Document Title:	**Final Report of the Cross-Site Evaluation of the Juvenile Drug Treatment Court (JDTC) Guidelines and Data Elements Specifications**
Author(s):	**Michael L. Dennis, Barbara Estrada, Kathryn A. Modisette, Steven Belenko, Matthew Hiller, Doris Weiland, Chelsey Cain, Raanan Kagan, Lauren Pappacena, Erika Ostlie, John Carnevale, Juliette Mackin, Shannon Carey**
Document Number:	**306475**
Date Received:	**April 2023**
Award Number:	**2014-DC-BX-K001**

FINAL REPORT OF THE CROSS-SITE EVALUATION OF THE JUVENILE DRUG TREATMENT COURT (JDTC) GUIDELINES

Michael L. Dennis, Barbara Estrada, & Kathryn A. Modisette
Chestnut Health Systems, Normal, IL

Steven Belenko, Matthew Hiller, Doris Weiland, & Chelsey Cain
Temple University, Philadelphia, PA

Raanan Kagan, Lauren Pappacena, Erika Ostlie, & John Carnevale
Carnevale Associates LLC, Washington, DC

Juliette Mackin & Shannon Carey
NPC Research, Portland, OR

December 31, 2022

This resource was prepared by the author(s) using Federal funds provided by the U.S. Department of Justice. Opinions or points of view expressed are those of the author(s) and do not necessarily reflect the official position or policies of the U.S. Department of Justice.

Acknowledgements

The development of this report was funded by subaward 0373700105 under Grant #2014-DC-BX-K001 awarded to the American Institutes for Research (Dr. Roger Jarjoura, Project Director) by the Office of Juvenile Justice and Delinquency Prevention and managed by the National Institute of Justice, Office of Justice Programs, U.S. Department of Justice (Jen Tyson, Project Officer). The authors thank the youth, their families, and staff from the 10 jurisdictions that participated in this research, the full evaluation team, AIR, OJJDP, NIJ, and the advisory board for their help in conducting this study, and Kate Hart, Casey Sarapas, Kelli Wright, Kate Kissick, Tim Ho, and Brian Lee for assistance with the analysis. The opinions, findings, and conclusions or recommendations expressed in this document are those of the author(s) and do not necessarily reflect those of the Department of Justice or any other federal, state, or local government. Please direct comments and questions to Dr. Michael Dennis, Chestnut Health Systems, 448 Wylie Drive, Normal, IL 61761, Email: mdennis@chestnut.org, Phone: 309-451-7801, Fax: 309-451-7765.

TABLE OF CONTENTS

1. OVERVIEW OF JUVENILE DRUG TREATMENT COURT (JDTC) GUIDELINES CROSS-SITE EVALUATION 8

1.1 Review of Prior Research 8
Figure 1a. Recidivism Across 41 Evaluations 8
Figure 1b. Large Variation by Study 8

1.2 The 2016 JDTC Guidelines 9
Figure 1c. Graphical Representations of the 2016 JDTC 31 Evidence-Based Guidelines Organized into 7 Objectives 10

1.3 Evaluation Goals & Research Questions 10

1.4 Summary of Research Design 11
Table 1a. Overview of Proposed Research Design 12

1.5 Cross-Site Evaluation Team 15
Figure 1d. Juvenile Drug Treatment Court (JDTC) Cross-Site Evaluation 16

1.6 COVID-19, Case Flow, & Other Challenges to the Original Plans 16

2. COURT-LEVEL METHODS & FINDINGS 18

2.1 Methods: Assessing Program Design, Implementation, Fidelity to JDTC Guidelines & Change Over Time. 18
2.1.1 CSA Methods 18
2.1.1.1 Sources & Tools 19
Table 2a. Cronbach Alpha Results (JDTC and TJC) 20
2.1.1.2 Procedures 20
2.1.2 Site Visit Methods 20
2.1.2.1 Protocols & Processes 21
Table 2b. Site Visit Timing 21

2.2 Data Processing & Analyses 23
2.2.1 Court Self-Assessments 23
2.2.2 Site Visits 24
2.2.2.1 Guided Discussion Data 24
2.2.2.2 Court Observation Data 25
Figure 2a. Court Observation Researcher Agreement by Site & Dimension 26
Figure 2b. Court Observation Mean Scores by Site & Dimension 27
2.2.3 Documentation 27
2.2.3.1 Court Self-Assessments 27
2.2.3.2 Site Visits 27
2.2.4 Overlapping Methods: Merging CSA & Site Visit Data 28

2.3 Court-Level Results 28
2.3.1 CSA Findings 28
Table 2c. Significant Differences ($p < .05$) between JDTC & TJC at Both Baseline & Follow-up 29
Table 2d. Significant Differences between JDTC & TJC at Baseline Only 30

Table 2e. Significant Differences between JDTC and TJC at Follow-up Only....30
2.3.1.1 Comparison of JDTC & TJC at Baseline....30
Figure 2c. Overall Adherence by Court Type & Site....32
Figure 2d. Difference in Guidelines Achievement Between JDTC & TJC Within Site....32
Figure 2e. Comparison of JDTC & TJC at Baseline by Objective....33
Figure 2f. Self-Reported Adherence by Objective & Court Type....34
2.3.1.2 Changes in JDTC & TJC Over Time (Changes in Trajectory)....34
Figure 2g. JDTC Change from Baseline to Follow-up by Objective....35
Table 2f. JDTC Change from Baseline to Follow-up by Objective....36
Figure 2h. TJC Change from Baseline to Follow-up by Objective....36
Table 2g. TJC Change from Baseline to Follow-up by Objective....37
Figure 2i. Comparison of JDTC & TJC at Follow-up by Objective....37
Table 2h. Comparison of JDTC & TJC at Follow-up by Objective....38
2.3.1.3 Range of Guidelines Implementation Across Sites....38
2.3.1.4 Comparisons Between JDTCs & Their Respective TJCs....39
2.3.1.5 Areas JDTCs Focused on Through TTA....40
2.3.2 Overview of Site Visit Findings....41
2.3.3 Variation in JDTC Guidelines & Objectives....42
2.3.3.1 Family Engagement (Objectives 1 & 3)....42
Figure 2j. Community Events & Parent Groups....43
Figure 2k. Dedicated Staff & Family Role in CM (with No Other Role)....43
2.3.3.2 Training (Objective 1)....44
2.3.3.3 Clarification of Roles (Objective 1)....44
2.3.3.4 Education & School Connections (Objectives 1 & 6)....44
Figure 2l. School Representative Role....45
2.3.3.5 Eligibility, Referral, Screening, & Admission (Objective 2)....45
Figure 2m. Reported Average Juvenile Justice Contacts Prior to JDTC Enrollment....46
Table 2i. Coordinator-Reported Average Time from JDTC Referral to Formal JDTC Enrollment....47
2.3.3.6 Incentives & Sanctions (Objectives 3 & 5)....47
Figures 2n & 2o. Formalized Incentives & Sanctions Systems....48
Figure 2p. “Public” vs. “Private” Administration of Major Sanctions (e.g., incarceration)....49
2.3.3.7 Use of Detention (Objective 5)....49
Figure 2q. Average Length of Stay in Detention, When Used (Site Visit Self-Report)....49
Figure 2r. Percentage of Youth in Custody or Taken into Custody During Site Visit Observation....50
2.3.3.8 SUD Treatment Providers, Fidelity, & TJC Overlap (Objective 6)....50
Figure 2s. JDTC SUD Treatment: Number of Providers....51
Figure 2t. SUD Treatment Availability in TJC....52
2.3.3.9 Case Management & Probation (Objective 5)....52
2.3.3.10 Judge Engages Parent During Court (Objective 3)....53
2.3.3.11 Judge Engages Youth During Court & Uses a Non-Judgmental and Procedurally Fair Approach (Objective 3)....53
Figure 2u. Court Observation Mean Scores by Site & Dimension....54
2.3.3.12 Youth Perception of Incentives/Sanctions as Fair (Objective 5)....55
2.3.4 Site Variation: Descriptive Findings....55
2.3.4.1 JDTC Size....55
Figure 2v. JDTC Size & Structure....56
2.3.4.2 JDTC Tracks....56
Figure 2w. JDTC Use of “Tracks”....56
2.3.4.3 Phase Progression Determination....56
2.3.4.4 Probation Caseloads & Staffing....57

2.4 Summary & Recommendations from Court-Level Findings....57
2.4.1 Recommendations....57

2.4.2 Key Takeaways that Inform the Outcome Study 59

3. YOUTH LEVEL METHODS & RESULTS 61

3.1 Assignment Mechanism & Controlling for Differences between Groups 61
3.1.1 Random Assignment (RA) Experiment 61
Figure 3a. Case Flow Diagram for Random Assignment (RA) Experiment 62
3.1.2 Needs-Based Assignment Quasi-Experiment 63
Figure 3b. Case Flow Diagram for Needs-Based Assignment Quasi-Experiment 64
Figure 3c. GAIN Substance Use Disorder Screener & Crime & Violence Screener 65
Figure 3d. Feasibility of Using Needs-Based Assignment to Predict Recidivism 66
Table 3a. GAIN Crime & Violence Screener & Substance Use Disorder Screener Groups based on Past Year Symptoms: Case Distribution & Ability to Predict Recidivism 67

3.2 Data Sources, Tools, & Primary Outcome Measures 68
3.2.1 Youth Juvenile Justice Records Abstraction 68
3.2.2 Youth Surveys 69
Table 3b. Crosswalk of Data Source, Primary Instrument Source, & Modifications Made 69
3.2.3 Youth Survey Procedures 71

3.3 Analyses 72
3.3.1 Administrative Data Record Abstraction 72
3.3.1.1 Administrative Data for SUD Treatment Cascade Outcomes 72
3.3.1.2 Administrative Data for Drug Test Results 72
3.3.1.3 Administrative Data for Recidivism Analyses 73
3.3.2 Survey Data 74
3.3.3 Recruitment Case Flow & Compliance With Court Type Assignment 74
Table 3c. Mean Surveys Per Month Pre- & Post-COVID (All Sites) 75
3.3.4 Recruitment & Follow-up Survey Summary 75
Table 3d. Baseline *N* & Follow-up Completion at 6 & 12 months by Design & Site 75
3.3.5 Attrition Analysis for 6-Month & 12-Month Follow-up 76
3.3.5.1 Random Assignment Site 76
3.3.5.2 Needs-based Assignment Sites (Table 3f) 77
Table 3e. Attrition Bias Analysis in the 1 Random Assignment Site 80
Table 3e. continued 81
Table 3f. Attrition Bias Analysis in the 3 Needs-Based Assignment Sites 82
Table 3f. continued 83
3.3.6 Comparison of Youth Characteristics at Baseline by Court Type 84
3.3.6.1 Demographics 84
3.3.6.2 Substance Use 84
3.3.6.3 Delinquency Behaviors & Justice System Involvement 85
Table 3g. Baseline Demographic, Substance Use, Justice, Characteristics by Assignment Method & Court Type 86
Table 3g. continued 87
3.3.6.4 Health Risk Behaviors & Victimization (Table 3h) 88
Table 3h. Baseline Risk Behaviors & Victimization by Assignment Method & Court Type 88
3.3.6.5 Mental Health & Wellbeing (Table 3i) 89
Table 3i. Baseline Mental Health & Wellbeing by Assignment Method and Court Type 91
Table 3i. continued 92
3.3.6.6 Family & Peer Risk (Table 3j) 92
Table 3j. Baseline Family & Peer Risk by Assignment & Court Type 93

3.4 Substance Use Disorder (SUD) Services Cascade Outcome 94
Figure 3e. SUD Service Cascade Outcomes: Random Assignment (78 youth from 2 sites) 94
Figure 3f. SUD Service Cascade Outcomes: Needs-Based Assignment (331 youth from 8 sites).....95
Figure 3g SUD Service Cascade: Needs-Based Assignment Sites TJC vs. JJ-TRIALS 96

3.5 Urine Test Outcomes 96
Figure 3h. Urine Test Results: Random Assignment (2 sites).....97
Table 3k. Regression Analysis Controlling for Baseline Use 97
Figure 3i. Urine Test Results: Needs-Based Assignment (8 sites).....98

3.6 Recidivism Outcomes..... 99
Table 3l. Recidivism Within 6 and 12 Months of Assignment by Court Type: Random Assignment Site A 99
Figure 3j. Evaluation of Recidivism Risk Adjustment.....100
Table 3m. Rearrests for Non-status Offense in 12 Months after Assignment by Design, Site, & Court Type[a] 102
Figure 3k. Rate of 12-month Rearrest for Non-status Offense by Design, Site, & Court 103

3.7 Self-Reported Youth Outcomes..... 103
3.7.1 Substance Use.....103
Table 3n. Change in Youth-Reported Substance Use by Study Design 104
3.7.2 Self-reported Arrest 104
Table 3o. Change in Youth-Reported Arrests by Study Design 105
3.7.3 Mental Health 105
Table 3p. Change in Youth-Reported Mental Health by Study Design.....105

3.8 Summary & Recommendations from Youth-Level Findings..... 105
3.8.1 Key Takeaways 106
3.8.2 Recommendations 106

4. CONCLUSIONS & RECOMMENDATIONS 109

4.1 Reprise of Project & Findings 109
4.1.1 Chapter 1: The Cross-site Evaluation Project.....109
4.1.2 Chapter 2: Court-Level Findings.....109
4.1.3 Chapter 3: Youth-Level Findings 110

4.2 Implications & Recommendations Related to the JDTC Guidelines 110
4.2.1 Changes to Existing Guidelines 110
4.2.2 Additions to the JDTC Guidelines.....111
4.2.3 Other Issues to Clarify in the Guidelines.....111

4.3 Implications & Recommendations Related to JDTC Training & Technical Assistance..... 111
4.3.1 Immediate Steps 111
4.3.2 Specific Training & Technical Assistance Needs.....112

REFERENCES.....114

APPENDICES 117

Appendix A. Court Self-Assessment (CSA)..... 117

Appendix B. Site Visit Protocol, Fidelity Coding Tool, De-identified JDTC Logic models..... 117

Appendix C. Excel File Used for Record Abstraction..... 117

Appendix D. Youth Assent, Parent Consent, & Youth Survey..... 117

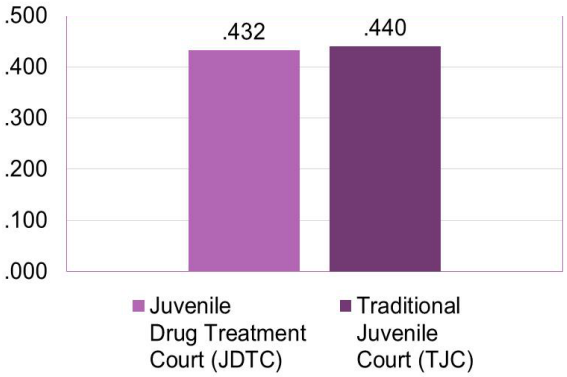
Appendix E. Summary of Changes During COVID-19 117

1. OVERVIEW OF JUVENILE DRUG TREATMENT COURT (JDTC) GUIDELINES CROSS-SITE EVALUATION

1.1 Review of Prior Research

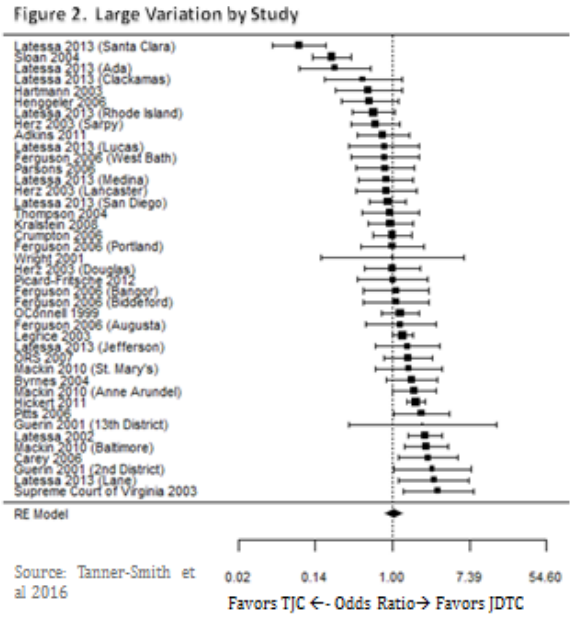
Because of a growing concern about the relative effectiveness of Juvenile Drug Treatment Courts (JDTC) and Traditional Juvenile Courts (TJC), the Office of Juvenile Justice and Delinquency Prevention (OJJDP) entered into a cooperative agreement with the American Institutes for Research (AIR) to launch a 7-year plan to better understand the evidence, develop a new set of guidelines based on this evidence, and then evaluate the effectiveness of the new guidelines (for more information, see https://www.ojjdp.gov/research/initiative-to-develop-and-test-juvenile-drug-treatment-court-guidelines.html). As shown in Figure 1a, the project's meta-analysis of 41 experimental or quasi-experimental evaluations comparing JDTC and TJC showed both approaches exhibited similar effects on recidivism (Tanner-Smith et al., 2016a; 2016b). The implication of this finding is that despite additional labor and cost of JDTC, to date there was no evidence of a benefit of using one approach over another. However, a comparison of individual studies found large variations; as shown in Figure 1b, in the 3 studies at the top, the JDTC did worse than TJC (95% confidence intervals farther to the left than average), compared to TCJ. Even more noteworthy is the finding that 9 other studies highlighted at the bottom of Figure 1b showed that JDTC did better than TJC (95% confidence intervals farther to the right than average). Other key findings of the review included: a) the findings were similar for recidivism overall and for drug-related crime; b) JDTC programming often was not well focused on those who benefited the most from it; c) substance use treatment initiation and engagement were often problematic; d) youth were often referred to substance use treatment "as usual," which had separately been shown to have little or no effect relative to no treatment; and e) few programs referred youth to the "evidence-based" substance use treatment that did have significant effects on substance use and recidivism relative to treatment as usual and no treatment (Tanner-Smith et al., 2013; 2016a; 2016b). Limitations of the prior studies included low overall methodological quality of the research (i.e., small sample sizes, low follow-up rates, non-standardized measures) and variations in study methods/findings, making them difficult to combine.

Figure 1a. Recidivism Across 41 Evaluations



Source: Tanner-Smith, Lipsey & Wilson, 2016

Figure 1b. Large Variation by Study



Source: Tanner-Smith et al 2016

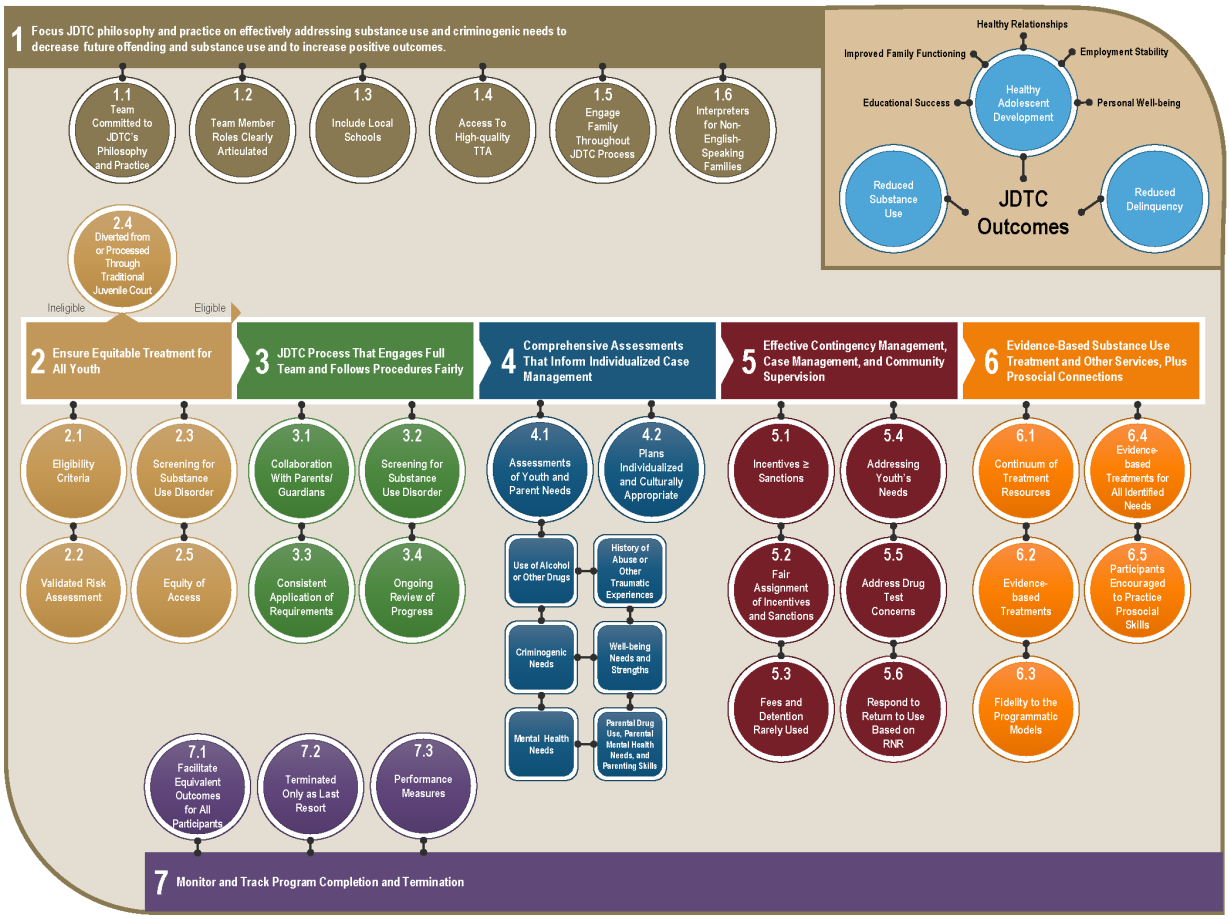
The rest of this first chapter summarizes the 2016 JDTC Guidelines (1.2), the evaluation goals and research questions (1.3), the evaluation design (1.4), the evaluation team (1.5), and the changes that had

to be made in response to COVID-19 pandemic (1.6). Chapter 2 describes the cross-site results in terms of guideline implementation by court type and the logic models used. Appendix A includes a memo describing the differences between the JDTC and TJC course self-assessment (CSA), a copy of the most detailed CSA used, and the de-identified results of for each wave by court type within each of the jurisdictions/sites. Appendix B provides a copy of the generic site visit protocol, a table with coding of JDTC characteristics by site and de-identified logic models for each of the JDTC. Chapter 3 describes the cross-site results from records (justice, treatment, and urine), as well as baseline risk/needs and outcomes from youth self-report. Appendix C provides a copy of the Excel file used for record abstraction. Appendix D provides a copy of the youth assent and parent consent and the youth survey used at enrollment, 6 and 12 months, noting questions asked only at enrollment. Appendix E includes a summary of the changes occurred during COVID. Chapter 4 provides a summary of the findings, identified several limitations and next steps. The latter focuses on the immediate implications for training and technical assistance.

