - ii. Type of Test
      - A. Panels
    - iii. Outcome
      - A. Positive
      - B. Negative
      - C. Absent
      - D. Stalled
      - E. Tampered
      - F. Inconclusive
  - d. Program Start Date
  - e. Status Hearings
  - f. Encounters with Judge
  - g. Last Date of Contact (used primarily for absconders)
  - h. Sanctions and Incentives
    - i. Precipitating Event
    - ii. Type of Sanction or Incentive
    - iii. Completion of Sanction
    - iv. Who Imposed the Sanction or Initiated the Incentive
    - v. Severity
  - i. Court Fines and Fees
    - i. Paid
    - ii. Assessed
- 3. Services (referral and performance)
  - a. Mental health
  - b. Medical
  - c. Vocational
  - d. Educational
  - e. Public Assistance
  - f. Housing
  - g. Family
- 4. New Charges or Arrests
  - a. Charge
  - b. Date of Incident
  - c. Date of Arrest
  - d. Conviction
  - e. Type of Charge
    - i. Drug Charge
    - ii. DUI
    - iii. Theft
    - iv. Violent Crime
    - v. Crime against Person

#### **IV. Post-Program and Follow Up**

1. Aftercare
2. Continued Treatment
3. 12-Step Participation
4. Support Groups
5. Arrests
  - a. Charge
  - b. Date of Incident
  - c. Date of Arrest
  - d. Type of Charge
    - i. Drug Charge
    - ii. DUI
    - iii. Theft
    - iv. Violent Crime
    - v. Crime against Person
    - vi. Conviction