1.2 The 2016 JDTC Guidelines

JDTCs are designed for youth with substance use disorders (SUD) who come into contact with the juvenile justice system. The new guidelines provided juvenile courts with an evidence-based, treatment-oriented approach that emphasizes family engagement and use of evidence-based treatment models, and addresses the substance use and often co-occurring mental health disorders experienced by the youth. The 2016 JDTC Guidelines (OJJDP, 2016) combined the findings from a meta-analysis of research on JDTCs (Tanner-Smith et al., 2016a; 2016b), a JDTC systematic research review/qualitative synthesis (Wilson et al., 2016), a JDTC policy scan (Choo et al., 2016), a meta-analysis and systematic review of adolescent substance use treatment research (Tanner-Smith et al., 2013; 2016b), as well as a systematic review of the factors that impact the quality of child welfare, public health, and education programs for adolescents (Campie & Sokolsky, 2016). Using what was learned from this body of work, the 2016 JDTC Guidelines were an attempt to encourage courts to use more of the practices that, "on average," were associated with less recidivism and substance use, as well as to encourage courts to move away from practices that were associated "on average" with more recidivism and substance use. AIR partnered with a research team, experts in the field, and other federal agencies to develop the Guidelines to support judges and professional court staff, young people with substance use disorders, and their families. The Guidelines include 31 evidence-based guideline statements shown in Figure 1c. These guidelines are organized into 7 objectives: 1) Focus JDTC philosophy and practice on effectively addressing substance use and criminogenic needs to decrease future offending and substance use and increase positive outcomes; 2) Ensure equitable treatment for all youth; 3) JDTC process that engages full team and follows procedures fairly; 4) Comprehensive assessments that inform individualized case management; 5) Effective contingency management, case management, and community supervision practices; 6) Evidence-based substance use treatment and other services, plus prosocial connections; and 7) Monitor and track program completion and termination. The Guidelines also include summaries of the supporting research and considerations for implementation for each guideline statement.

Figure 1c. Graphical Representations of the 2016 JDTC 31 Evidence-Based Guidelines Organized into 7 Objectives



1.3 Evaluation Goals & Research Questions

This study is the first cross-site evaluation of the 2016 JDTC Guidelines. The goals of the evaluation were to: a) Determine the extent to which it is feasible to implement the 2016 JDTC Guidelines and the kinds of adaptation courts make to use them; b) Examine the impact on youth of the JDTC relative to TJC; c) Identify evidence for some components of the Guidelines being more or less important or not important; and d) Recommend changes to the Guidelines based on a-c. The specific research questions are:

Q1. Do youth with substance use disorders (SUD) experience more positive outcomes if assigned to a JDTC rather than to a TJC?

Q2. Are different interpretations of the Guidelines by the courts associated with better outcomes?

Q3. Are there certain Guidelines that, if present, are associated with better outcomes?

Q4. Are there Guidelines that, if absent, do not seem to be associated with worse outcomes (i.e., they are not necessary)?

Q5. Do some of the seven broad objectives have a stronger association with outcomes than others?

Q6. Is there counterfactual evidence that instances of NOT following the Guidelines produces worse outcomes?

Across sites, the outcomes evaluated include differences in a) recidivism (new arrests); b) substance use and symptomatology; c) internalizing (depression, anxiety, symptoms of trauma, suicidal ideation or behaviors) and externalizing (conduct, attention deficit, hyperactivity, gambling) mental health symptomatology. Though not included in this report, the study also collected and is making publicly available outcome data on d) well-being (happiness, connectivity, self-worth); e) relationship with parents/guardians and very important adults; f) peer risk and support, g) involvement in prosocial structured activities; and h) academic performance (grades, attendance). All youth outcomes were measured based on self-report at 6- and 12-months post-entry to the study. Recidivism was measured based on 12 months of justice records after entry to the study.

Because of the overlap between JDTC and TJC processes, as well as considerable variability in each across sites to address local circumstances, two additional goals of the study were to describe a) the extent to which elements of the Guidelines were implemented in JDTC and TJC before and after the evaluation and b) the various logic models used to implement the Guidelines. In general, individualized assessment was expected to identify youth most appropriate for a) traditional juvenile courts (TJC) vs. JDTC (ages 14–17, high risk for re-offending, and SUD), and b) who would benefit from evidence-based treatment (EBT) related to SUD. Ideally, JDTCs include well-developed procedures and a high functioning team; engage parents/guardians in inclusive and culturally competent dways to help the youth initiate, engage, and be retained in evidence-based treatment for SUD; and provide wraparound services including judicial oversight, behavioral management, alcohol and other drug (AOD) testing, case management, and monitoring. Together, these strategies were expected to improve family functioning, educational success, and well-being, thereby reducing the likelihood of substance use and delinquent activity. Youth were expected to react differently to the above services in different ways based on a range of "moderators," such as degree of trauma, social competence, fidelity of program implementation, and intensity of services provided. Engagement, support, and risks from peers, family, and community were also expected to mediate the effectiveness of the model. Court self-assessments of Guideline implementation were supplemented with in-person site visit. To ensure accurate reporting, summaries of guideline implementation results relative to cross-site averages and the draft logic models were provided to the courts for further feedback and refinement.

1.4 Summary of Research Design

The cross-site evaluation involved two parallel studies across 10 sites, defined as a county or other jurisdiction with a participating Juvenile Drug Treatment Court (JDTC) and a participating Traditional Juvenile Court (TJC). In 2 sites, youth who were eligible for JDTC ***and*** TJC were randomly assigned (RA) to JDTC vs. TJC. This design provided the most rigorous and direct effect of JDTC's impact relative to TJC. In the remaining 8 sites, youth who were eligible for JDTC ***or*** TJC were assigned to the most appropriate court using a needs-based assignment rule (aka regression discontinuity). Per the Guidelines, this means that youth who were at moderate to high risk of recidivism ***and*** had a mild to severe SUD were assigned to JDTC and the rest to TJC. Because these two groups are by definition different in their risk of recidivism and substance use, to meaningfully compare their outcomes we have to first adjust for their "expected" outcome based on baseline risk and need. This design also provided a test of the Guidelines' recommendation to focus JDTC on youth with moderate to high risk of recidivism

and a SUD. Court self-assessments, youth records, and youth surveys were gathered the same way across both types of assignment mechanism and type of court. Table 1a provides a contrast of the research designs for the two parallel studies, with the details discussed further in the narrative below.

Table 1a. Overview of Proposed Research Design

Assignment Method	**Random Assignment**		**Regression Discontinuity**	
Number of sites	2		8	
Number of eligible youth expected over 2 years	150/site (300 min.)		150/site (1,200)	
Inclusion requirements[a, b]	Eligible for JDTC and TJC		Eligible for JDTC or TJC	
Exclusion requirement: Adjudicated delinquent for violent offense[c]; expected to leave community within 12 months; or other court exclusion	Yes		Yes	
Percentage assigned to each type of court	50%		25% or more	
Nature of traditional juvenile court (TJC) youth comparison group	**Both** groups eligible for JDTC and TJC		Those eligible for TJC but **NOT** JDTC	
Evaluation team worked with each local site to define who is screened and how to exclude youth prior to assignment	Yes		Yes	
In addition to study criteria, court could exclude inappropriate youth from the study prior to assignment rule being applied	Yes		Yes	
Youth assent and parent/guardian consent required to participate in the evaluation study	Yes		Yes	
Assignment rule (using the same stratification variable or random assignment, regression discontinuity, and propensity score adjustment after the fact; judicial discretion could still override if needed in exceptional cases)	**Random Assignment**		**Regression Discontinuity**	
Juvenile court involvement	JDTC	TJC	JDTC	TJC
Court/team self-assessment in Year 1 and 3 to assess readiness and implementation of Guidelines	X	X	X	X
Training and technical assistance on 2016 JDTC Guidelines provided under separate contracts by American University (AU)/ National Association of Drug Court Professionals (NADCP) (3 site grants – 2 using randomization and 1 site using regression discontinuity) or NCJFCJ (all others using regression discontinuity)	X		X	
Site visits in Year 2 to assess fidelity to the JDTC Guidelines, variations, and overlap in staff and services between JDTC and TJC	X		X	
Youth records abstracted at 6 and 12 months post entry to assess baseline risk, court assignment/dispositions, service cascade, and recidivism outcomes	X	X	X	X
Youth surveys at entry, 6 and 12 months to assess baseline risk, services received, and outcomes	X	X	X	X

Notes:
[a] JDTC include courts attempting to implement the 2016 JDTC Guidelines in the context of juvenile drug treatment courts or juvenile mental health courts that also serve youth with substance use disorders; Evaluation eligibility also requires a) age 14–17; b) mod to high risk of recidivism; and c) mod to high on substance use disorder (SUD)
[b] TJC means the default court/dockets for juveniles excluding any other specialized courts; eligible for TJC excludes youth referred to diversion, or delayed or informal supervision not involving a judge; Evaluation eligibility also requires age 14–17.
[c] Violent offender means a youth who has been adjudicated delinquent (or convicted in an adult court) for a felony-level offense that (1) has, as an element, the use, attempted use, or threatened use of physical force against the person or property of another or the possession or use of a firearm or (2) by its nature, involves a substantial risk that physical force against the person or property of another may be used in the course of committing the offense [42 USC 3797u-2(b)].

- **Assignment Rule.** The two parallel types of studies varied by their intended service population and method of participant assignment. The first type of study focused on youth eligible for both JDTC and TJC and then used random assignment (RA) to place 50% into JDTC and 50% into TJC. The second type of study focused on youth eligible for JDTC or TJC and used regression discontinuity (RD) based on criminogenic and substance use severity to place at least 25% of each level of classification into JDTC or TJC.
- **Recruitment Goals and Eligibility.** The evaluation's goals were to work with the sites to recruit at least 150 youth over 20–24 months who were eligible for the chosen design, obtain their assent and parental/guardian consent, and place them into JDTC or TJC by either the RA or RD rule. Note that for the RA, eligibility was based on being ages 14–17, being moderate to high severity on crime/violence and moderate/high severity on substance use, not adjudicated delinquent for a violent offense, and not excluded by the court. For RD, eligibility was based on being ages 14–17, not adjudicated delinquent for a violent offense, and not excluded by the court—with placement into JDTC being based on being moderate to high on crime/violence and SUD, and other youth placed into the TJC (including moderate to high criminological severity but with no symptoms of SUD or need for SUD treatment).
- **Exclusion Prior to Assignment.** Prior to assignment, all sites excluded youth who were adjudicated delinquent for violent crimes (e.g., sexual offenses, assault with a weapon), who were unlikely to stay in the area for 12 months (e.g., where a change of venue was expected), or where the placement to either court was not viable based on judicial or prosecutorial discretion. While courts could still override assignment post RA/RD, our goal was to minimize this occurrence as much as possible as we primarily evaluated the courts based on how youth were initially "assigned" regardless of whether or not they remained in the JDTC.
- **Assent and Consent.** To be included in the evaluation, we required parental/guardian consent and youth assent, to be administered by the trained Evaluation Liaisons (a local person at each site who was trained on study procedures and served as a first-tier responder to questions, as well as being responsible for shepherding communication between the site and evaluation teams) at each site. AIR's Institutional Review Board (IRB) provided approval and ongoing oversight for the study. Chestnut provided assent and consent forms and procedures, and complete the paperwork required by the AIR IRB, and per the OJJDP Privacy Certificate. In one site, we needed to submit an application to the local IRB.
- **Court Self-Assessment.** Both JDTCs and TJCs were asked to complete a court self-assessment in spring 2018 and again in spring 2020 to describe the degree to which their "current" practices

were similar or different from the 2016 JDTC Guidelines. This information was used to help our evaluation understand the contrast between JDTCs and TJCs, how jurisdictions differ from each other, and how they changed over time. We measured TJCs as well because they included many of the same components that are part of concurrent juvenile justice reform efforts, use some of the same staff and treatment resources and also changed over time. Each JDTC and TJC received feedback from this assessment to help it identify where it is already doing well; where it might want training, technical assistance, or access to other resources; and where it appeared to have a unique context or was doing something unique/complex that should be documented.

- **Training and Technical Assistance on JDTC Guidelines.** The local JDTC staff received training and technical assistance on 2016 JDTC Guidelines starting in 2018 through separate contracts with the AU/NADCP for 3 sites awarded direct grants (DeKalb County Government, Decatur, GA; Eighth Judicial District Court, Las Vegas, NV; and the Youth Family Treatment Court, Denver, CO) and NCJFCJ for the remaining 7 sites (Brevard County 18th Judicial Circuit, Viera, FL; Juvenile Court of Cobb County, Marietta, GA; Montgomery County Common Pleas Court Juvenile Division, Dayton, OH; Rankin County Juvenile Justice Center, Pelahatchie, MS; Second Judicial District, Albuquerque, NM; Third Judicial Circuit of Michigan, Detroit, MI; and 34th Judicial District, Chalmette, LA). There was one exception to this structure: TTA on measurement, data collection, and other content related to the evaluation was provided directly by the cross-site evaluation team. The cross-site evaluation team and TTA teams coordinated their work and shared reports with each other and the sites.
- **Site Visits.** Site visits were conducted with each JDTC in 2018–2020 to observe differences in practices (e.g., local context, other specialized dockets/services, unique or complex features); to document differences in the local logic model of how the program works; and to make sure we understood potential overlap in judges, community supervision staff, and substance use treatment programs used by both courts within sites. A secondary objective was to look for the determinants of a core logic model that described program operations common across all sites. Again, the courts received feedback on this component to help guide their efforts.
- **Youth Record Abstraction.** Juvenile justice records were abstracted to record each study participant's history of prior arrests, current charges, changes in courts and dispositions, behavioral health services cascade outcomes (see Section 3.3, 5.3, and 6.4), and rearrests over the subsequent 12 months. The latter included the charges at the time data were gathered. The Evaluation Liaisons received feedback on the quality of their data submissions each quarter.
- **Youth Survey.** Youth in both JDTCs and TJCs were asked to complete a youth survey at study enrollment, and 6 and 12 months later. The enrollment youth surveys were used to illustrate JDTC eligibility, risk of recidivism, and substance use. Across time, the youth surveys were also be used to track changes in wellness, family functioning, peer risk, school achievement, substance use, mental health, and illegal activity. The Evaluation Liaisons received feedback on the quality of their data submissions each quarter.
- **Reporting and Feedback.** Every month after they started enrolling youth in the study, each court received a management report providing information on the number of youth approached, eligible, assigned, and followed up. As noted above, each court received feedback after each court self-assessment and the site visit, and the Evaluation Liaison received feedback on quarterly data submissions. Once there were sufficient (20) cases, we provided the sites with quarterly profiles on youth characteristics, movement within the court system, and outcomes. These reports included comparison to the cross-site data so each site knew how it compared with others. The goal of this interim reporting and feedback was to allow courts to avoid surprises and to take maximum advantage of TTA.

- **Interim, Final and Other Reports.** The evaluation team also produced interim reports every 3 months to update OJJDP on the project's progress and findings so far. These reports were distributed to the sites, AIR, and the federal funding partners. The final report and papers summarizing findings will be distributed to the sites and the field in general.

As anticipated, the sites varied in how they screened and referred youth to JDTC prior to implementation of the study. Please see Chapter 2 about the site visits for detailed information about screening and referral systems in each site. We worked with each site to identify their process and the least disruptive place to put screening and (when applicable) randomization. We attempted to have it as early as possible in the court process. Sites used a standardized screener called the Global Appraisal of Individual Needs Short Screener (GAIN-SS) so that we could compare youth going to different types of courts and across sites within types of courts. Given the Guidelines' focus on selecting the most appropriate youth for JDTC, preliminary analyses of the national GAIN-SS dataset were used to show a) that less than half of the youth who are eligible for JDTC are currently enrolled in these programs and b) how the GAIN-SS could be used for eligibility and placement to improve this situation. Thus, we also worked with sites to identify their capacity and ways to increase referrals so randomization could be presented as a fair way of allocating services among multiple eligible youth. We used the GAIN-SS in a regression discontinuity (RD) assignment design to help improve the rate of placing the most appropriate youth into JDTC. (Both of these methods are discussed further in Chapter 3).

1.5 Cross-Site Evaluation Team

Under a subcontract from AIR and OJJDP, the cross-site evaluation team was led by senior staff from Chestnut Health Systems (CHS; Dr. Michael Dennis and Barbara Estrada), Temple University (Drs. Steven Belenko and Matthew Hiller), Northwest Professional Consortium, Inc., dba NPC Research (Drs. Shannon Carey and Juliette Mackin), and Carnevale and Associates LLC (CALLC; Dr. John Carnevale, Erika Ostlie, and Raanan Kagan). This highly experienced team has over 100 years of combined experience evaluating JDTCs, assessment, and adolescent treatment; implementing multi-site experiments and quasi-experiments; and integrating qualitative and quantitative data into mixed methods. In addition to this experience, the cross-site evaluation team brought to the table one of the largest clinical data sets on youth in JDTCs and traditional courts, nationally representative survey data on juvenile justice systems in the United States, and data/experience from a cluster randomized trial of data-driven decision-making conducted with juvenile justice agencies in 34 counties in 7 states. This study is a part of a larger cooperative agreement shown on the map in Figure 1d, that required working closely with:

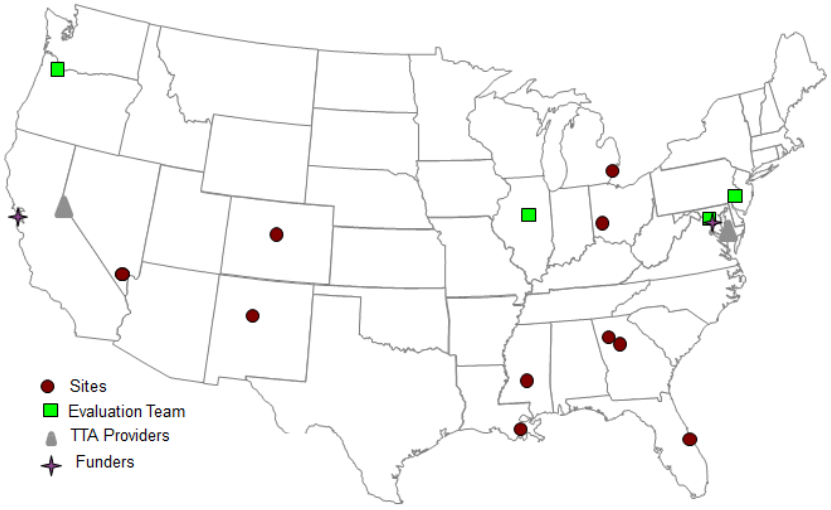
- OJJDP/NIJ, AIR, and their other grantees or subcontractors who developed and will refine the 2016 Guidelines based on findings from this effort;

- OJJDP contractors providing training and technical assistance (TTA) to implement the Guidelines, including American University (AU) and the National Association of Drug Court Professionals (NADCP) working with the first 3 grantee sites and the National Council of Juvenile and Family Court Judges (NCJFCJ) working with the other 7 sites;

- The 10 jurisdictions with both a JDTC and TJC participating in the evaluation: Brevard County 18th Judicial Circuit, Viera, FL; DeKalb County Government, Decatur, GA; Eighth Judicial District Court, Las Vegas, NV; Juvenile Court of Cobb County, Marietta, GA; Montgomery County Common Pleas Court Juvenile Division, Dayton, OH; Rankin County Juvenile Justice Center, Pelahatchie, MS; Second Judicial District, Albuquerque, NM; Third Judicial Circuit of Michigan,

Detroit, MI; 34th Judicial District, Chalmette, LA; and Youth Family Treatment Court, Denver, CO. Each of the 10 jurisdictions/sites agreed to: recruit youth for the cross-site JDTC evaluation; either randomly assign (RA) or use regression discontinuity (RD) to assign youth to a JDTC and TJC; and provide a quarter to full-time local Evaluation Liaison who was responsible for collecting data and working with the cross-site evaluation team.

Figure 1d. Juvenile Drug Treatment Court (JDTC) Cross-Site Evaluation



1.6 COVID-19, Case Flow, & Other Challenges to the Original Plans

One of the most complicating factors that impacted this study was the global pandemic in 2020–2021 and subsequent social restrictions in communities throughout the United States. In response to the spread of COVID-19, most states and localities experienced at least some type of closures or changes to court processes and other services. In particular, the most common was for courts to close to in-person hearings, treatment providers to close and/or shift to teleservices, drug testing procedures to be halted or altered, and probation/supervision activities to shift from being in person and in the home or community to being remote (such as by phone). In many communities, there were progressive or evolving changes that programs had to adjust to over time.

As part of the study, evaluation team members held monthly calls to assess study progress and problem solve any emergent issues. The evaluation team developed a spreadsheet to track each site each month and the changes that were occurring (see Appendix E). This information was used to understand the context of the impact of COVID-19 on the sites, jurisdictions, and study, as well as to be used as potential moderator variables.

Case flow: Because of court closures and stay at home orders in some locations, the rate of referrals of youth to the juvenile justice system, and consequently to the study, greatly declined during the pandemic. However, even prior to COVID, referrals to the juvenile justice system nationally were declining and some JDTC programs were facing challenges getting their local partners to refer youth to their services. Several sites experienced difficulties getting study procedures approved by their participating agencies and in place. All of these issues contributed to study numbers that were much lower than originally projected.

Other challenges to the original plans included COVID's impact on the study, as it reached beyond recruitment of the youth-level study sample. The study had planned to gather site-level information about policies and practices at two time points. The second time point occurred at the start of program shut-downs due to the pandemic and affected the availability of program staff. The evaluation team decided to ask program sites to complete the program-level assessment as of their policies and practices in place in March 2020, even if they were actually completing it later, so that it would reflect pre-pandemic operations and more accurately illustrate any changes that the program had implemented in the prior 2 years, without the complication of COVID-related changes.

2. COURT-LEVEL METHODS & FINDINGS

This chapter presents findings from the court-level analyses. Highlights of the findings include:

- Overall, the JDTCs implemented a substantial percentage of the Guidelines and increased their implementation over time.
- TJCs also implemented some of the Guidelines, and increased achievement over time, though they typically implemented fewer than the JDTCs.
- There was substantial variation across both JDTCs and TJCs in which Guidelines they implemented as well as the percentage that they implemented, with TJCs having much greater variability than JDTCs.
- JDTCs also varied widely in *how* they implemented some Guidelines, demonstrating a range of creative strategies for achieving the broader goals described in the Guidelines.

The JDTC Guidelines Cross-Site Evaluation used two primary methods of collecting court-level data: (1) a comprehensive self-report assessment of court practices and (2) site visits. The assessment was an online assessment conducted with both the JDTCs and TJCs at two points in time (baseline or "pre" and follow-up or "post" training and technical assistance [TTA]), to measure changes in Guidelines implementation. The site visit involved in-person observations and team member guided discussions by research staff, to examine comprehensively how JDTCs were operating. The primary products from the court self-assessment (CSA) were individual site-level reports summarizing Guidelines implementation (at both pre and post) and aggregate reports of Guidelines implementation illustrating change over time and comparisons between JDTCs and TJCs for the entire sample of 10 sites. The primary products from the site visits involved case flow diagrams for each site and detailed qualitative and quantitively coded descriptions of program characteristics. These were intended to supplement and inform the overall study and potentially provide moderator variables for the outcome (youth-level) analyses.

Both the CSA and the site visits were primarily designed to support the outcome study's test of whether JDTCs have a more positive impact than TJCs on moderate- to high-risk youth with substance use disorders. However, CSA and site visit findings also have insights on their own, contributing useful information for the field regarding the implementation of research-based standards of practice for treatment courts and juvenile justice systems overall. In addition, the site visits provided a rich source of data describing the many ways jurisdictions identify, refer, and serve JDTC-eligible youth and served as an informal validity check on CSA findings.

2.1 Methods: Assessing Program Design, Implementation, Fidelity to JDTC Guidelines & Change Over Time

2.1.1 CSA Methods

The court self-assessment is the primary tool for measuring implementation of the JDTC Guidelines and Objectives; that is, the degree to which JDTCs were following the treatment court model. This information is useful for identifying which Guidelines are most commonly met or unmet, where there is greatest variability across sites, which Guidelines saw the most change over time, and where JDTCs and TJCs were most alike or dissimilar. The CSA was also administered to provide potential moderator variables for the outcome study component.

Both JDTCs and TJCs were asked to complete an online survey about their court that asked close to 200 questions about potential policies, practices, partners, and resources. The data were used to describe the degree to which their "current" practices were similar or different from the 2016 JDTC

Guidelines. This information helped our evaluation understand the contrast between JDTCs and TJCs, how jurisdictions differ from each other, and how they changed over time. We measured TJCs as well because they include many of the same components that are part of concurrent juvenile justice reform efforts, use some of the same staff and treatment resources, and also had the potential to change over time, particularly if key staff learned about best and promising practices during the 2-year period. Baseline data collection occurred in 2018 (year 1) and follow-up data collection occurred in 2020 (year 3). The CSA data were summarized for each JDTC and TJC to identify where it was doing well; where it might want training, technical assistance, or access to other resources; and where it appeared to have a unique context that should be documented.

2.1.1.1 Sources & Tools

The court self-assessment tool is included in Appendix A. The JDTC self-assessment was created through collaboration with OJJDP, AIR, AU JPO, NCJFCJ, NADCP, and the cross-site evaluation team to reflect the practice elements of the JDTC Guidelines as well as some basic descriptive information about JDTCs. It was adjusted by integrating relevant items from the Juvenile Justice – Translational Research on Interventions for Adolescents in the Legal Systems (JJ-TRIALS) study. The TJC self-assessment is a parallel tool that includes the questions from the JDTC self-assessment that are relevant to juvenile court more broadly (and using adapted language) and a few supplemental questions.

The collaborative cross-site evaluation team and TTA providers developed a list of practices to operationalize the JDTC Guidelines. Depending on the breadth and complexity of the Guideline, there was a range of 1–26 practices that defined each Guideline. The items from the CSA relating to each of the practices within each Guideline were identified and a coding system[1] was established to indicate which responses or combination of responses on the assessment would yield a practice as being met [yes] (or not yet met [no]).

Table 2a shows the Cronbach's alpha that were calculated for both time periods and for JDTCs, TJCs, and all sites together. The results indicated the Objectives had high levels of reliability. Objectives 1, 2, 5, and 7 each have at least one indicator that is JDTC-only, so alphas were calculated for TJC only for Objectives 3, 4, and 6. For all sites together, alphas ranged from .63 to .94 at baseline and .60 to .92 at follow-up. The only alphas under .70 were Objective 2 [equitable treatment, eligibility criteria, initial screening] at baseline and follow-up (JDTC only, .67 baseline, .60 follow-up) and Objective 5 [contingency management, case management, community supervision] at baseline and follow-up (JDTC only, .63 baseline, .65 follow-up). The three Objectives that included TJCs ranged from .77 to .95 when run with just TJC data.

[1] For detailed information about coding, please contact Juliette Mackin, NPC Research, mackin@npcresearch.com or 503-243-2436 x 114.

Table 2a. Cronbach Alpha Results (JDTC and TJC)

Objective	Description	Baseline	Follow-up
Objective 1	Focus the JDTC philosophy and practice on effectively addressing substance use and criminogenic needs to decrease future offending and substance use and to increase positive outcomes.	**0.78**	**0.87**
Objective 2	Ensure equitable treatment for all youth by adhering to eligibility criteria and conducting an initial screening.	0.67	0.60
Objective 3	Provide a JDTC process that engages the full team and follows procedures fairly.	**0.87**	**0.76**
Objective 4	Conduct comprehensive needs assessment that inform individualized case management.	**0.94**	**0.92**
Objective 5	Implement contingency management, case management, and community supervision strategies effectively.	0.63	0.65
Objective 6	Refer participants to evidence-based substance use treatment, to other services, and for pro-social connections.	**0.91**	**0.87**
Objective 7	Monitor and track program completion and termination.	**0.78**	**0.75**

Alpha > .7 are in **bold**

2.1.1.2 Procedures

Courts completed this court self-assessment (CSA) in spring 2018 (year 1 – baseline) and again in spring 2020 (year 3 – follow-up). Sites were asked to enter their data into a secure online system. Hard copies of the tools were available for reference and if the site wanted or needed to complete it on paper first and then enter into the online system. The online surveys were conducted with a cloud-based tool called Survey Gizmo (subsequently the company changed its name to Alchemer). The cross-site evaluation team compiled the data from JDTC and TJC sites for analysis and shared it with the TTA providers and OJJDP/NIJ. The cross-site evaluation team utilized several (site-level) variables from the CSA as moderators for the youth-level analyses.

The evaluation team worked with each jurisdiction to identify if there were multiple courts or dockets with very different practices, to determine if they should complete multiple assessments. However, all jurisdictions had a single JDTC and a typical TJC process, so all 10 of the sites completed 4 CSAs, one for JDTC and one for TJC at baseline, and one each at follow-up.

For the JDTC, the court coordinator and team were asked to complete the court self-assessment. TJC was asked by the Evaluation Liaison to select a representative judge/docket to complete the court self-assessment. In some cases, the JDTC Coordinator or Evaluation Liaison facilitated completion of the TJC CSA by working with other TJC staff; in other cases, they identified someone else who could complete it. In both JDTCs and TJCs, the person completing the assessment is indicated on the form, and staff was encouraged to involve multiple people, to ensure that the various content areas (such as treatment information, drug testing information, and youth statistics) were completed accurately by someone who had that detailed knowledge.

2.1.2 Site Visit Methods

The site visit process was designed to better understand variations in JDTC practice across the 10 sites at several levels: (1) fidelity of Guideline implementation (in conjunction with the CSA), (2) sub-Guideline implementation approach, and (3) the relationship between JDTCs and TJCs. Ultimately, the

visits sought to develop a typology that would work with the CSA to identify factors which can be tested as mediating and/or moderating variables for outcomes. Site visit findings were also designed to inform the evaluation team's input to fine-tune the JDTC Guidelines/Objectives and the TTA related to them. Notably, site visits allowed the researchers to obtain a level of detail about site-specific context and Guideline interpretation not achievable via survey. To that end, the site visits aimed to provide a limited validity check of self- and researcher-ratings of the JDTC implementation of specific Guidelines, allowing researchers to understand changes in how the Guidelines were or were not implemented by questioning the programs about the context for their implementation decisions.

2.1.2.1 Protocols & Processes

Data on the operations of JDTC (and to a lesser extent TJC) were collected at each of the 10 sites by a multi-day site visit conducted once during the study period (between the 1st and 2nd CSA; see Table 2b) and attended by two researchers. The lead researcher was constant across all 10 sites. The second researcher was variable, with one individual attending 6 sites and another attending 4 sites. Each visit was 2 to 2.5 days in length, depending on travel logistics, staff availability, and staffing/court schedule. Visits were timed to ensure full observation of staffing and court as well as ample time for discussion with JDTC staff—individually and in groups (see below). Site visits were coordinated between research staff and the site's Evaluation Liaison, including at least one pre-visit coordination call with each site's Liaison. Before each visit, the site visit team reviewed site materials to develop a concrete understanding of the operation and structure of each site and to inform the structure and discussion prompts for the visit.

For all sites, researchers reviewed the initial CSA. Most sites also provided some combination of the following, though they were often working drafts or "not updated" versions: policy & procedures manual, youth/family manual, and/or staff manuals. Sites were asked to send any other relevant documentation, but such documentation was not available for all sites. For a subset of sites, researchers were also able to review some combination of the following prior to the visit: incentive/sanctions documentation, screener/assessment tools, phase checklists, program calendars, staffing sheets, marketing brochures, and relevant state standards/policies. In addition, TTA providers shared TTA documentation that existed at the time of the site visit.

Table 2b. Site Visit Timing

Site ID	Visit Dates
A	March 5–7, 2019
B	April 22–23, 2019
C	October 23–25, 2018
D	September 11–13, 2019
E	January 14–16, 2020
F	December 9–10 2019
G	February 27–28, 2020
H	June 4–5, 2019
I	July 22–23, 2019
J	April 1–2, 2019

Data were collected using two distinct methods: (1) semi-structured guided discussions conducted with JDTC staff and (2) observation of staffing and court operations.

JDTC Staff Guided Discussions. Guided discussions were conducted with individuals, small groups, and large groups of JDTC staff, depending on site conditions and/or court team preference. Permission was asked from all participants to record the discussions. All guided discussions were recorded to ensure that researchers recorded information with fidelity, except one guided discussion at one site where site staff asked the researchers not to use the recorder. Supplemental and/or updated documentation was also collected at the site visit to augment any documentation provided before the visit.

A generic guided discussion protocol was developed from a core set of questions across 18 distinct topic areas[2] and were customized based on the information provided by each site. The core questions were developed based off of a similar protocol used by the site visit team in the National Cross-site Evaluation of Juvenile Drug Courts/Reclaiming Futures (JDC/RF; University of Arizona - Southwest Institute for Research on Women, 2016; University of Arizona - Southwest Institute for Research on Women, & Carnevale Associates, 2012). The JDC/RF tool was updated and augmented to suit the specific needs of the current study. Questions were modified and reordered, and numerous other modifications were made to suit the present study. The generic guided discussion tool is included in Appendix B.

This generic tool was then customized for each site. As a result, each site was asked about the same topic areas, which covered the same general questions, but individual sites' questions were tailored to the specifics of those sites. This process established a baseline of understanding and allowed the researchers to focus on areas where the pre-visit information was insufficient or no longer represented implementation "on the ground" (often due to the implementation of new TTA around JDTC Guidelines that had not been added to the site documentation prior to the site visit).

Follow-up calls were held with sites to collect missing data that were not captured during the initial visit guided discussions or to clarify areas where the researchers did not have shared understanding of the sites processes based on notes and recordings (see below).

JDTC Court & Staffing Meeting Observation. A data collection tool (see Appendix B) was developed for court observation and successfully used at 7 of the 10 sites. On the tool, each researcher made independent binary assessments of the extent to which each judicial interaction with a participant was "successful" across four variables: (1) judge engaged parent/caregiver (if applicable), (2) judge engaged youth, (3) judge employed a "non-judgmental and fair" approach with the youth, and (4) youth felt that incentives and sanctions were applied "fairly."

The observation team developed Item 3 based on JDTC Guideline 3.2 "The judge should interact with the participants in a non-judgmental and procedurally fair manner" and Item 4 on JDTC Guideline 5.2 "Participants should feel that the assignment of incentives and sanctions is fair." Terms in quotes are pulled from the JDTC Guidelines and the researchers reviewed those Guidelines prior to observation for guidance in making those assessments.

Two visits occurred while the tool was being developed and formed the basis for the final tool to be used at the subsequent sites; however, the tool was not in its final form and therefore not used at those 2 sites. One JDTC used a group-style court approach, which did not permit youth-level assessments and therefore the tool was not used.

Observation of court staffing was documented ad hoc rather than with a pre-defined tool, due to the lack of uniformity in staffing meetings. Staffing meetings were not recorded due to the sensitive

[2] (1) History and Structure; (2) JDTC Team, Stakeholders and Judicial Leadership; (3) Accessibility; (4) TTA; (5) Eligibility Criteria; (6) Referral/Entry Process; (7) Screening & Assessment; (8) SUD Treatment; (9) MH Treatment and other clinical services; (10) Pro Social Services; (11) Case Management; (12) Supervision/Probation; (13) Drug Testing; (14) Incentives and Sanctions; (15) Family Engagement; (16) Educational Involvement; (17) Graduation; (18) Evaluation and Data Sharing.

nature of the discussions but were observed by both researchers. Following the visits, researchers pooled notes on staffings, which yielded data on the following data points across sites: staffing attendees and roles, timing, cases discussed, data or other tools utilized by staff in the meeting, and meeting structure/leadership. Most visits also yielded additional qualitative data on the nature of the discussions (e.g., group dynamic and approach to incentives/sanctions). For sites with multi-level staffing (i.e., smaller meetings focused on specific cases or clinical staffing prior to staffing with the judicial official), all meetings were observed.

2.2 Data Processing & Analyses

2.2.1 Court Self-Assessments

Percentage scores were calculated for each Objective and Guideline by taking the sum of practices met divided by the number of practices within each Guideline and Objective. Percentage scores allow for a common scale across the different Objectives and Guidelines, since they vary in the number of practices they contain.

Mean percentage scores were compared for each Guideline and Objective for JDTCs and TJCs at both timepoints. At each time point, mean percentage scores were compared for each Guideline and Objective using an independent samples *t*-test to see if there were significant differences in the mean scores between JDTCs and TJCs.

To assess change between Guidelines and Objectives between 2018 and 2020, dependent samples *t*-tests were conducted on mean percentage scores. Separate dependent samples *t*-tests were conducted for JDTCs and TJCs. Difference scores were also calculated for each respondent using the percentage scores for Guidelines and Objectives at each survey administration. Means for these change scores were examined to assess which Guidelines and Objectives increased or decreased between 2018 and 2020, and which changed the most and least across sites.

To assess whether there were differences in trends between JDTCs and TJCs over time, a repeated-measures ANOVA was conducted using court type as a between-subjects variable and time point as a within-subjects variable. This model was used on each of the mean percentage scores for each Guideline and Objective. In addition, an overall percentage mean score was calculated by adding the total number of practices met across all the Guidelines and Objectives divided by the total number of practices overall. This overall practice mean percentage score was used to assess whether there were differences in trends across all practices and not just specifically within individual Guidelines and Objectives.

Other analyses explored the variance of practices within each Guideline. That is, the extent to which individual practices were endorsed within each Guideline and whether that variance differed across JDTC and TJC sites. For this analysis, the standard deviation of practice items was calculated within each Guideline. One Guideline only contained one practice. In this instance, the standard deviation of practice endorsements could not be calculated and was excluded for this analysis. Once the standard deviation of practices within each Guideline was obtained, a mean was calculated for these standard deviations to obtain a sense of the average variance of practices across sites. Means were calculated for JDTCs and TJCs and for each time point. These means were then examined descriptively to observe which Guidelines had greater or lower mean standard deviations.

Finally, analyses explored which of the 10 sites had similar responses on practices and Guidelines between JDTCs and their corresponding TJCs. For this analysis, each practice was compared between the JDTC and corresponding TJC at each site. If both the JDTC and TJC at the site had a similar score (that is, yes or no) on the practice, regardless of whether the practice was met, then the practice

was indicated to be the same across the JDTC and TJC. After comparing similar responses across practices between JDTCs and their corresponding TJCs, the percentage of practices that were identical between JDTCs and their corresponding TJCs were calculated within each Guideline. These Guideline percentage similarities were then averaged across the 10 sites. The average Guideline similarity percentages were then examined descriptively to assess which Guidelines had similar responses between JDTCs and their corresponding TJCs. This process was done separately for each survey administration.

2.2.2 Site Visits

2.2.2.1 Guided Discussion Data

Extensive field notes were collected from the guided discussion portions of each site visit from which a site-specific report summarizing operations was created. To capture the full richness of the data collected, these reports typical ran ~20 single-spaced pages in MS Word. One researcher led the development of the site-specific reports by synthesizing notes collected during the visit and replaying audio recordings. A second researcher reviewed the reports for comprehension and accuracy. Reports were finalized following multiple rounds of revisions. Follow-up calls were held with sites to collect missing data that were not captured during the initial visit, to clarify areas where the researchers did not have shared understanding of the sites processes, and to confirm findings. Site field note reports were shared with the evaluation team. These notes were further compiled into a cross-site comparison tool (see documentation), which displays site-specific data across 21 distinct categories based on the guided discussion protocol. This document allowed for comparison of distinct court features (such as SUD treatment system and incentives/sanctions system) across sites and provides the full richness of the dataset in a way that allows the research team to examine dimensions within and across sites.

Next, the site visit team developed qualitative characterizations across over 60 dimensions that the researchers found to be notably heterogeneous across sites. These characterizations spanned the following categories and were based both on site visit guided discussions as well as court observations: (1) Court Structure, (2) Court Entry Procedures, (3) Incentives & Sanctions, (4) Family Engagement, (5) Education/School, (6) Case Management & Probation, (7) Eligibility Criteria, (8) SUD Treatment, (9) Case Planning & Treatment Planning, (10) Screening & Assessment, (11) Staffing Duration/Cases, (12) Court Duration/Cases, and (13) Court Observation Scores. Researchers then coded these characterizations on numeric scales, which were developed for each measure and thus varied by category. In cases where only two options were possible, researchers used binary codes, while others were coded based on the number of site characteristics (though some of those could be reduced to binary analyses, as needed). Further, some scales were descriptive only while others were explicitly tied to JDTC Guideline implementation. For those characterizations based on Guidelines, the scores were specifically tied to the Guideline or Guidelines in question. Characterizations were used by the outcomes team to look for possible mediators and moderators.

Finally, researchers also created a process flow/logic model to depict the process and timing from youth referral to JDTC enrollment (or TJC when applicable) and SUD treatment referral (see Appendix B for de-identified versions). These models were developed primarily based on site visit guided discussions and were explicitly confirmed via follow-up calls with the coordinator or other point of contact for each site.

2.2.2.2 Court Observation Data

Researcher Agreement. Researcher observations for the 7 sites at which the observation tool was employed were independently scored across each of the four (4) dimensions. Independent scores were provided at the individual youth level for: youth engagement, parental engagement, judicial approach (fairness), and youth perception of incentive/sanction fairness. For example, if a docket contained 5 youth, each researcher would score "yes" or "no" in each area for each youth, for a total of 4 scores per researcher per youth (8 scores per youth across both researchers). Parental engagement also included a "not applicable" option for cases where a family/caregiver was not present, to ensure that the absence of an individual to engage did not artificially lower the parental engagement score.

As a first step, each set of youth scores (i.e., across all four dimensions for one youth) was reconciled across researchers to ensure internal validity (i.e., to ensure that each researcher was scoring the interaction with the same youth). This was necessary because researchers were not always seated with one another and because some cases were null (e.g., the youth was called but not present) so researchers had to reconcile their case-specific-notes to ensure proper youth matching across the scores.

Next, "researcher agreement" was calculated at the youth level for each of the 4 scored items. These youth-level matches were aggregated at each site to yield site-level researcher agreement scores in each dimension. For example, each of the four scores for Site A Youth 1 Researcher 1 were compared to Researcher 2's four scores for Site A Youth 1. This was calculated using a simple comparison of scores (yes vs. no) for each dimension except parental engagement. Together, this process yielded a researcher agreement percentage for youth engagement, judicial "fairness," and youth perception of incentives and sanctions, which represented the extent to which researchers scored that dimension consistently at that site. For example, a site where 10 youth were reviewed by each researcher and one youth was scored differently by each researcher for youth engagement would have a 90% (9/10) researcher agreement for youth engagement.

Because parental engagement scores were only assigned for cases where a family member/giver was present, a third score ("not applicable") was possible. For parental engagement, two researcher agreement scores were calculated. First a "raw parental engagement agreement" score was calculated, where mismatches across all 3 possible scores—yes, no, and N/A—were considered lack of agreement. Next, an "adjusted parental engagement agreement" was calculated. For the adjusted score, cases where one researcher assigned a "yes" or "no" value and the other assigned an "N/A" deferred to the researcher who assigned a score (rather than N/A) and were not treated as disagreement. In many cases, these "disagreements" stemmed from whether a researcher considered another non-parent (e.g., a brother) in this area and chose to score the interaction.

Researcher agreement calculations yielded five (5) scores per site: Youth Engagement, Non-Judicial Approach, Youth Perception of Incentive and Sanction Fairness, Parental Engagement (Raw), and Parental Engagement (Adjusted). Adjusted parental engagement scores were used for our analyses. We calculated 22 researcher agreement scores across 5 sites and 4 dimensions. Note that researcher agreement could only be calculated for 6 of the 7 scored sites because 1 site (Site B) had concurrent dockets and each docket was therefore observed by only one researcher. In addition, for 2 of the 6 JDTCs, researcher agreement could only be calculated for 3 out of the 4 dimensions because Researcher 2 did not score one dimension.

Overall, researcher agreement was high. Though scores ranged from 70% to 100%, only 3 out of 22 scores (excluding raw PE scores) were below 92% (see Figure 2a). Thirteen of 22 scores (60%) had perfect agreement (100%) and another 6 of 22 (27%) had 92–93% agreement, for a total of 87% of scores at 92%+ agreement. Only two scores had 85/86% agreement and the lowest individual score for researcher agreement occurred at Site D for youth perception of incentive/section fairness (70%).

Figure 2a. Court Observation Researcher Agreement by Site & Dimension

Reviewer Agreement					
Site ID	Parental Engagement (Raw)	Parental Engagement (Adjusted)	Youth Engagement	Non-Judgmental and Fair Approach	Incentives/ Sanctions Perceived Fair
A	N/A	N/A	N/A	N/A	N/A
B	N/A	N/A	N/A	N/A	N/A
C	N/A	N/A	N/A	N/A	N/A
D	70%	85%	100%	90%	70%
E	100%	100%	100%	100%	100%
F	73%	93%	93%	100%	N/A
G	86%	93%	100%	86%	93%
H	N/A	N/A	N/A	N/A	N/A
I	100%	100%	100%	92%	100%
J	N/A	N/A	100%	100%	100%
Key					
	50% or Below	70%-79%	80-89%	90-99%	100%

Examining researcher agreement by dimension studied, for Youth Engagement, 5 of 6 scored sites had 100% agreement and the remaining site had 93% agreement. For Adjusted Parental Engagement, 2 sites had 100% agreement, 2 had 93% agreement and 1 had 85% agreement. For Non-Judgmental Approach, 3 sites had 100% agreement, 2 had 90–92% agreement, and 1 had 86% agreement. For Perceived Incentive/Sanction Fairness, 3 sites had 100% agreement, 1 had 93% agreement and 1 had 70% agreement. Notably, the only item that had less than 85% agreement (I/S at Site D) had score alignment issues according to this methodology *but* had well aligned mean scores (i.e., researchers scored that site as 75% and 78% I/S fairness, respectively). So, the researcher agreement score would appear to overstate the level of disagreement on the level of I/S perception of fairness at that site (see Mean Scores).

Mean Scores. After assessing researcher agreement, an average site score was developed for each dimension at each site by calculating the percentage of youth interactions which were scored as "yes" out of the percentage of total interactions. For example, a site where 10 youth were reviewed by each researcher and Researcher 1 scored 9 of 10 youth as "yes" for youth engagement and Researcher 2 scored 10 of 10 youth as "yes" for youth engagement would have a mean youth engagement score of 95% (19/20). Despite the existence of some mismatched "not applicable" responses, the same process was used for parental engagement. So, for example, a Researcher 1 scored parental engagement as 10 out of 15 (with 5 N/As, for 66%) and Researcher 2 scored the same site as 12 out of 17 (with 2 N/As for 71%) the average score would be 22 out of 32, for 68%. Some of these findings were fed into the site characterizations discussed elsewhere and others were used to examine Guidelines 3.1, 3.2, 3.3 and 5. Mean scores are presented in Figure 2b below but also discussed under Section 2.5.3.

Figure 2b. Court Observation Mean Scores by Site & Dimension

Mean Scores				
Site ID	Parental Engagement	Youth Engagement	Non-Judgmental and Fair Approach	Incentives/ Sanctions Perceived Fair
A	N/A	N/A	N/A	N/A
B	100%	100%	100%	94%
C	N/A	N/A	N/A	N/A
D	83%	100%	95%	77%
E	100%	100%	100%	100%
F	95%	95%	100%	79%
G	74%	93%	93%	96%
H	N/A	N/A	N/A	N/A
I	75%	100%	96%	100%
J	50%	100%	100%	100%
Key				
50% or Below	70%-79%	80-89%	90-99%	100%

2.2.3 Documentation

2.2.3.1 Court Self-Assessments

In addition to the site-level and aggregate reports of court self-assessment data from the baseline and follow-up time points and both JDTCs and TJCs, full data sets were provided in SPSS (compiled pre-post and JDTC/TJC file) and Excel (calculated variables indicating degree of Guideline implementation).

2.2.3.2 Site Visits

In addition to site-specific reports for each site, data from sites were synthesized into several documents and tools:

- **A Cross-Site Comparison Table.** Displays site-specific data across 21 distinct categories based on the guided discussion protocol. This document allowed for comparison of distinct court features (such as SUD treatment system and incentives/sanctions system) and provides the full richness of the dataset in a way that allows the research team to examine dimensions within and across sites. A de-identified version of this file was provided as a

product to the evaluation team and to OJJDP/NIJ. It is not included as an appendix as the nature of the data renders it impossible to fully de-identify.

- **Categorizations by Topic Area.** Offers distributions of courts across over 60 areas that the researchers found to be notably heterogeneous across sites. This file is optimized for viewing by researchers to provide the full richness of these comparisons and draws from both guided discussions and observations. A de-identified version of this file was provided as a product but is not included as an appendix, as the nature of the data renders it impossible to fully de-identify.
- **Site Visit Key Activities Coding File.** Codes a sample of site categorizations and applies a numerical value score. Coded items are tied explicitly to Guidelines, where applicable. A version of this file was provided as a product but is not included as an appendix, as the nature of the data renders it impossible to fully de-identify.
- **Process Flow/Logic Models.** Visually depict the process and timing from youth referral to JDTC enrollment (or TJC when applicable) and SUD treatment referral. De-identified versions of these file are included in Appendix B.

2.2.4 Overlapping Methods: Merging CSA & Site Visit Data

CSA and Site Visit evaluation teams held a series of meetings to compare findings from the two sources of court-level data, identify any apparent discrepancies, and integrate information about common topic areas (such as family engagement, use of detention, and responses to participant behaviors). These efforts were to utilize the detailed and rich data to understand how and to what extent study sites were implementing the JDTC Guidelines and where the Guidelines and assessments could be enhanced or improved. Topics that had notable variability across sites, practices that were highly or minimally implemented, and areas that had significant change over time were priorities for discussion. The evaluation teams also incorporated feedback from AIR, the TTA providers, program staff, and federal funding partners in discussions about the results and how the CSA and site visit data informed each other. Section 2.5.3 presents results stemming from this effort.

2.3 Court-Level Results

2.3.1 CSA Findings

Highlights of findings from the court self-assessment (details follow in the sections below):

- Both JDTCs and TJCs have implemented many of the JDTC Guidelines
- Both JDTCs and TJCs had implemented more Guidelines at follow-up than at baseline (though there were individual items that changed in a negative direction; overall, there was a net gain in number/percentage of Guidelines achieved for the group of sites [aggregate data], in 9 of the 10 JDTCs, and in all 10 TJCs)
- Overall (in aggregate), JDTCs had achieved more Guidelines than TJCs at both baseline and follow-up. In 9 of the 10 study sites, the JDTC had higher achievement of Guidelines than its respective TJC. In addition, there were some TJCs that achieved more Guidelines than JDTCs in other jurisdictions
- There was a lot of variability across sites in which Guidelines were achieved
- The TJCs had more variability than the JDTCs in their level of implementation of the Guidelines – JDTCs were more closely clustered in their rates of achievement than the TJCs

- JDTCs were generally higher in Guidelines achievement than TJCs, were more clustered in that achievement, and most approached or exceeded 80% of Guideline practices at the follow-up assessment, all of which helps confirm that JDTCs have a definable program model
- Some Guidelines (and Objectives) were more likely to be met than others, which may represent those that are more achievable or viewed as more important (for example, some Guidelines were the focus of TTA prioritization); conversations during the site visits confirmed that program staff focused their efforts on topics the TTA providers designated as "programmatic goals."
- JDTCs' strongest Guidelines were related to family engagement and screening/assessment. Out of the questions that were related to these areas, JDTC programs met almost all of them.

Table 2c shows all of significant differences at $p < .05$ [see summary results table in Appendix A] between JDTC and TJC seen at both baseline and follow-up, in the following areas:

Table 2c. Significant Differences ($p < .05$) between JDTC & TJC at Both Baseline & Follow-up

Objective/Guideline	Description	JDTC Pre	TJC Pre	JDTC Post	TJC Post
Objective 2	eligibility and screening	76%	52%	86%	54%
Objective 3	team engagement and procedural fairness	85%	60%	90%	72%
Guideline 3.4	team meets to review participant progress	81%	45%	83%	54%
Objective 4	needs assessment/case planning	83%	56%	87%	51%
Guideline 4.1	needs assessment details	86%	58%	86%	50%
Guideline 4.2	individualized case management and treatment plans	80%	53%	87%	54%
Objective 5	contingency management, case management, community supervision	65%	28%	72%	37%
Guideline 5.1	more incentives than sanctions	60%	0%	90%	10%
Guideline 5.2	participants feel incentives and sanctions are fair; consistent and individualized incentives and sanctions	70%	14%	86%	26%
Guideline 6.3	treatment implemented with fidelity	88%	54%	94%	56%
Guideline 7.2	tracks incentives/ sanctions	63%	15%	80%	15%

Table 2d shows the significant differences at $p < .05$ between JDTC and TJC at baseline only. In these areas, JDTC scored remained higher than TJC, but not enough to reach statistical significance. In three areas (Guidelines 1.5, and 3.1, and Objective 6), TJC's increased their achievement to a greater extent than JDTCs, closing the gap between the court types. In the other three areas (Guidelines 3.2, 3.3, and 5.3) JDTC scored decreased from baseline to follow-up. Two of these Guidelines were affected by the same practice: the judge provides consistent follow-through on warnings, which might reflect increased knowledge over time about what consistency should look like or increased comfort answering

this question honestly (see Section 2.3.3 for a discussion of site visit findings for Objectives 3.1, 3.2. and 3.3).

Table 2d. Significant Differences between JDTC & TJC at Baseline Only

Objective/Guideline	Description	JDTC Pre	TJC Pre
Guideline 1.5	parent/guardian engagement	89%	73%
Guideline 3.1	parent/guardian participation	88%	72%
Guideline 3.2	judge nonjudgmental and fair	95%	60%
Guideline 3.3	judge consistent with incentives/sanctions	97%	53%
Guideline 5.3	minimize fees and detention	58%	15%
Objective 6	evidence-based treatment/services/connections	83%	63%

Table 2e shows the significant differences at $p < .05$ between JDTC and TJC at follow-up only. In these five areas, JDTCs were higher at baseline than TJCs, but not enough to be statistically significant, and the JDTCs increased more than the TJCs over time. In one area, Guideline 2.5, TJCs decreased from baseline to follow-up.

Table 2e. Significant Differences between JDTC and TJC at Follow-up Only

Objective/Guideline	Description	JDTC Post	TJC Post
Objective 1	JDTC philosophy and practice	75%	59%
Guideline 2.2	assess risk of offending	94%	64%
Guideline 2.5	equity of access	67%	17%
Objective 7	monitoring completion	78%	51%
Guideline 7.3	data elements	77%	51%

2.3.1.1 Comparison of JDTC & TJC at Baseline

In general, at baseline, the JDTCs met more Guidelines than the TJCs, though TJCs did meet some of them. Of the 7 high level Objectives, the three highest Objectives at baseline for JDTCs were 3 (provides a JDTC process that engages the full team and follows procedures fairly, 87%), 4 (conduct comprehensive needs assessments that inform individualized case management, 83%), and 6 (refer participants to evidence-based substance use treatment, to other services, and for prosocial connections, 83%). These three areas were also the strongest ones for the TJCs.

JDTCs had the lowest percentage of practices implemented in Objective 1 [JDTC philosophy and practice] at baseline (60% of practices met) and the smallest difference between JDTC and TJC at both baseline and follow-up, though there was change over time and neither court type had Objective 1 as the lowest at follow-up.

The other Objectives that were lowest at baseline were 5 [implementation of contingency management, case management, and community supervision strategies] and 7 [monitor and track program completion and termination], both of which were just under 2/3 of practices met (65% and 66% respectively).

The largest difference between JDTC and TJC at baseline was in Objective 5 (implement contingency management, case management, and community supervision) with JDTCs meeting 65% and

TJCs meeting 28% of practices (this was the lowest Objective for the TJCs). There remained a large difference at follow-up in this area (71% compared to 37%).

Some Guidelines were already being met at the baseline CSA. JDTCs had 90% or greater achievement of Guidelines 3.3 (judge consistent when applying program requirements, 97%), 3.2 (judge interacts with participants in nonjudgmental and procedurally fair manner, 95%), and 2.3 (screening program participants for substance use using validated, culturally responsive assessments, 90%). The topic of judicial interactions is discussed in more detail below.

TJCs' highest Guidelines were in the 70's: 5.4 (ongoing monitoring focuses on addressing needs holistically and focus on behavioral health treatment and family intervention, 73%), 1.5 (deliberately engage parents/guardians and address barriers to engagement, 73%), 6.1 (access to continuum of evidence-based substance use treatment resources, 72%), and 3.1 (work collaboratively with parents/guardians in court, supervision, and treatment, 72%).

Of the 31 Guidelines that make up the 7 Objectives, JDTCs had 4 that were under 50% at baseline and 16 were under 80%. TJCs had 13 that were under 50% and 30 were under 80%.

The only Guideline that was higher for TJC than JDTC at baseline was 1.6 (interpreters for limited English and hearing deficiency, documents translated), which likely represents the resources of the court overall and availability of interpreter services for the fewer court hearings that are part of TJC (compared to JDTC, which has many more status review hearings). At baseline, TJCs reported meeting 80% of practices compared to 57% for JDTCs.

One Guideline was the same for TJC and JDTC at 32%: 1.2 (roles are articulated, including MOUs, written position descriptions, and orientation that covers roles). By follow-up, JDTCs had increased this Guideline to 66% and TJCs to 50%. It is possible that because some of the jurisdictions participating in this study are small, and in some cases share staff across JDTC and TJC, the information gained from TTA and study involvement may have benefited TJC as well as JDTC. In Guideline 1.2, for instance, two TJCs added MOUs with partner agencies, three added roles and duties of staff to MOUs, two updated MOUs to specify what information staff would share, and three added staff roles to their orientation. These practices that are recommended ways to clarify team member roles in JDTCs are also relevant for any staff working together, even in the TJCs.

The lowest Guideline for both JDTC and TJC at baseline was 5.5 (imposition of immediate, graduated sanctions for failure to appear for a drug test) – 30% of JDTCs reported meeting this practice and none of the TJCs did. TJCs had another area where none of the courts reported the practice: 5.1 (use of incentives exceeding sanctions).

The JDTCs had practices that they had not yet met within Guidelines 1.2 (articulating roles for each member of the JDTC team, 32% of practices achieved) and 2.5 (ensuring equity of access to all demographic groups of youth, 43% pf practices achieved).

At the site level, JDTCs were typically higher (percentage of Guidelines achieved) than their respective TJC (at one site they were even—at 75%). In the nine sites that varied, JDTCs were 14% to 56% higher than their TJC.

Figure 2c illustrates how the percentage achievement of the Guidelines varies across Objectives by type of court and site. Note that the JDTC sites (on left) are clustered more tightly together and that the TJC sites (on the right) are more spread out. Also, there is considerable overlap in the two distributions with the best TJC site being about the middle of the distribution for the JDTCs. Since there is considerable variation in the order of the sites within court types, Figure 2d looks at the difference of the JDTC achievement score and the TJC achievement score within site. Note that the JDTC with the lowest scores in Figure 2c (I & J) have some of the biggest differences in Figure 2d because their local TJC was even lower. Conversely, the best TJC (F, C & E) are very close to their local JDTC.

Figure 2c. Overall Adherence by Court Type & Site

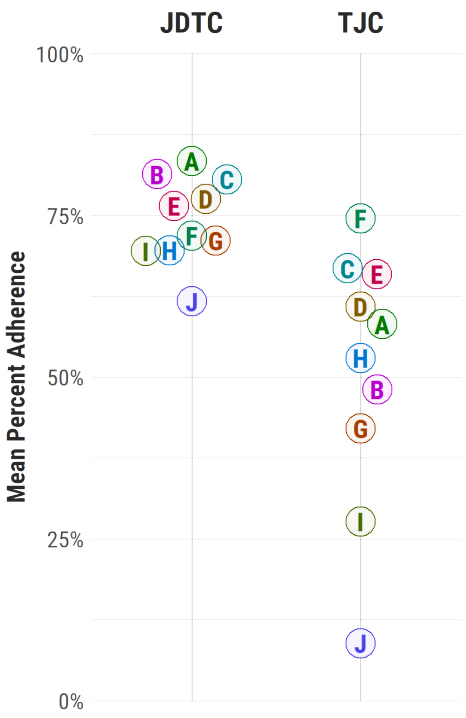


Figure 2d. Difference in Guidelines Achievement Between JDTC & TJC Within Site

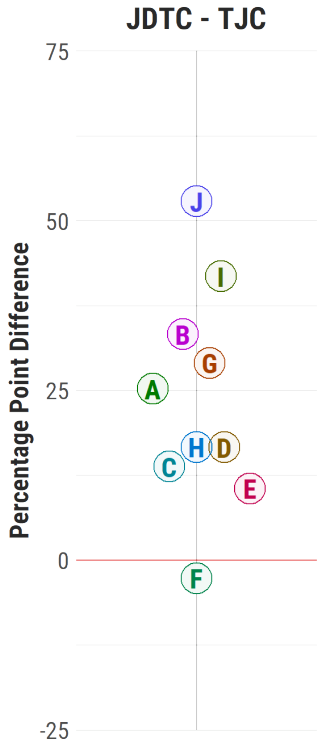


Figure 2e shows the mean across sites by the 10 Objectives. While the magnitude of the difference varies by Objective, the JDTC mean is always higher than the TJC mean across sites. Statistically significant difference at $p < .05$ is indicated by an asterisk before each Objective.

This resource was prepared by the author(s) using Federal funds provided by the U.S. Department of Justice. Opinions or points of view expressed are those of the author(s) and do not necessarily reflect the official position or policies of the U.S. Department of Justice.

Figure 2e. Comparison of JDTC & TJC at Baseline by Objective

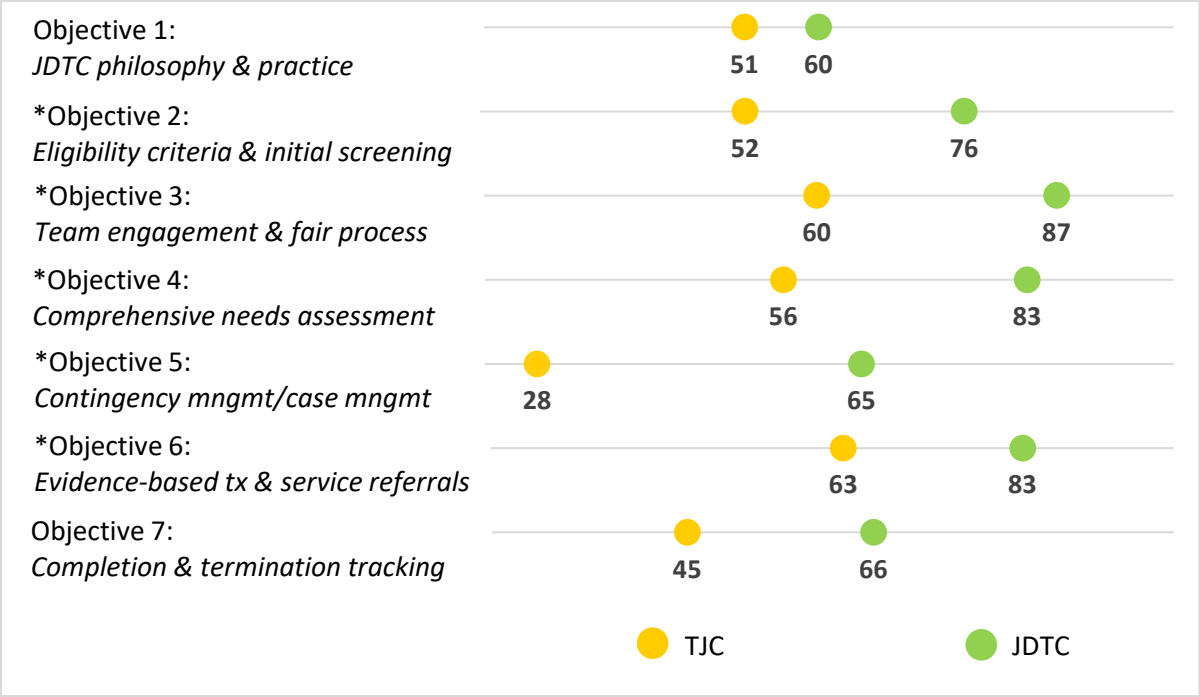
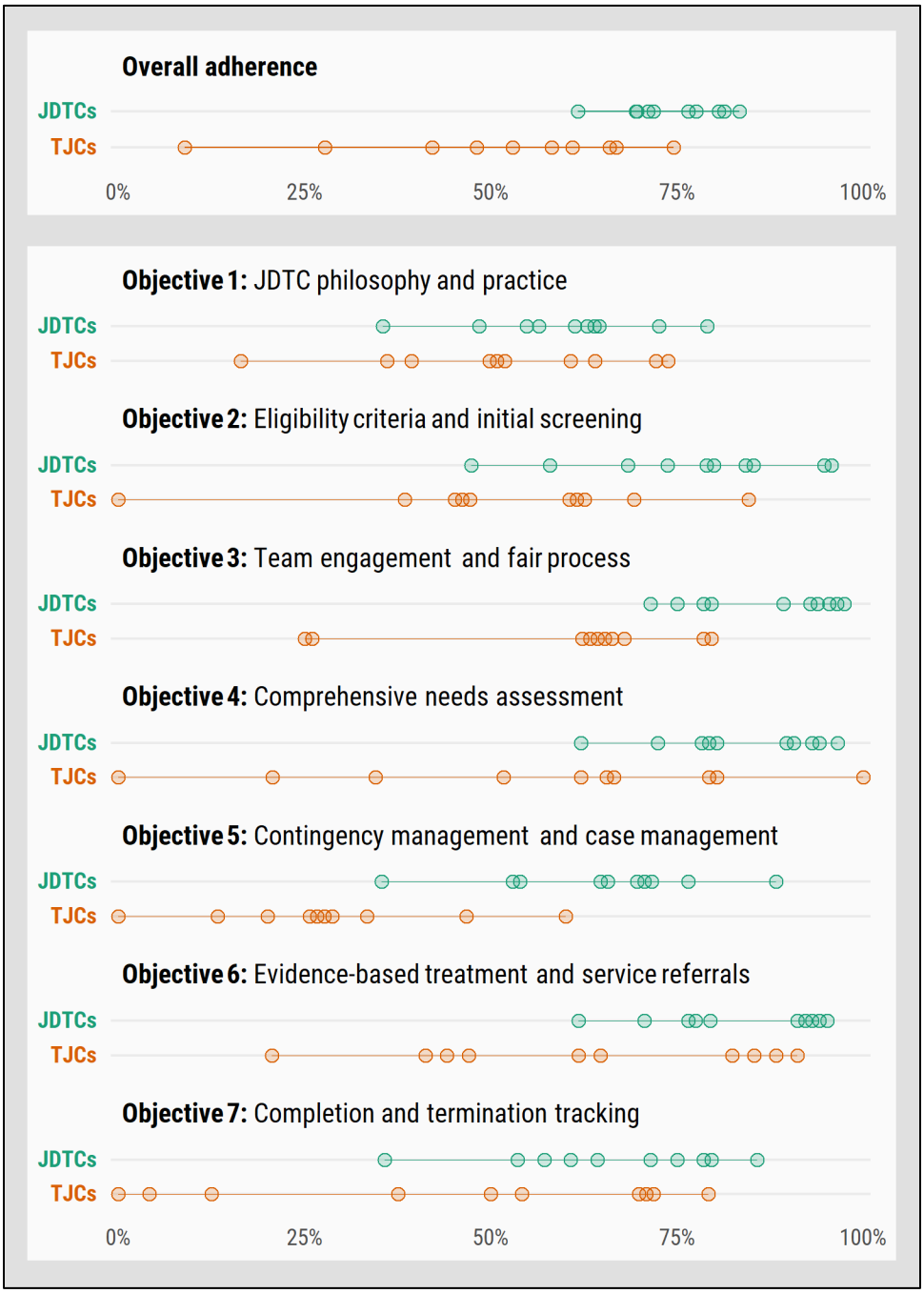


Figure 2f shows the distribution of courts by baseline Objective score, separately for JTDCs (top rows, green) and TJCs (bottom rows, orange). "Overall adherence" is the average across all Objectives and maps onto the preceding figures. Figure 2f illustrates the general patterns of JDTCs' achievement of the practices defining the JDTC Guidelines tending to be higher and more closely clustered together and the TJCs generally being more spread out (that is, having wider variability in scores). This figure also shows the considerable overlap between JDTC and TJC ranges of scores, and that some TJCs are higher than some JDTCs.

Figure 2f. Self-Reported Adherence by Objective & Court Type



2.3.1.2 Changes in JDTC & TJC Over Time (Changes in Trajectory)

JDTCs improved over time in terms of the number of Guidelines they met (based on their responses to questions on the court self-assessment demonstrating the practices that they had implemented). They also, unsurprisingly, met more Guidelines than the traditional juvenile courts,

though the TJCs met many of the Guidelines as well. There was a lot of variety in the Guidelines that were met.

- JDTCs met more Guidelines in 2020 (average of 85%) than in 2018 (average of 77%)
- JDTCs met more Guidelines than TJCs in both 2018 and 2020
- TJCs also improved over time (from 51% to 56%)
- JDTCs and TJCs varied in the Guidelines they met

The areas of greatest change for JDTCs (from 2018–2020) were in making team member roles clearer, favoring incentives over sanctions, ensuring access to interpreters, and focusing on equity of access for all youth. JDTCs implemented or enhanced orientations to cover team roles, the JDTC philosophy, and JDTC practices. Six programs added these three practices. Five programs started engaging participants in identifying meaningful incentives, and by 2020, all 10 programs reported using a higher ratio of incentives to sanctions.

JDTC Change from Baseline to Follow-up by Objective. In Figure 2g, each row represents a JDTC Objective, from #1 through #7. The data points represent aggregate scores of percentage achievement across all 10 JDTC sites (see Table 2f). Statistically significant change at $p < .05$ is indicated by an asterisk before each Objective.

Figure 2g. JDTC Change from Baseline to Follow-up by Objective

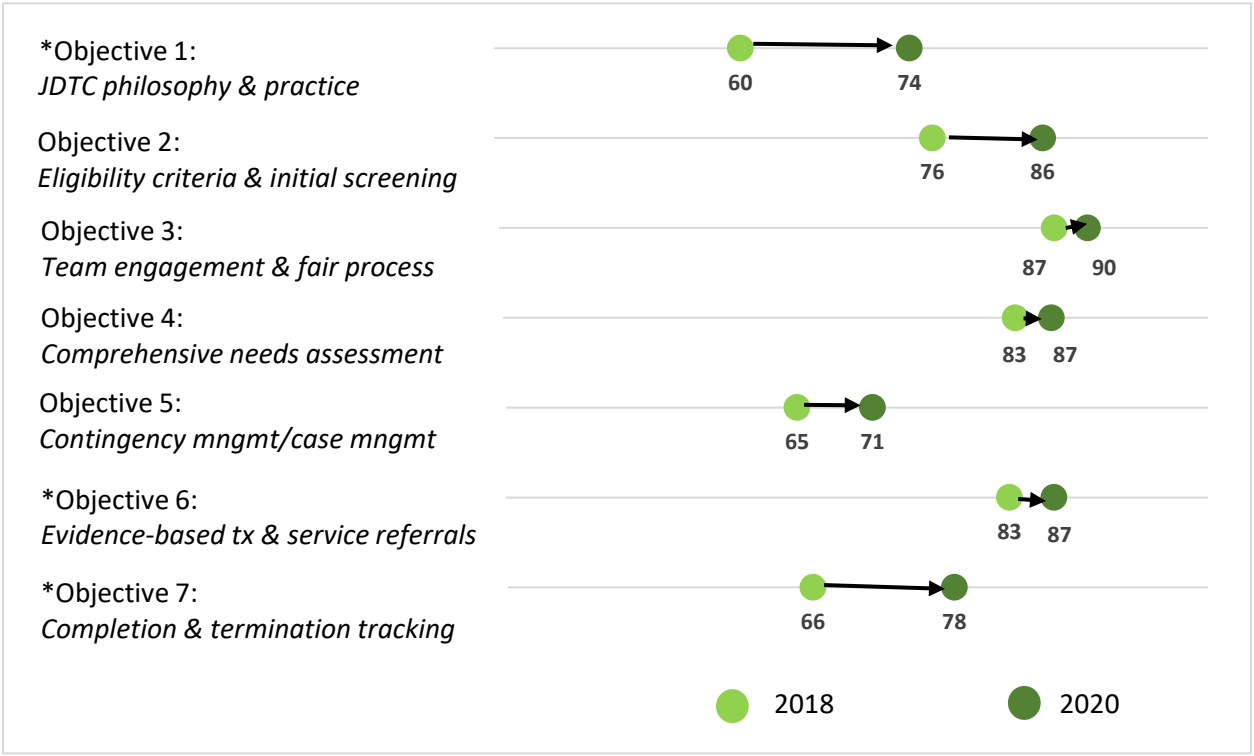


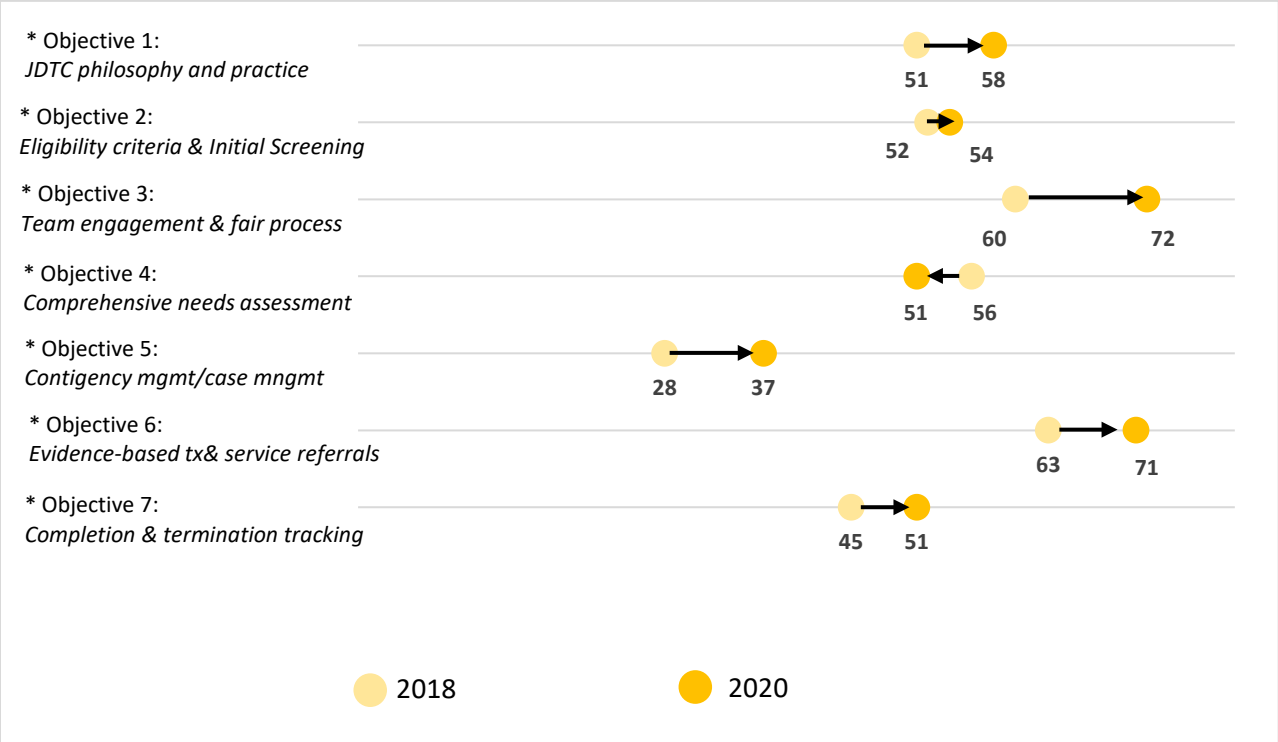
Table 2f. JDTC Change from Baseline to Follow-up by Objective

Objective	Description	Baseline	Follow-up
*Objective 1	Focus the JDTC philosophy and practice on effectively addressing substance use and criminogenic needs to decrease future offending and substance use and to increase positive outcomes.	60	74
Objective 2	Ensure equitable treatment for all youth by adhering to eligibility criteria and conducting an initial screening.	76	86
Objective 3	Provide a JDTC process that engages the full team and follows procedures fairly.	87	90
Objective 4	Conduct comprehensive needs assessment that inform individualized case management.	83	87
Objective 5	Implement contingency management, case management, and community supervision strategies effectively.	65	71
*Objective 6	Refer participants to evidence-based substance use treatment, to other services, and for pro-social connections.	83	87
*Objective 7	Monitor and track program completion and termination.	66	78

Note: Asterisk indicates statistically significant change, $p < .05$

TJC Change from Baseline to Follow-up by Objective. In Figure 2h, each row represents an Objective, from #1 through #7. The data points represent aggregate scores of percentage achievement across all 10 TJC sites (see Table 2g). Note that for Objective 4 (comprehensive needs assessment) the mean rate for TJC actually went down slightly. Statistically significant change at $p < .05$ is indicated by an asterisk before each Objective.

Figure 2h. TJC Change from Baseline to Follow-up by Objective



This resource was prepared by the author(s) using Federal funds provided by the U.S. Department of Justice. Opinions or points of view expressed are those of the author(s) and do not necessarily reflect the official position or policies of the U.S. Department of Justice.

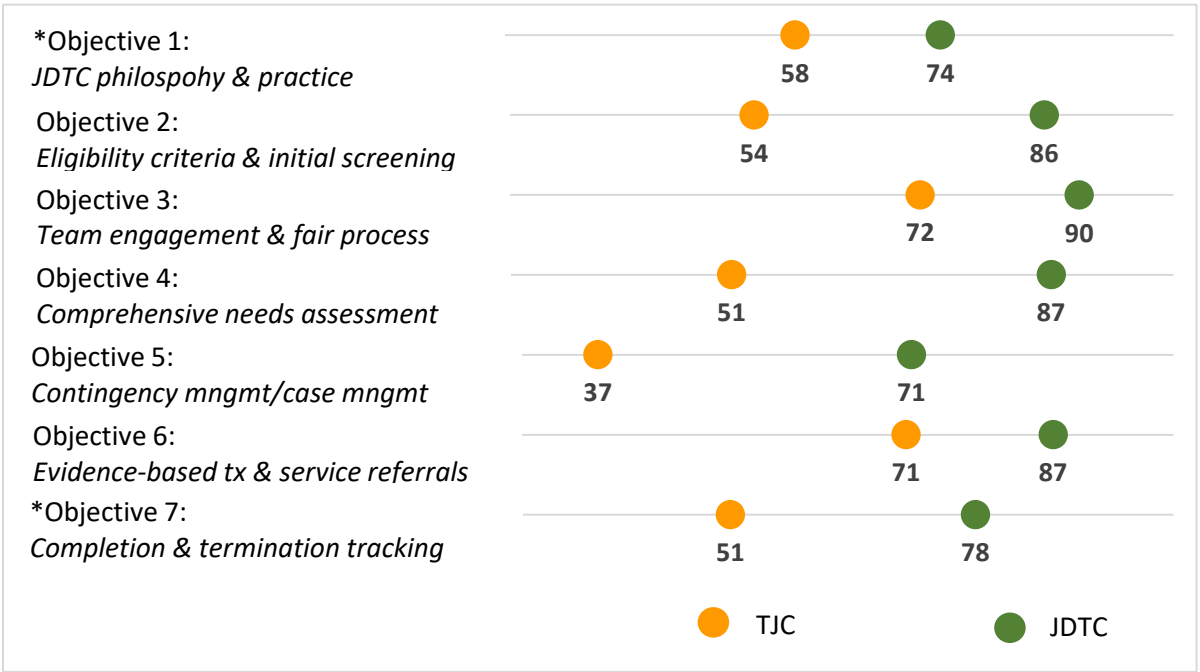
Table 2g. TJC Change from Baseline to Follow-up by Objective

Objective	Description	Baseline	Follow-up
Objective 1	Focus the JDTC philosophy and practice on effectively addressing substance use and criminogenic needs to decrease future offending and substance use and to increase positive outcomes.	51	58
Objective 2	Ensure equitable treatment for all youth by adhering to eligibility criteria and conducting an initial screening.	52	54
*Objective 3	Provide a JDTC process that engages the full team and follows procedures fairly.	60	72
Objective 4	Conduct comprehensive needs assessment that inform individualized case management.	56	51
Objective 5	Implement contingency management, case management, and community supervision strategies effectively.	28	37
*Objective 6	Refer participants to evidence-based substance use treatment, to other services, and for pro-social connections.	63	71
Objective 7	Monitor and track program completion and termination.	45	51

Note: Asterisk indicates statistically significant change, $p < .05$

Comparison of JDTC and TJC at Follow-up by Objective. In Figure 2i, each row represents a JDTC Objective, from #1 through #7. The data points represent aggregate scores of percentage achievement across all 10 JDTCs and TJCs (see Table 2h). JDTCs had higher aggregate scores than TJCs at follow-up across all seven Objectives. Both JDTCs and TJCs scored highest on Objective 3 (team engagement and fair process) and lowest on Objective 5 (contingency management and case management). Statistically significant difference at $p < .05$ is indicated by an asterisk before each Objective.

Figure 2i. Comparison of JDTC & TJC at Follow-up by Objective



This resource was prepared by the author(s) using Federal funds provided by the U.S. Department of Justice. Opinions or points of view expressed are those of the author(s) and do not necessarily reflect the official position or policies of the U.S. Department of Justice.

Table 2h. Comparison of JDTC & TJC at Follow-up by Objective

Objective	Description	JDTC	TJC
*Objective 1	Focus the JDTC philosophy and practice on effectively addressing substance use and criminogenic needs to decrease future offending and substance use and to increase positive outcomes.	74	58
*Objective 2	Ensure equitable treatment for all youth by adhering to eligibility criteria and conducting an initial screening.	86	54
*Objective 3	Provide a JDTC process that engages the full team and follows procedures fairly.	90	72
*Objective 4	Conduct comprehensive needs assessment that inform individualized case management.	87	51
*Objective 5	Implement contingency management, case management, and community supervision strategies effectively.	71	37
Objective 6	Refer participants to evidence-based substance use treatment, to other services, and for pro-social connections.	87	71
*Objective 7	Monitor and track program completion and termination.	78	51

Highlights of Guidelines Implemented by Follow-up. JDTCs' strongest Guidelines at follow-up were:

- 3.1 (JDTCs should work collaboratively with parents and guardians throughout the court process to encourage active participation in (a) regular court hearings, (b) supervision and discipline of their children in the home and community, and (c) treatment programs; 95%).
- 1.5 (JDTCs should be deliberate about engaging parents or guardians throughout the court process, which includes addressing the specific barriers to their full engagement; 95%).
- 2.2 (Assess all program participants for the risk of reoffending using a validated instrument; 94%).
- 6.3 (Service providers should deliver intervention programs with fidelity to the programmatic models; 94%) Further discussion of this topic occurs below.

TJCs' strongest Guidelines at follow-up were:

- 6.1 (The juvenile court should have access to and use a continuum of evidence-based substance use treatment resources-from in-patient residential treatment to outpatient services.90% [JDTCs were also 90%]).
- 3.1 (87%; see JDTC list above).
- 1.5 (84%; see JDTC list above).

At follow-up, all JDTCs had exceeded their TJCs in Guidelines implementation, from 4% to 61%. The distinction between JDTCs and TJCs varied over time as well. Three sites closed the gap between their JDTCs and TJCs from baseline to follow-up (the largest change there was 16 percentage points, where the JDTC had 20 percentage points more achievement at baseline and only 4 percentage points at follow-up). However, at the other extreme, one site had no difference between JDTC and TJC at baseline and the JDTC was 18 percentage points higher at follow-up. On average, JDTCs were 29 percentage points higher than their TJC at follow-up, 3 percentage points higher than at baseline.

2.3.1.3 Range of Guidelines Implementation Across Sites

JDTCs: Aggregate scores were calculated for each site at pre and post by taking an average of the percentage of practices that were achieved within each of the seven Objectives and then across Objectives. The proportion of practices implemented ranged from 65% to 86% at baseline and from 72% to 92% at follow-up. One of the JDTCs was in the top three highest achieving sites at both baseline and follow-up, but three sites tied at the third slot at 88% at follow-up (that is, 5 of the 10 sites were 88% to 92% in overall implementation). All sites improved from baseline to follow-up, with improvements ranging from 2% to 17%.

TJCs: The proportion of practices implemented ranged from 9% to 75% at baseline and from 11% to 88% at follow-up. The lowest site was the same at both baseline and follow-up and had notably lower scores compared to the other TJCs (second lowest was 29% at baseline and 39% at follow-up). The lowest site for TJC, however, was also the lowest for the JDTC (65% baseline and 72% follow-up), making it the biggest difference (least similar, see section below) between the JDTC and TJC at a given site. The TJC with the most Guidelines implemented at baseline (75%) and the TJC with the most at follow-up (88%) were the two sites that were most like their JDTCs (see section below) when comparing all 10 pairs.

2.3.1.4 Comparisons Between JDTCs & Their Respective TJCs

We compared the degree of Guideline implementation between each JDTC and its TJC to see which pairs were most and least similar. This distinction is important for understanding the adoption of certain practices in the overall juvenile justice system and the enhancements offered by the JDTC. This context can also help explain why in some cases, differences in outcomes for JDTC-eligible youth may not be found (that is, if there is little to differentiate the JDTC and TJC, youth in both conditions may be getting similar interventions).

Aggregate scores were calculated to represent similarity between JDTCs and their respective TJCs on the Guidelines and Objectives. Overall, when looking at the percentage of each Guideline that was achieved, there was approximately 62% agreement between the JDTCs and TJCs at baseline and 65% agreement between the JDTCs and the TJCs at follow-up. At baseline, similarity ranged from 41% to 77% and at follow-up the range had expanded to 32% to 80%. The same two jurisdictions had the greatest JDTC-TJC alignment at both pre and post, and the same three jurisdictions had the greatest difference. That is, while both JDTCs and TJCs tended to increase their implementation over time, their degree of similarity (within jurisdiction) stayed consistent over time. The three sites with the least agreement [all below the average aggregate level of agreement] were J, I, and G at both baseline and follow-up (from lowest agreement). The three sites with the most agreement [all above the average level of agreement] were F, D, and A at baseline and F, D, and C at follow-up.

In addition to looking at similarity at the site level, we looked at specific Guidelines to see which areas varied the most and least. The Guidelines/practices that varied the most between JDTCs and TJCs were related to two areas important to the JDTC model: the effective use of incentives and sanctions and the intention to ensure equity of access to services for all youth.

- TJCs were much less likely to indicate that they recorded data about the use of incentives and sanctions [Guideline 7.2]. There was only 15% agreement in TJC and JDTC responses to these indicators at follow-up.
- TJCs were also much less likely to favor incentives over sanctions as a behavior modification strategy [Guideline 5.1]. There was only 20% agreement in TJC and JDTC responses to these indicators at follow-up.
- TJCs were much less likely to provide a list of possible incentives or sanctions to youth or involve the youth in identifying possible incentives and sanctions [Guideline 5.2]. There was

more alignment in whether the gave youth the option to challenge a positive drug test. Overall, there was 40% agreement in TJC and JDTC at follow-up for this Guideline.

- Regarding equity of access to services (regardless of race, ethnicity, gender identity, or sexual orientation), TJCs were much less likely to have processes or policies in place to ensure equity of access or have reviewed data to determine if equity exists [Guideline 2.5]. At follow-up, TJCs and JDTCs aligned 37%.

The Guidelines/practices where JDTCs and TJCs were most similar related to providing treatment and interventions to address needs and working collaboratively with parents/guardians.

- JDTCs and TJCs had 77% alignment at follow-up related to providing family interventions, treatment, and ongoing reassessment of needs [Guideline 5.4].
- JDTCs and TJCs also seem to experience primarily the same treatment environment, with 87% agreement at follow-up related to having access to a continuum of evidence-based substance use treatment services [Guideline 6.1].
- JDTCs and TJCs also had 87% and 84% alignment in their ratings of their strategies to engage families in the court process [Guidelines 3.1 and 1.5].
- All sites (both JDTC and TJC) said that the judge speaks directly to youth in court and about half of both court types rated their judges as being consistent on follow-through on warnings they gave to the youth [Guideline 3.2]. These results led to a high level of agreement between JDTCs and TJCs (85%) at follow-up.
- Also at follow-up, there was strong alignment (83%) between JDTCs and TJCs related to providing court-certified or licensed onsite interpreters for parents or guardians with limited English proficiency and for those with a hearing deficiency, as well as whether the courts provide translated documents when needed [Guideline 1.6].

It is worth noting the particularly high achievement reported by TJCs related to parent/ guardian engagement (87% of 3.1 and 84% of 1.5 reflect both the TJCs average achievement as well as their degree of agreement with the JDTCs in these two areas). The scoring in these Guidelines on the CSA may be impacted by the wording of the indicators, many of which are based on whether the site "encourages" the practice or makes certain services "available," which are less stringent requirements than achieving the desired result. For example, all sites (both JDTCs and TJCs) at both baseline and follow-up indicated that they encourage a parent/guardian to attend court sessions, but the sites were not asked to rate themselves on the degree to which they achieve attendance by all families. In addition, while all sites said (at the follow-up CSA) that family therapy was available to all families, there was not an indicator that measured if all families actually participated in family therapy. At the time of the tool development, it was not clear what a reasonable standard was for JDTC programs, and this study indicates that at least for the participating sites, this level of effort for family engagement was very attainable. This topic is also discussed in more detail in Section 2.5.3 using site visit data to examine CSA results.

It is also worth mentioning that sites self-reported their perception of their level of achievement of these Guidelines and indicators. It is possible that sites used different standards for their ratings, or that JDTCs, which are trained to focus on this area as a key element of the JDTC model, have encouraged this approach in their larger juvenile justice systems, or that the juvenile justice systems overall understand the importance and benefits of involving families.

2.3.1.5 Areas JDTCs Focused on Through TTA

TTA providers summarized the key goals that they worked on with each site. Eight of the study sites participated in this element of the project. TTA occurred throughout the project and continued beyond data collection during the site visits and the follow-up court self-assessments. Seven of the sites had 5 goals and one site had 3 goals. There were some goals that were common across sites and some that were unique. Four sites each had goals to increase family engagement, increase community partnerships/resources, and improve case planning (such as to make it more individualized or integrated). Three sites focused on increasing training and two sites focused on increasing the number of youth they served. The other goals were specific to the site.

While the goals were not established to align specifically with a single Guideline or indicator, they did map in some cases to Guidelines or indicators (and in many cases multiple Guidelines or indicators). Of the 38 goals, 2 goals were not pursued and 4 did not map to a specific Guideline or indicator. Of the remaining 32 goals that were considered completed or in progress toward the end of the study (end of April 2021), 26 (81%) were associated with indicators or Guidelines that changed in a positive direction (from no to yes) on the CSA from baseline to follow-up and 3 (9%) that were yes at both baseline and follow-up. Four goal areas included mixed results, with at least one indicator or Guideline that did not improve, and three goal areas included mixed results where at least one indicator or Guideline moved from yes to no. No goal had only negative change.

2.3.2 Overview of Site Visit Findings

Data from the site visits was meant to provide richer details regarding JDTC implementation/variation within and across sites. The site visit team coded data on 64 topics spanning 13 domains: (1) Court structure, (2) Court Entry Procedures, (3) Incentives & Sanctions, (4) Family Engagement, (5) Education/School, (6) Case Management & Probation, (7) Eligibility Criteria, (8) SUD Treatment, (9) Case Planning & Treatment Planning, (10) Screening & Assessment, (11) Staffing Duration/Cases, (12) Court Duration/Cases, and (13) Court Observation. Overall, site visits found that there was considerable variation across JDTCs—not only in successful Guideline implementation (as measured by the CSA) but also in the sub-Guideline/Objective level of implementation—for example, in the particular methods employed to engage families. JDTCs also displayed considerable variation along dimensions which were not nested under any Guideline (e.g., the use of “tracks”). This report organizes site visit findings into two categories: (1) variation in implementation related to Guideline areas and (2) variation in implementation unrelated to Guidelines. Discussion of Guideline-related variation is paired with CSA data to provide quantitative context for the site visit observational data. Products provided by the evaluation team elsewhere include characterizations across a broader set of areas.

Highlights of findings from site visits are listed below and expanded on in the next several subsections:

- While similar in their overarching structure and mission, JDTCs vary considerably in “on the ground” practices and Guideline implementation – owing both to the JDTC-specific differences and to differences between jurisdiction’s broader juvenile justice systems
- Services provided within JDTCs are to varying degrees impacted by the larger juvenile justice systems under which they are nested
- Relative success in Guideline implementation may be related to program sustainability, funding, and the non-JDTC-specific skills of JDTC staff (e.g., project management) in addition to more “obvious” factors (like JDTC training, or fidelity to SUD treatment models)
- The role of Court Coordinator in practice varied considerably and could be important to JDTC success

2.3.3 Variation in JDTC Guidelines & Objectives

Sites varied widely in the ways they designed and implemented their JDTC programs, the structure and flow of the traditional juvenile courts that the JDTCs were housed within, the practices they implemented, and the Guidelines they met. We found differences in most areas and highlight some of the notable areas here. We have organized these results loosely by Objective, but it is important to note that some of the information provided here about how sites implemented activities under specific Objectives is descriptive only – as it focuses on a level of detail not addressed by the Guidelines.

2.3.3.1 Family Engagement (Objectives 1 & 3)

On the CSA, most JDTCs reported that they work collaboratively with parents/guardians to encourage active participation in (and reduce barriers to engagement in) court hearings, supervision and discipline, and treatment (95% of indicators in Guidelines 1.5 and 3.1 achieved). This finding was broadly confirmed through the site visits, where all 10 JDTCs reported involving the parent/guardian in admission and encouraging parents/guardians to participate in court. At the time of the visit, 100% of the JDTCs also had at least one family meeting as part of their enrollment procedure. But while all JDTCs reported encouraging parent participation (consistent with the Guidelines) on both the CSA and at site visits, at the visits, all JDTCs also reported that successful family engagement/involvement was a challenge. For example, despite reports of encouraging family participation in court, at all site visits, JDTC court sessions occurred during regular work hours, which could present a barrier for some families. Furthermore, at the time of the site visits, only two JDTCs allowed parents/guardians to call into court.[3] As mentioned earlier in this report, the Guideline standard of "encouraging active participation" does not require efforts to be successful.

All JDTCs reported using *some* family engagement strategies, but there was considerable variation in the implementation details, with many JDTCs employing creative strategies. Some of the most common strategies included community/family events, a voluntary parent group, and employing dedicated family engagement staff (paid or volunteer). Family events were offered, at least quarterly, in 4 of the JDTCs – several of the JDTCs that did not offer them felt that these events would not be utilized by families. Six JDTCs hosted a voluntary parent group led by a parent peer (see Figure 2j). Like the community/family events, JDTCs that did not employ this strategy often reported that they did not think that parents would participate.

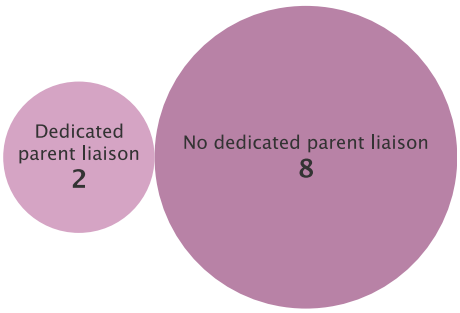
[3] However, while not reflected in either the CSA or site visit findings, COVID-related changes observed during the study period may have made family engagement in court easier for some families by increasing remote access to court. This practice seems likely to be retained by many programs, which is a promising way to engage parents/guardians and youth and make transportation less of a challenge.

Figure 2j. Community Events & Parent Groups

In addition, while all 10 JDTCs reported on the CSA that they have a designated point of contact for families (Guideline 3.1, item 1), only 2 JDTCs had a dedicated parent liaison who did not have another role in the JDTC (i.e., was not also the coordinator or probation officer; see Figure 2k).

Finally, at the time of the site visits, three JDTCs reported explicitly involving the family in case planning (though all 10 JDTCs reported encouraging parents/guardians/family members to participate in at least some case planning and case management sessions [Guideline 3.1, items 5 and 7]) – perhaps indicating that the nature of the Guideline was not clear or highlighting that the Guideline centers around JDTC intentionality rather than results. A clearer set of expectations about what that involvement entails could help JDTCs implement this practice. Interestingly, four JDTCs (F, G, H, & J) had goals with the TTA providers to increase family engagement. One JDTC (F) hired a family engagement coordinator as part of its work to address this goal and was counted as one of the two observed at the site visits in Figure 2k. Another JDTC (H) received training in the Parent Project and conducted its first Parent Project group.

Figure 2k. Dedicated Staff & Family Role in CM (with No Other Role)



Finally, on the CSA, all 10 JDTCs said they encourage parents/guardians/family to participate in at least some treatment. Site visits revealed more detailed requirements. Some of the other creative approaches JDTCs have implemented include:

- Requiring two family sessions of Motivational Enhancement Therapy in the home before a youth can join the treatment group

- Incorporating family treatment through the Adolescent Community Reinforcement Approach model
- Support services for parents/guardians explicitly related to the intervention received by youth (e.g., a parent group tied back to CBI for youth receiving CBI)

It is worth noting that if a parent is not willing or able to participate in treatment, youth are still able to progress in the program. Generally, JDTCs revealed that the use of the term "require" in the context of parental responsibilities was less clear than for youth responsibilities, as the courts generally lacked jurisdiction over the parent or hesitated to use such authority in the uncommon event that they had it, except in extreme cases (e.g., neglect).

2.3.3.2 Training (Objective 1)

A key element of JDTCs is ensuring that all team members understand the treatment court model, including the Guidelines that promote positive outcomes, and are knowledgeable about key content that supports the youth and families in their programs, such as understanding substance use disorder, treatment, incentives and sanctions, the impacts of trauma, adolescent development, and services appropriate for a youth's needs. JDTCs were very active in TTA activities during the study and continued to face challenges in getting all team members trained across all important content areas. For example, 30% of JDTCs achieved the goal of having all team members trained in the treatment court model (Guideline 1.4, item 6). Often there are some team members who are less integrated into the team or who are new. However, most new team members receiving formal training on their specific role on the team (7 of 10 JDTCs; Guideline 1.4, item 17) and by the follow-up CSA many JDTCs had implemented orientations for new team members that cover the JDTC model/philosophy and practices (Guidelines 1.4, items 20 and 21 reported met by 9 of 10 JDTCs). All JDTCs also reported the judge having attended JDTC-specific training or relevant JDTC seminars at conferences (Guideline 1.4, item 25). At the site visits, researchers asked about whether JDTC staff had received training in any of 12 TTA areas. Though data were not available for one site, most JDTCs reported receiving at least some TTA in most of the 12 areas over the study period, thus confirming that significant strides were made in training over the study period.

2.3.3.3 Clarification of Roles (Objective 1)

One of the least achieved practices was related to having written position descriptions for [all] team members. While this practice improved a little over time (from none to two of the JDTCs [Guideline 1.2, item 4]), implementation remained low in 2020. In many JDTCs, team members are employed by partner agencies, so the JDTC itself may not have traditional job descriptions for them; however, it is recommended that the JDTC's policy and procedures manual describe the roles of all team members, to increase shared understanding in the team and assist in orienting new team members. At the site visits, many teams did not appear to feel empowered to impose job descriptions on individuals that were not employed by their agency (e.g., a coordinator on a probation officer or a treatment provider). Power dynamics may also have been at play in some cases though they were not always explicitly cited (e.g., a coordinator imposing a role or position description on a prosecutor or jurist).

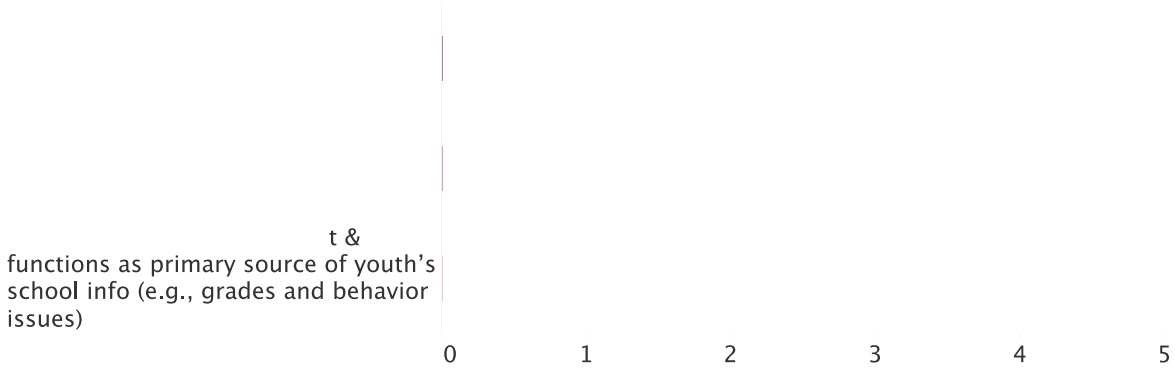
2.3.3.4 Education & School Connections (Objectives 1 & 6)

Guidelines 1.3 emphasizes the importance of connections between JDTCs and schools to support educational goals of the youth. Site visits indicated that all 10 JDTCs reported access to school information and JDTCs all reported having collaboration with school partners on the CSA (Guideline 1.3,

item 5). All JDTCs reported assessing participants for educational needs (Guideline 4.1, item 28). However, only half of the JDTCs had a school representative on the JDTC team at the time of the site visit (Guideline 1.3, item 2), with variation in whether that person was the source of school information or not (see Figure 2l). On the baseline CSA, 5 JDTCs reported having a school representative or liaison on the team, and at follow-up the number increased to 8 (that person attended staffings and court sessions at 7 of the JDTCs [Guideline 1.3, item 4].

Site visits also identified several notable strategies related to education and school, demonstrating considerable focus on education at the sub-Guideline level of implementation. Several JDTCs review the youth's school status as part of the court hearings, one JDTC requires youth to maintain a B average and study for 2 hours per day (with flexibility allowed as needed), and one JDTC builds meaningful school-focused goals into the youth's case plan.

Figure 2l. School Representative Role



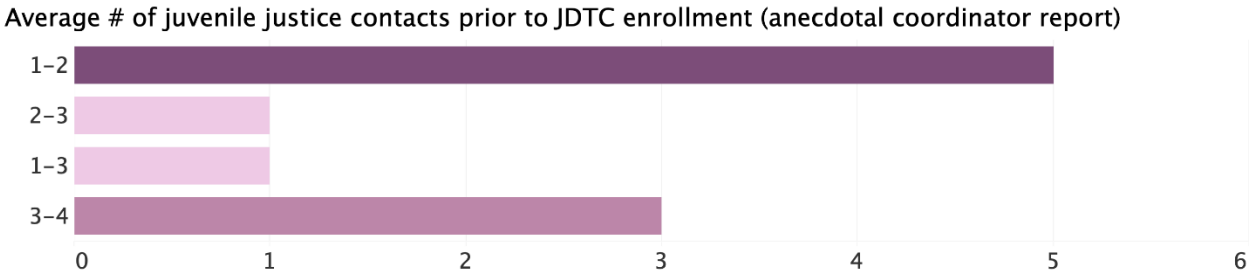
2.3.3.5 Eligibility, Referral, Screening, & Admission (Objective 2)

The selection, referral, screening, and admission of youth to JDTC is important because it ensures that JDTCs are serving the right youth at the right time. Both the CSA and the site visits explored numerous ways of assessing sites' fidelity to the relevant Guidelines and Objectives and observing the extensive variability across sites—especially at levels of detail not specified by the Guidelines (see Appendices A & B). This sub-section specifically references JDTC's admission flows, which are included in Appendix B.

Findings for eligibility were largely consistent across the CSA and site visits. On the CSA, at baseline, 7 JDTCs indicated youth must have a substance use disorder (SUD) to be eligible and at follow-up 9 JDTCs did. These findings were largely confirmed by the site visits, though there was considerable variation in the wording of the requirements. At the time of the site visits, 6 JDTCs' formal eligibility criteria explicitly required the youth to have an SUD (either by reference to diagnosis or by language indicating a formal "substance use disorder"). Two JDTCs did not explicitly include that language but required identified patterns or demonstrated "substance dependence/abuse"—seeming to still use pre-DSM-5 (APA, 2013) clinical language. One JDTC required only a drug-related charge, or a non-drug charge combined with a "history for drug use." Lastly, one JDTC's eligibility criteria did not include SUD/diagnosis or any mention of substance use (which was confirmed with the coordinator because some documentation did reference SUD).

Because JDTC referral is generally initiated by staff *outside* of the JDTC, site visits explored the JDTC referral mechanisms, finding that 7 JDTCs relied on personal referrals from juvenile justice stakeholders/partners (e.g., district attorney, public defender, probation officer, etc.) to begin the JDTC process. Three JDTCs relied on a more formal screener/assessment results administered at probation intake to prompt the JDTC referral process. Notably, these screener/assessments were necessarily conducted prior to any kind of JDTC referral. JDTC staff were also asked how many prior contacts youth have with the juvenile justice system prior to JDTC enrollment. Figure 2m reflects their responses. This data indicates that the JDTCs were most frequently enrolling youth with one or two prior juvenile justice contacts, though several JDTCs focus on youth they perceived as more "deep end," those with 3–4 prior contacts.

Figure 2m. Reported Average Juvenile Justice Contacts Prior to JDTC Enrollment



The Guidelines offer robust guidance on aspects of screening and assessment. On the CSA, JDTCs had a high level of achievement on these measures. Specifically, all JDTCs at follow-up assessed participants for risk of offending (Guideline 2.2, item 1) and screened for substance use disorder (Guideline 2.3, item 1). Site visits generally confirmed these findings, but saw additional variability in implementation. At the site visits, every JDTC had at least one screening/assessment procedural step (consistent with the CSA), with 6 JDTCs having two such steps as part of their entry procedures. Notably, two JDTCs had 4 screener/assessment steps (Sites H and A) and one JDTC had three (Site D). The JDTC in site B had only 1 such step. Because screeners/assessments are meant to both guide services within JDTC and determine whether youth are suitable for admission, the site visit team also examined where within the admission process screener/assessment steps occurred. In all but one site, two screener/assessments steps occurred prior to formal JDTC enrollment. In one JDTC (Site B) there was no reported screener/assessment prior to JDTC enrollment, seemingly indicating that such information could not be used in admission decisions, which was also consistent with data reported by staff.

Site visits allowed researchers to further explore the nuances of JDTC admission in more detail, revealing some commonalities but also considerable variability. Common features of JDTC entry included JDTC Team Meetings and Family Meetings. All of the JDTCs had at least one family meeting as part of their enrollment procedure. JDTC team meetings were common but not universally reported. Three JDTCs did not use JDTC Team meetings (Sites A, J, B). The other seven JDTCs did use such meetings, with 4 using one JDTC meeting (Sites E, G, D, F) and 3 using two JDTC Team meetings (Sites C, H, I). Notably, JDTCs which did not have a team meeting may still have solicited team input as all JDTCs reported that admission was a "team decision."

In further analyzing the admission flows, researchers identified certain individuals/roles within the juvenile justice system that acted as "gatekeepers" to JDTC admission, which is to say that they exercised personal discretion over moving forward with the JDTC enrollment process apart from the results of formal screening/assessment (we excluded the JDTC judge who always makes final decisions

on JDTC admissions). Four of the 10 JDTCs had at least one gate keeper (Sites D, I, H, and B). In Site H, the prosecutor acted as the JDTC gatekeeper. The JDTC Coordinator functioned as a gatekeeper in Sites D, I, and B. And Sites I and B had *multiple* JDTC gatekeepers. In Site B, both the Coordinator and the original Jurist played that role. And in Site I there were *three* gatekeepers: the JDTC coordinator, the Treatment Coordinator, and the Probation Supervisor.

Site visit researchers also collected data on the staff-reported time from JDTC referral to enrollment—some JDTCs provided a range (minimum and maximum) while others provided an "average." This presentation made it difficult to compare responses across sites at a granular level but is sufficient to document wide disparity—ranging from 1 week or less (2 JDTCs) to 1 month or more (2 JDTCs). Table 2.9 provides information the self-reported estimated the time from JDTC referral to formal JDTC enrollment.

Table 2i. Coordinator-Reported Average Time from JDTC Referral to Formal JDTC Enrollment

Site ID	Average Reported Time from JDTC Referral to JDTC Enrollment
A	~5–7 Days
B	~2–3 Weeks
C	~24 Days
D	~1–3 Weeks
E	~14 Days
F	~60 Days
G	~14 Days
H	~3–5 Days
I	~30 Days
J	~2–3 Weeks

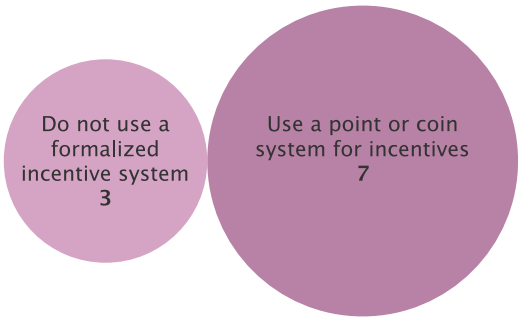
2.3.3.6 Incentives & Sanctions (Objectives 3 & 5)

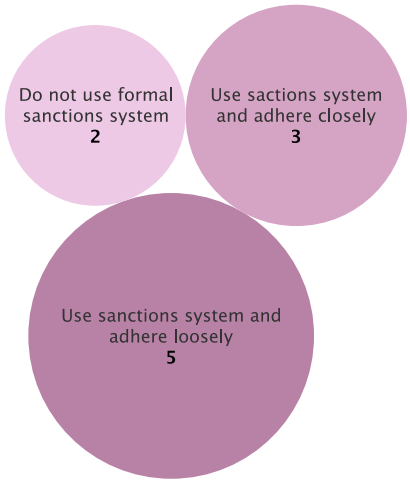
A key element of the treatment court and JDTC models is strategic use of incentives and sanctions to guide participant behavior. Three of the JDTCs reported at follow-up CSA that all of their team members had received training or education specifically in the use of incentives and sanctions (Guideline 1.4, item 5), though all 10 JDTCs reported involving parents/guardians/family members in helping to identify appropriate incentives and sanctions for their child (Guideline 1.5, item 4). All 10 JDTCs reported that their program provides incentives and sanctions consistently (that is, having a similar response to similar behaviors; Guideline 3.3, items 2 and 3). Guideline 5.1 specifically focuses on the ratio of incentives to sanctions, indicating that incentives should be favored over sanctions. Eight of the 10 JDTCs indicated that the team uses incentives as a primary approach to behavior (item 1) and all 10 JDTCs said they use more than one incentive for every sanction (item 2). All JDTCs also reported at follow-up that they track incentives and sanctions (Guideline 7.2, items 2 and 3). Finally, all JDTCs reported having a range of sanction options (Guideline 5.3.1, follow-up) and *not* using fees as sanctions (Guideline 5.3, item 2, baseline; 9 of 10 at follow-up), which are positive practices.

Site visits broadly confirmed CSA findings, but also illustrated considerable variation at the sub-Guideline level of implementation. Site visits revealed numerous systems for the imposition and tracking of incentives and sanctions, including formalized points/coins incentive systems and a variety of sanctions systems. Generally, JDTCs reported using these systems to ensure consistency within and across youth and to help track the aggregate application of incentives/sanctions. It was also clear at the site visits that many JDTCs were actively improving or modifying their systems at the time of the visit.

Figures 2n and 2o display the use of these systems at the time of the visits. Seven JDTCs used a formal incentive system and 8 used a formal sanction system. But of those 8 JDTCs with sanctions systems, only 3 adhered closely to the system while 5 adhered more loosely. Though not temporally associated with the pre- or post-CSA, these findings provide a lens through which to interpret the CSA results in which all JDTCs reported using a consistent approach to incentives and sanctions. Given that not all JDTCs had systems and most sanction systems were only loosely followed, the reliability of the self-report data may merit consideration.

Figures 2n & 2o. Formalized Incentives & Sanctions Systems

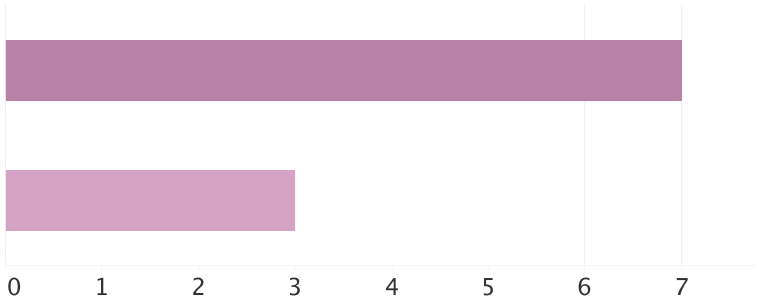




In addition to the use of formalized systems, site visits found significant variation and innovative practices regarding the imposition of incentives and sanctions. Some JDTCs elect to handle the imposition of severe sanctions privately, rather than during the public hearing per standard JDTC practice. As shown in Figure 2p, 7 of the JDTCs deliver "major" sanctions typically during the regular court session in front of all of the other participants (a traditional process for treatment courts). However, 3 JDTCs hold over cases to address at the end of the court session, after dismissing the other participants. Two (2) of these courts use either a caucus system or a judicial review system. The third court used a slightly less formal approach, but still ultimately handled such cases after dismissing other participants, thereby ensuring a degree of "privacy" from the other JDTC youth and families.

In particular, the caucus system involves the judge meeting with the youth and parent/guardian to discuss specific challenges one-on-one, outside of regular JDTC hearings. The judicial review system involves behavior contracts as an intermediate step, explicitly defining what a youth must do and what the next responses (sanction) will be if the youth does not meet expectations. The judicial review is a private meeting with the judge, youth, family member, and attorneys, where the defense and prosecutor make a case for a desired action (sanction) and the ruling is formally on the record. In both of these processes, the more private administration of sanctions is trauma-responsive, developmentally appropriate, avoids shaming, and avoids reinforcing the identity of youth as "bad."

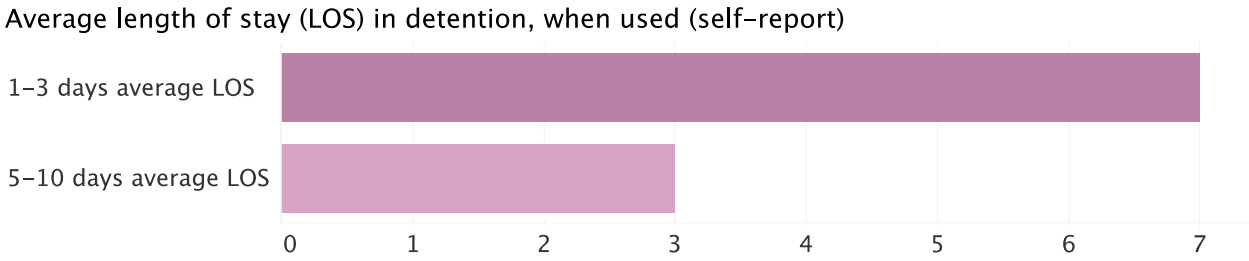
Figure 2p. "Public" vs. "Private" Administration of Major Sanctions (e.g., incarceration)



2.3.3.7 Use of Detention (Objective 5)

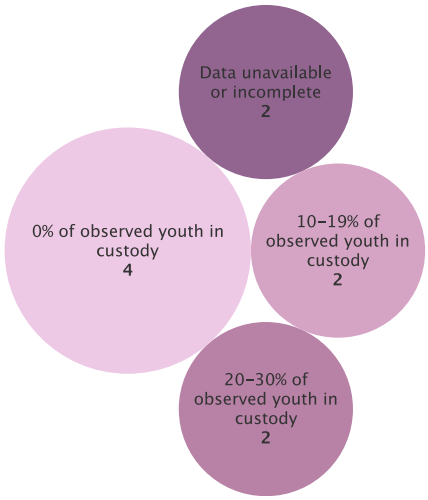
As reported on the CSA, JDTCs continued to rely on the use of detention as a sanction, for longer periods than recommended, and in a broad range of situations. For example, at the follow-up, no JDTC had implemented Guidelines 5.3, items 3 or 4, which indicate that the length of a detention sanction is generally 2 days or less, or that detention is only used when a youth is a danger to themselves or others or may abscond. Site visits generally confirmed these findings (see Figure 2q). At the site visits, all JDTCs reported using detention as a "last resort" but confirmed that this area needs continued work and identified reasons for detention that were not consistent with Guidelines, which specify a restrictive set of circumstances for using detention and instruct JDTCs to use this approach sparingly because of the harm and interruption in treatment it can cause. With COVID restrictions, some JDTCs decreased their use of detention as it became unavailable or limited but those practices are not reflected in CSA or site visit data.

Figure 2q. Average Length of Stay in Detention, When Used (Site Visit Self-Report)



At the time of the site visits, research staff recorded the frequency of youth who were in custody or taken into custody (the reader is advised to interpret these results with caution as the sample sizes are very small so percentages may overrepresent the frequency of incarceration). These data are displayed in Figure 2r. Despite the caveats around sample size, Figure 2r illustrates that substantial percentages of JDTC participants were in custody at the time of the visits in half of JDTCs with available data.

Figure 2r. Percentage of Youth in Custody or Taken into Custody During Site Visit Observation



2.3.3.8 SUD Treatment Providers, Fidelity, & TJC Overlap (Objective 6)

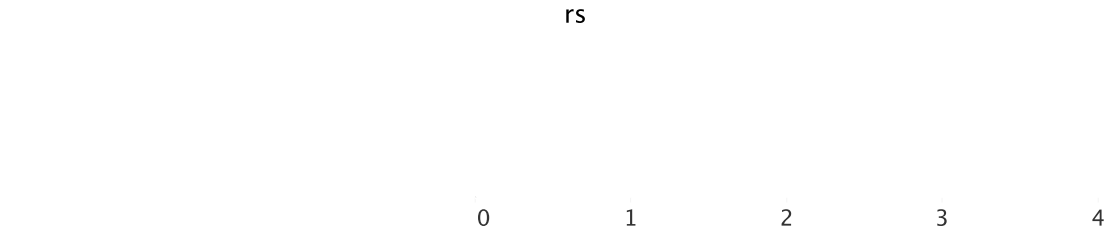
Objective 6 is measured through the CSA and covers the continuum of care for substance use treatment, recommended treatment modalities, providers' fidelity to the treatment models, evidence-based treatment to address risks and needs, and prosocial skills. JDTCs at follow-up met 87% of the Guidelines for this Objective. Both JDTCs and TJCs had access to a broad continuum of care, with detoxification services being the biggest gap (met in 7 of the 10 JDTCs and 8 of the TJCs). JDTCs and TJCs were most distinct in the fidelity Guideline (6.3) with 94% of JDTCs reporting meeting these indicators (such as visiting the providers and having discussions evidence-based practices and fidelity) and TJCs meeting 56%.

Data on the nature and extent of SUD treatment were collected through records for the outcome study. As such, site visits focused on better understanding the SUD treatment landscape that serves as the context for that data (e.g., the number of providers, what levels of care were available, and how likely a youth was to go to any given provider within the network). Unsurprisingly, some JDTCs (and TJCs) had relatively fewer SUD treatment options while others were able to send youth to many different treatment providers. Of particular note, SUD treatment was an area of significant fluctuation *during* the study period, with numerous participating JDTCs making changes to their SUD treatment contracts (or simply to their referral balance) during the study.

Only one JDTC in our study reported having a single SUD treatment option at the time of the visit. Because all of the others reported some degree of variability or choice, we focus on where JDTCs send *most* youth. Importantly, in some JDTCs, SUD treatment providers are a function of client choice (e.g., among certified/Medicaid providers); however, this was not the only reason that a JDTC might use multiple providers. Some JDTCs used multiple providers to provide different levels of care (usually Outpatient and IOP), different evidence-based practices, or different methods of practice (e.g., individual vs. group treatment). Other JDTCs chose SUD treatment provider based on location/transportation issues, caseload balancing, or more subjective "client fit." As displayed in Figure 2s, at the time of the visit, 4 JDTCs relied predominantly on one provider (though in only one case was

that the only available provider). Six JDTCs relied predominantly on 2+ providers, with three JDTCs using 2 providers and another three JDTCs using 3+ providers.

Figure 2s. JDTC SUD Treatment: Number of Providers



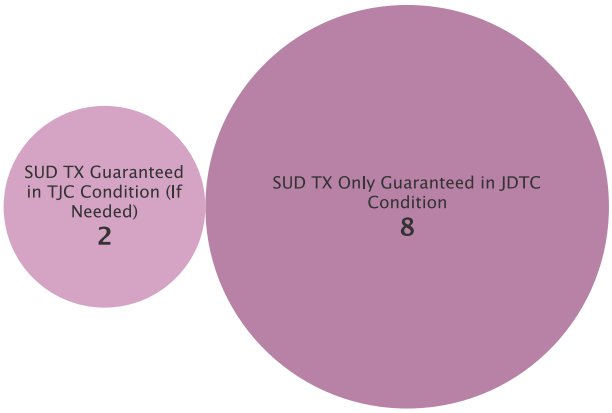
CSA findings indicated that JDTC staff believe service providers are maintaining fidelity to the treatment models (94% of indicators in Guideline 6.3 were reported as met at follow-up), but site visit data may call those findings into question. The findings above indicated that most JDTCs are working with at least two providers (and, in fact, many more)—ensuring treatment fidelity would seem to be a large task for JDTC staff. At the visits, most JDTCs reported that SUD treatment had fidelity to the model (seemingly confirming CSA findings). However, upon follow-up questioning, most court staff indicated that they were not able to make independent assessments of treatment fidelity—often due to lack of expertise, lack of independent data, and the large number of providers—so they relied on providers to self-report fidelity. Other JDTCs indicated that assessments of SUD treatment providers were properly the purview of other (higher) authorities—either the juvenile system more generally or the state Medicaid system (e.g., assuming that Medicaid certification or a contract with the juvenile court confers quality). This result was consistent with the CSA, as 8 of the 10 JDTCs at follow-up indicated that their state conducts audits or site visits for treatment provider certification [Guideline 6.3, item 3]. Notably, though most JDTCs did not exercise meaningful oversight over treatment, a small number of courts did so at a high level. This achievement was particularly apparent at one court where the coordinator had a treatment background and was therefore better able to make such assessments and assert the clinical authority needed to request or demand changes to the status quo. Site visit discussions about treatment models frequently (but not always) indicated that therapists used "components of many models" rather than adhering specifically to one. These discussions further highlighted the challenging nature of tasking a non-clinical staff person with ensuring treatment fidelity.[4]

Finally, because the outcomes study needs to know whether SUD treatment is unique condition of JDTC (vs. TJC) to properly assess the difference between the experimental and control arms (and possibly understand mediators), researchers asked JDTC staff about the availability of SUD treatment for TJC youth. Overall, at all sites, youth in TJC *may* receive SUD treatment if they have need for it. But only two (Sites D and F) of the 10 TJCs guarantee treatment access (if needed). See Figure 2t for results. Note that in one of those two sites, guaranteed access to SUD treatment under TJC is *only* true for youth in the study. So, general *availability* of SUD treatment is largely not unique to the JDTCs. However, researchers also asked staff at site visits how common it was for TJC youth to receive SUD TX. Because guided discussions were with JDTC staff rather than general probation staff, not all site staff were able to provide consistent responses. Usually (though not always), SUD treatment was less available in standard probation than in JDTC. Staff always reported it was less "enforced" than in JDTC, meaning that even if the youth had the *opportunity* to enroll in SUD treatment, they would be much less likely to be

[4] These findings are also consistent with site visit findings, which revealed that non-clinical staff were frequently not aware of the clinical distinction between an SUD screener and an SUD assessment (though this may have changed over the study period as a result of TTA).

compelled to participate as they are in JDTC. These findings indicate that treatment availability is not a unique condition of JDTC, but robust treatment *requirements* are unique at all sites except Sites D and F. Chapter 3 examines actual youth data on service utilization by condition.

Figure 2t. SUD Treatment Availability in TJC



2.3.3.9 Case Management & Probation (Objective 5)

The focus of Objective 5 is the philosophy and approaches being used; that is, on addressing needs and services, emphasizing incentives over sanctions, and having communication with youth and families. To understand the nature of services being delivered and who was responsible for coordinating those services, researchers collected extensive information about the use of case management and the role of probation officers at sites. The JDTC Guidelines reference case management 31 times; however, at the site visits, there was no apparent consensus definition of what constitutes "case management" (as compared with regular juvenile probation duties) across the 10 JDTCs. Some JDTCs had a distinct case management service provided by a (generally outsourced) person who was specifically tasked with focusing on youth needs (vs. program compliance). Other JDTCs relied on probation officers to fulfill the case management role (even going so far as to say that the probation officers "do case management"), with varying degrees of success. Notably, some probation officers appeared to capture the same spirit of outsourced case management. Ultimately, 6 JDTCs did not have a distinct case management entity and reported providing case management as part of probation. Three JDTCs had separate entities for case management and 1 JDTC switched from dedicated and outsourced case management to probation-based case management during the study. Other JDTCs also reported changes (including one that originally had dedicated case management from a case manager but ultimately reported offering the same service through the Court Coordinator).

Beyond the variability in whether JDTCs provided dedicated case management, there was also significant variability in *how* that case management was provided at the 3 JDTCs that did so. One JDTC site offered case management under the broader juvenile justice system. So, while it was available to JDTC youth, it was also available to TJC youth and was not a unique condition of the JDTC. Of the 2 JDTCs that provided case management as a specific (and unique) component of the JDTC program, only 1 provided the service to all JDTC youth, while the other assigned case managers to JDTC youth based on an ad hoc assessment of need. As a result, in total, only 1 of the 10 JDTCs offered a dedicated case manager (separate from probation) to *all* youth enrolled in JDTC.

2.3.3.10 Judge Engages Parent During Court (Objective 3)

Though numerous Guidelines speak to parental engagement generally (1.5, 3.1, and 4.2, among others), Guideline 3.1 specifically identifies three areas in which to encourage active parent participation: regular court hearings, supervision, and treatment. The CSA found that this was one of the JDTCs' best Guidelines, improving from 88% at pre to 95% at post. Notably, the Guideline is written around "working collaboratively to encourage active participation." At the site visits, researchers made direct observations of the extent to which parents were engaged in JDTC proceedings, if present. For the 7 JDTCs where observations could be successfully made and recorded, parental engagement varied from 50% to 100%—the widest variation of any item recorded during JDTC observation. Notably, this was not a measure of *whether* a parent was present but rather whether the jurist meaningfully engaged those parents who *were* present. Because only youth with participating parents were scored, sample sizes were extremely small (as low as 2 in Site J, likely accounting for the 50% score). Still, there was considerable variability in the extent to which family members who attended court were engaged. These findings raise questions about how to interpret CSA results for Guideline 3.1 (and for other Guidelines that are focused on level of effort rather than results). Mean scores are displayed in Figure 2u.

2.3.3.11 Judge Engages Youth During Court & Uses a Non-Judgmental and Procedurally Fair Approach (Objective 3)

Guideline 3.2 says that "the judge should interact with the participants in a non-judgmental and procedurally fair" manner. JDTCs actually saw a decline on this Guideline from 95% at baseline to 80% at follow-up, which the research team hypothesized was the result of the respondent better understanding the goal of the Objective (and therefore assessing more "harshly" at post than at pre). These results were generally confirmed by the site visits, though both methodologies leave room for interpretation. The CSA used two indicators for Objective 3.2, "the judge speaks directly to participants during their court appearances" (which remained at 100% from baseline to follow-up) and "the judge provides consistent follow-through on warnings to participants," which declined from 90% at baseline to 60% follow-up.

Researchers used two primary measures to assess interactions between the jurists and the youth at the site visits. The more basic measure simply asked whether the judge meaningfully engaged the youth (e.g., spoke to the youth and also asked the youth to speak). On this measure, JDTCs ranged from 93% to 100%, with 5 of 7 JDTCs achieving a perfect score. This finding indicates only that the judge successfully encouraged the youth to speak in nearly all (but not 100%) of cases which were observed across all sites. While there was some variation, the scores were uniformly high and likely do not permit meaningful cross-site comparison. Despite this limitation, not all sites received perfect scores – in contrast with their self-assigned CSA ratings. Mean scores are displayed in Figure 2u.

Figure 2u. Court Observation Mean Scores by Site & Dimension

Mean Scores				
Site ID	Parental Engagement	Youth Engagement	Non-Judgmental and Fair Approach	Incentives/ Sanctions Perceived Fair
A	N/A	N/A	N/A	N/A
B	100%	100%	100%	94%
C	N/A	N/A	N/A	N/A
D	83%	100%	95%	77%
E	100%	100%	100%	100%
F	95%	95%	100%	79%
G	74%	93%	93%	96%
H	N/A	N/A	N/A	N/A
I	75%	100%	96%	100%
J	50%	100%	100%	100%
Key				
50% or Below	70%-79%	80-89%	90-99%	100%

For this study, researchers scored youth engagement as a binary ("Yes" or "No"). Given the nature and structure of JDTC (where each youth is called to the bench to discuss their case with a judicial officer), only extreme cases of non-engagement would be coded as "No." In this study, we sought to avoid finer measurements because we did not wish to extrapolate detail from the Guidelines which was not present in the original text. A more nuanced measure of the depth and quality of youth engagement would likely yield heterogeneity that *may* prove useful for outcomes analysis in a way that our youth engagement scores were not.

To further assess Guideline 3.2, researchers attempted to make a direct observation of the *nature* of the interaction with each youth, assessing the extent to which it was "non-judgmental and procedurally fair;" however, as with youth engagement, researchers found very little variation, with JDTC's mean scores ranging from 93% to 100%, and 4 JDTCs achieving perfect scores. Similarly to youth engagement, researchers scored "The judge should interact with the participants in a non-judgmental and procedurally fair manner" as a binary ("Yes" or "No"). Here too, we sought to avoid finer measurements because we did not wish to extrapolate detail from the Guidelines which was not present in the original text. However, given the imprecision of this measure, researchers coded "yes" responses in all but the most extreme cases of unfairness/judgmental approach. A more nuanced measure of the depth and quality of the use of a non-judgmental and procedurally fair approach would likely yield heterogeneity that *may* prove useful for outcomes analysis in a way that our scores were not. Finally, assessment of consistency in judicial follow-up was a challenge because only one interaction was observed with each youth. This limitation made intra-youth consistency ratings impossible and rendered inter-youth ratings too challenging to attempt with the small sample sizes.

While we anticipated the need to categorize on a binary scale would obscure observed gradation of the interactions (both within and across courts) as a result of the binary choice, this

concern was confirmed during the observations on the site visits. All three researchers generally limited a "no" response to instances where the practice was significantly and obviously out of step with the spirit of the Guideline. This practice would explain both the lack of variation (only 7 percentage points), the universally high scores (all 93% and above), and the similarity in scores for Youth Engagement and Non-judgmental and Fair Approach. Anecdotally, researchers also agreed easily on subjective assessments of the relative success of the judges across JDTCs (e.g., Judge X exemplified Guideline 3.2 more than Judge Y) that were not reflected in the formal scores. So, though we cannot state so conclusively, we nonetheless believe it more likely that our observed uniformity reflects imprecision of measurement and possibly also of practice guidance. Future research would benefit for more nuanced measures, which may require more nuanced guidance on the implementation of specific Guidelines.

2.3.3.12 Youth Perception of Incentives/Sanctions as Fair (Objective 5)

The CSA attempts to measure Guideline 5.2 by assessing whether youth receive a list of incentives/sanctions (I/S) and whether they are identified as part of the case planning process, finding that scores improved from 70% at baseline to 86% at follow up. For site visit observations, there was slightly more variability on the youth perception of I/S fairness than on some other measures, ranging from 77% to 100%. While 3 JDTCs scored 100% and 2 JDTCs scored 94% and 96%, 2 JDTCs scored 77% and 79% (Sites D and F). Our findings indicated that 5 of 7 scored courts achieved better than 94% while 2 courts scored 77% and 79%. We judge that that our observational measures were able to detect extreme cases where youth did not perceive incentives and sanctions as fair (e.g., the youth stated so explicitly in court or made other obvious signs in the court room). However, given that youth may be disinclined to express disagreement or dissatisfaction with a judicial decision to the judicial officer during the hearing, our observational data should be considered a minimum level of variability.

2.3.4 Site Variation: Descriptive Findings

This section presents findings from site visits indicating variation across JDTCs which was relevant to program implementation but not explicitly nested under a JDTC Guideline or Objective. This selection of findings further demonstrates the considerable variation within programs collectively referred to as "JDTCs" on dimensions which are not even considered within the existing practice guidelines.

2.3.4.1 JDTC Size

At the time of the visits, the number of enrollees in each JDTC varied widely. Figure 2v shows the distribution of JDTCs by caseload size. Notably, the clustering masks greater variation, as the smallest JDTC had 6 youth enrolled while the largest had 80 and the second largest had 43. These sizes reflect only the number of youth enrolled at the time of the site visit. The outcome study includes data about the extent of court enrollment across all sites over the study period. Still, this finding indicates that some of the courts functioned as "boutique" programs—serving very small numbers of youth—while others functioned at scale. Though JDTC Guidelines do not specify a program size, it seems reasonable to conclude that there may be considerable differences between smaller "boutique" JDTCs and larger ones.

Figure 2v. JDTC Size & Structure

2.3.4.2 JDTC Tracks

The use of JDTC tracks was an area of considerable variation across the 10 observed JDTCs. Importantly, JDTCs had different definitions for what they considered "tracks." Generally, a jurisdiction has a process for identifying specific youth characteristics or circumstances and serving them in a special way (e.g., such as by having different phases, requirements, services, or timing). However, in most cases, only some of those dimensions were different across "tracks." Six of the 10 JDTCs had just one track or system and 4 JDTCs employed tracks. Of the JDTCs that used tracks, 2 based their tracks (JDTC requirements) on the youth's adjudication status (i.e., pre- or post-adjudication), and 2 based services on risk/need or level of care (see Figure 2w). Notably, what one JDTC considered a track (e.g., having a different treatment component based on level of care) might not be considered a distinct track at another JDTC. This lack of consistency around the definition of tracks is evidence of still further variation around core terminology, but it also makes assessment of true "on the ground" programmatic differences more challenging.

Figure 2w. JDTC Use of "Tracks"

2.3.4.3 Phase Progression Determination

Though phases are not formally required under JDTC Guidelines, TTA focused heavily on phase implementation—with all JDTCs at various stages of implementing formal phases at the time of the site visits. Nine of the 10 observed JDTCs used a formalized system for phase progression at the time of the site visit—only 1 JDTC did not, instead allowing treatment providers to initiate phase progression on the basis of treatment progress. Of the 9 JDTCs that used a formal system, 5 used a checklist/adherence to phase requirements, 3 used a point system, and 1 used a checklist & a point system combined. Aspects of these systems (including their relative complexity and rigidity) may be presumed to have a large

effect of the qualitative experience of enrolling in JDTC; however, this was not reflected in Guideline/Objective data discussed earlier.

2.3.4.4 Probation Caseloads & Staffing

The JDTC Guidelines did not speak specifically to probation/case management caseloads. However, site visits revealed considerable variation in PO caseload assignment (by both type and volume). A primary distinction was whether JDTC POs carry only JDTC cases or are assigned to TJC and JDTC cases. Five (5) courts reported that JDTC POs carry *only* JDTC cases while the other 5 reported a mix of JDTC and TJC cases. Of those who reported a mix, 2 sites reported that JDTC POs carried "mostly JDTC cases," 1 site reported an even split between two POs, and a 4th site reported that one POs was "mostly JDTC" and the other was "mostly TJC." Finally, 1 site had only one PO for the entire jurisdiction, making their caseload mostly TJC. Notably for the outcomes study, this means that at some sites youth in the JDTC condition received distinct POs while in others youth in JDTC and TJC might have the same PO. JDTCs also reported a range of PO caseloads from 12 to 55. Most (6) JDTCs reported average caseloads of 12–19. Of these, 4 served exclusively JDTC cases. Three (3) sites reported average caseloads of 20–30. Of these, only one was exclusively JDTC cases. One final site reported an average caseload of 55 (serving both JDTC and TJC).

2.4 Summary & Recommendations from Court-Level Findings

The court-level data collection for the JDTC Guidelines Cross-Site Evaluation involved court self-assessments of Guidelines implementation of JDTCs and TJCs and site visits to observe and gather rich and detailed information about the operations of JDTC programs. There was substantial overlap in practices of JDTC & TJC and considerable variability within JDTC in how they operate. In general, both JDTCs and TJCs improved in their implementation of Guidelines over time, with JDTCs typically higher in implementation achievement than TJCs.

For this study, we attempted to operationalize and establish measures for the JDTC Guidelines, as well as selected key topics to observe and collect data about. Through this process, we found that there was some room for interpretation regarding what the Guidelines meant and how they could and were interpreted by sites. The reliability of the court self-assessment is based on the extent to which the court staff understood the Guideline concepts – staff utilized TTA and gained knowledge and experience over time. Their interactions with evaluation team members also increased their understanding. The site visits informed the study in that outside experts were able to observe the full set of programs and code practices uniformly. The outcome study results and the validation study of the court self-assessment will also both inform the field and future evaluation efforts by highlighting and clarifying key Guidelines and practices and illustrating gaps in the research that still need to be addressed.

2.4.1 Recommendations

The close collaboration that our evaluation team members had with court staff, program partners, and TTA providers helped us interpret and understand the court-level data we collected and analyzed. The following list of recommendations includes suggestions for funders, evaluators, and professionals working to improve JDTCs and juvenile justice systems.

* **Reconvene the collaborative work group** to discuss the JDTC Evaluation results and implications for revisions to the Guidelines, the court self-assessment, and future evaluation and research needs. Bringing together federal partners, the various research teams, the Guidelines

development experts, and TTA providers could generate a list of priorities for (1) information to share with the field/practitioners, (2) ways to refine the court self-assessment as a program tool (and to match any changes to the Guidelines), (3) discussing what measures are still needed to benefit future evaluation and research, and (4) assessing what research questions are needed in the next phase of work studying the implementation and impacts of juvenile drug treatment courts.

Discussion about the CSA (and other measures) should include what the feasible vs. aspirational practices are to achieve Guideline implementation. For example, should we measure if services are available, or offered, or should we measure that they are received? Or both?

Once the Guidelines are updated and language clarified, the CSA can be updated as well to ensure that it measures as accurately as possible the specific practices and recommendations and offered by the Guidelines. Also work to revise questions that were misunderstood or misinterpreted by program staff. For example, clarify that the question about providing services to families is intended to measure a family engagement strategy. We need to be clear in the standards we are using to assess Guidelines achievement and when we have set too low a bar or too general a practice to be meaningful. Develop alternative methods for Guidelines that are not conducive to a self-assessment, such as judicial fairness or consistent follow-through on warnings, and provide explicit clarity on how those Guidelines are meant to translate into practice.

A more nuanced measure of the depth and quality of the use of a non-judgmental and procedurally fair approach would likely yield heterogeneity that *may* prove useful for outcomes analysis in a way that our scores were not. Though this method was not feasible for the present study, future studies should obtain these data directly from youth (either by survey or interview).

* **Continue to fund TTA** for juvenile courts, both for them to implement and sustain JDTCs that follow the model, and to enhance the effectiveness of traditional juvenile courts, through promoting use of research-based practices. Many of the JDTC Guidelines are clearly applicable and achievable in the traditional juvenile court context, and by implementing them throughout the system, JDTCs may be more effective and integrated into a comprehensive care system. For example,

- Ensure that all juvenile courts have a **screening and assessment process**, using appropriate, validated tools and trained staff, to determine youth needs at intake and identify which youth should be diverted and which youth need informal or formal/intensive supervision.
- Develop a system that **matches assessed needs to services**, and creates individualized, integrated, holistic, and coordinated service planning and support for youth and families. Provide treatment (that is, connect youth and families to treatment services) when it is needed.
- Make sure that all staff who work with youth and families are fully **trained** in adolescent development, trauma, strength-based practices, and contingency management and appropriate responses to youth behavior. Expand the use of incentives and rewards throughout juvenile court systems.
- Work to **promote collaboration** between juvenile justice systems and community resources, including schools, treatment providers, employment/career exploration opportunities, artistic/creative outlets, mentors, and safe recreational activities.
- Clarify the definition of substance use disorder for purposes of JDTC eligibility.
- Provide guidance regarding **effective family engagement practices** and how to remove barriers to family participation. Reinforce the goal of moving from intention and encouragement to achieving meaningful family participation. One example involves the perception of programs that they are flexible, while holding court sessions during the regular workday. Ironically, the COVID pandemic promoted innovations, such as calling into court by phone or video link, that many programs may retain because it provides access to involvement by more families.

- Decrease use of detention and increase alternative responses that provide constructive learning and skill development opportunities, community connections, and engagement in the change process.

* **Develop guidance** for JDTCs and TJCs regarding what **quality treatment services** look like and how to verify that treatment providers are implementing treatment with fidelity to evidence-based, culturally appropriate treatment models. This could be an updated version of the Drug Strategies (2005), "Bridging the Gap: A Guide to Drug Treatment in the Juvenile Justice System."

* Work with programs to operationalize what **equity of access** means and how to achieve it. Help programs develop policies, review their local data, identify disparities, create an action plan, and work with decision-makers to adjust their system to ensure that services are equally available and provided to all youth and families based on their needs.

* Help juvenile courts **establish appropriate goals** and expectations for youth, and the supports needed to achieve them. Ensure that measures of success include a wide range of indicators of wellness and functioning (including, but not limited to, not reoffending, reduced substance use, improved communication skills, reduced family conflict and improved family functioning, increased school attendance, engagement, and academic achievement, improved emotional self-management skills, etc.).

* Help juvenile courts **establish an infrastructure and build staff capacity**. It was clear during the evaluation that programs that had a foundation and dedicated staff were better able to manage change and make improvements. Having procedures and protocols in place helped the whole team work together and having a person with time (and authority) to guide the implementation process facilitated adoption of new practices. Written position descriptions are an example of a fairly simple, achievable product that helps all team members understand each other's roles. Project management training may also be helpful for JDTC coordinators.

* Support program use of **electronic management information systems**, and the collection, entry, and use of key data elements for program monitoring and improvement. Work with programs and juvenile courts to understand the benefit of collecting information at exit and follow-up and using it to document program successes and identify unmet youth needs.

2.4.2 Key Takeaways that Inform the Outcome Study

The youth-level components of the JDTC Guidelines Cross-Site Evaluation focus on 4 of the 10 study sites that had enough follow-up data to analyze youth outcomes.

To assess the impact of the JDTCs, we need to know that outcome study sites [A, C, H, I] are good representatives of the JDTC model; that is, that they are successfully implementing the Guidelines.

- Per the CSA, there was variability in the level of Guidelines achievement of the JDTCs at baseline from 70% to 86%, with two higher achieving [A, C] and two moderate [H, I] achieving sites. Per the site visits, there were two higher functioning [A, H], one moderate [I], and one lower functioning [C] site.
- Per the CSA, by the follow-up, all four study sites' JDTCs had increased their level of implementation and were in the higher achieving group, implementing at least 86% of the Guidelines.
- Data collected through guided discussions and observations at the site visits show that the JDTC varied in not only which Guidelines they achieved, but how they achieved them, interpreting and implementing different practices to meet the intent of the guidance. The outcome study results will highlight which of the sites had a more notable impact on participating youth.

To assess whether JDTCs are more effective than TJCs, we need to know the extent to which they differ on the Guidelines. We know that TJCs do follow many of the Guidelines, but that they also typically implemented fewer than the JDTCs did.

- Per the CSA, there were wider variability and lower levels of TJC Guidelines achievement than in the JDTCs, ranging from 28% to 67%. These rates put one TJC in the moderate group and the other three in the lower achieving groups. At follow-up, all four TJCs had also increased their level of implementation, ranging from 39% to 72%, but were all still below the level of the outcome study site JDTCs.
- In the four study sites, JDTCs had on average 26 percentage point differences between their baseline level of achievement of the Guidelines and their respective TJCs (ranging from 14% to 42%). At follow-up the average was 30 percentage points different on average (ranging from 16% to 47%). The distinction (gap) between JDTCs and TJCs grew on average 5 percentage points (with the range from -3% to 15%).

3. YOUTH LEVEL METHODS & RESULTS

3.1 Assignment Mechanism & Controlling for Differences between Groups

3.1.1 Random Assignment (RA) Experiment

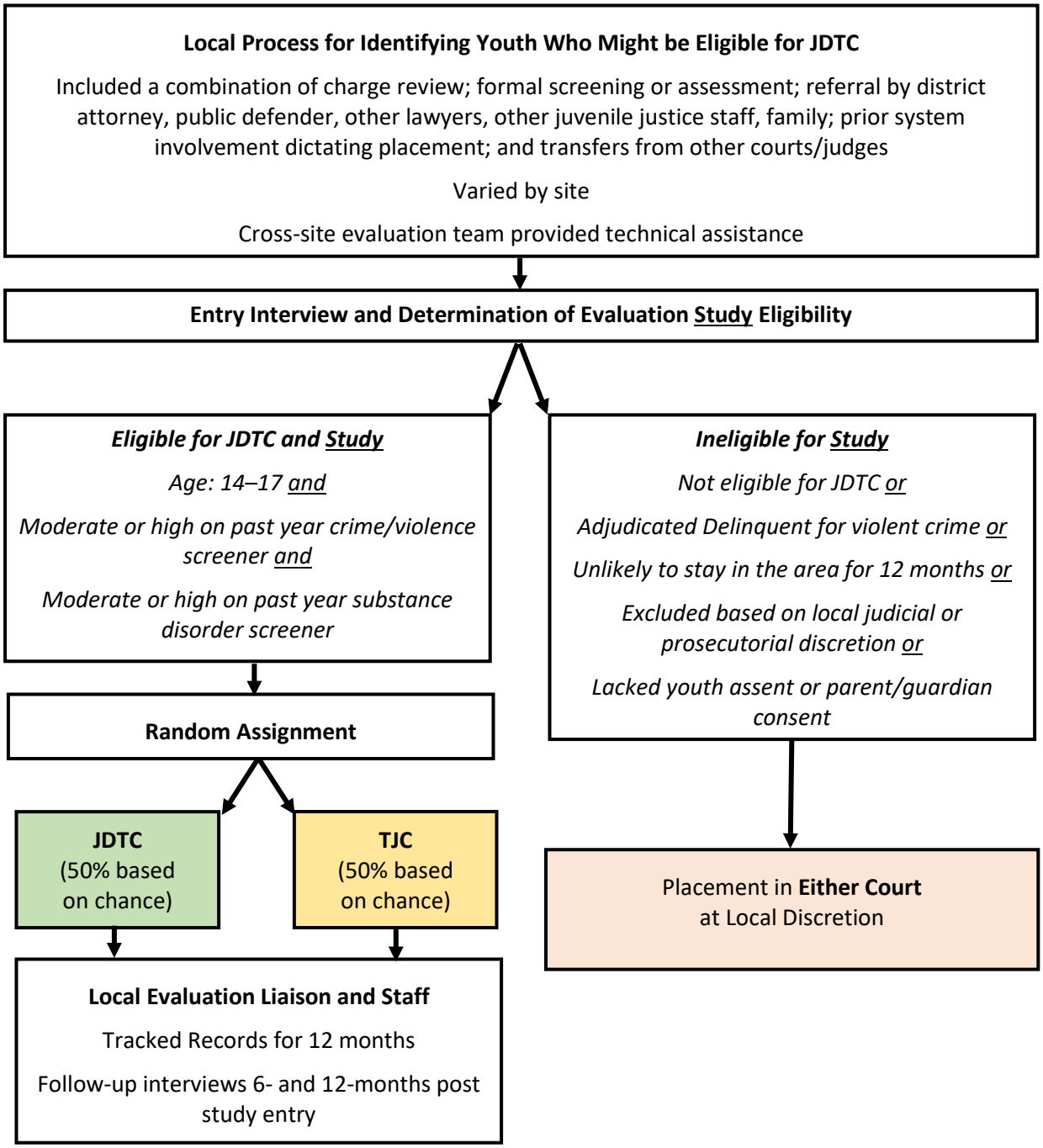
Random assignment (RA) was used by two jurisdiction sites. Each site recruited youth who were eligible under the 2016 JDTC Guidelines (i.e., ages 14–17, moderate to high risk of recidivism, had a substance use disorder), **and** who were also eligible for intervention as usual in a TJC **and** not excluded due to having been adjudicated delinquent for a violent offense, expected to leave the area within the next 12 months, or excluded by the local courts for other reasons (e.g., change of venue, other court having priority, prior court involvement driving placement). The term "violent offense" statutorily means a youth who has been adjudicated delinquent (or convicted in an adult court) of a felony-level offense that 1) has, as an element, the use, attempted use, or threatened use of physical force against the person or property of another or the possession or use of a firearm; or 2) by its nature, involves a substantial risk that physical force against the person or property of another may be used in the course of committing the offense [42 USC 3797u-2(b)]. The participating JDTCs were attempting to implement the 2016 JDTC Guidelines for youth with substance use disorders. TJC refers to the default court/dockets in the same county for juveniles, excluding any other specialized courts. Eligibility for JDTC and TJC excluded youth referred to diversion or delayed/informal supervision not involving a judge.

Youth participation in the evaluation was voluntary. Since eligible youth were under age 18, they were asked to provide informed "assent" to participate and then their parent or legal guardian was asked to provide informed "consent" to participate (Dennis et al., 2019a). Youth or families who declined were asked if they wanted to give a reason, and these reasons were reviewed for any issues that could be addressed with the individual or local implementation. For those who agreed, the local Evaluation Liaison used software provided by the cross-site evaluation team to generate assignment recommendations. Figure 3a shows the case flow for the random assignment experiment.

To prevent tampering with the assignment process, the randomization process was controlled by the evaluation team. The program staff confirmed administration of the youth survey, inclusion/exclusion criteria, and agreement to participate in the study before randomization. The use of assignment software helped to make each assignment independent, was blocked every 4 cases by site and time within site to ensure balanced assignment (50% to each type of court within site), and limited the maximum run of assignments to one type of court within site at 4 in a row. This was an open trial—meaning the youth, their family, court personnel, and evaluation staff all knew the assignment once made.

Judges and prosecutors maintained their respective existing legal and ethical prerogatives to reassign youth to another court, to detention, or to release them after RA. Such actions, or 'overrides,' were viewed as "outcomes" for the purpose of the evaluation. We tracked and reported on the rate of overrides in the first 90 days to identify potential problems in the pre-randomization exclusion process. Monthly, the cross-site evaluation team reviewed the reasons given for all overrides to make sure they did not indicate problems with pre-randomization exclusion. The courts used this option judiciously and the reasons given all fit within the expected range, including "youth survey result disagrees with local assessment" (n = 6), "staff request for specific court" (n = 4), "decision by the Judge (due to youth's history, substance use, mental health, or lack of family support)" (n = 3), "parent/youth refusal to participate in JDTC" (n = 3), and "youth terminated probation" (n = 3).

Figure 3a. Case Flow Diagram for Random Assignment (RA) Experiment



The cross-site evaluation team tested whether random assignment produced equivalent youth groups assigned to each court. The technical criterion was a Cohen's effect size *d* of -0.2 < *d* < +0.2 for continuous measures (e.g., risk of recidivism, days of substance use) and an odds ratio (OR) of 0.80 < OR < 1.2. There were no significant differences by condition and no differences outside of the expected range for "d" across demographics, substance use disorder severity, or risk of recidivism.

3.1.2 Needs-Based Assignment Quasi-Experiment

Regression Discontinuity was used to make needs-based assignment for the remaining 8 sites (including one site that originally proposed random assignment but switched to this design, and one site that withdrew from the study after 16 months). Each site recruited youth who were a) eligible under the 2016 JDTC Guidelines (e.g., ages 14–17, moderate to high risk of recidivism, and had a substance use disorder) **or** who were eligible for TJC **and** b) were not excluded due to being adjudicated delinquent (or convicted in an adult court) for a violent offense, expecting to leave the area within the next 12 months, or excluded by the local courts for other reasons (Figure 3b); definitions for these factors are the same as described in Section 3.1.1.

As with the random assignment sites, youth participation in the needs-based sites was voluntary, and the assent/consent process was the same. Since all were under the age of 18, eligible youth were asked to provide informed "assent" to participate, and their parent or legal guardian was asked to provide informed "consent" to participate. Youth and parents/guardians who declined were asked if they wanted to give a reason and the reasons were reviewed for any issues that could be addressed with the individual or local implementation. For those who agreed, the local Evaluation Liaison used software provided by the cross-site evaluation team to generate assignment recommendations based on the risk of substance abuse and recidivism (see below). Figure 3b shows the case flow for the needs-based assignment quasi-experiment.

As with randomization, the evaluation team controlled the software/decision rules. Program staff documented the youth survey, inclusion/exclusion criteria, and agreement to participate in the system before implementing the needs-based assignment algorithm. This design worked by using logistic regression on pre-existing data to establish a relation between one or more baseline predictors (e.g., risk of recidivism, severity of substance use) and an outcome (e.g., recidivism over the subsequent 6 months). A criterion based on the baseline predictors was then used to decide who gets the intervention of interest vs. the comparison intervention.

The effect of providing an intervention can then be estimated by the differences (i.e., discontinuity) between the expected and actual regression line for the subset that gets the new intervention relative to those who receive treatment as usual. So, for example, if the actual recidivism rate for the JDTC group is lower than what is expected, this would represent an effect of JDTC. This process is repeated for the TJC group because the actual case mix of the previous data and evaluation data are likely to vary. Comparing the differences (observed minus expected) allows a more rigorous evaluation of the effects of JDTC vs. TJC after controlling for case mix.

To develop the needs-based assignment design for this cross-site evaluation, we used data from the 2012 GAIN CSAT dataset (see http://www.gaincc.org/slides), which included 9,399 youth from 141 sites around the United States who were involved in the juvenile justice system, ages 14–17, and had 1 or more follow-ups in the 6 months post baseline. The youth were 77% male and 23% female; 35% White, 33% Hispanic, 14% Black, and 18% multiple races or another race; an average age of 15.6 years; and included 1,105 (12%) youth in JDTC.

Two screeners from the GAIN (Figure 3c; Dennis et al., 2006) were used to assess the youth: The Substance Disorder Screener (SDScr) was used to assess the need for substance use treatment and the Crime and Violence Screener (CVScr) was used to assess risk of recidivism.

Figure 3b. Case Flow Diagram for Needs-Based Assignment Quasi-Experiment

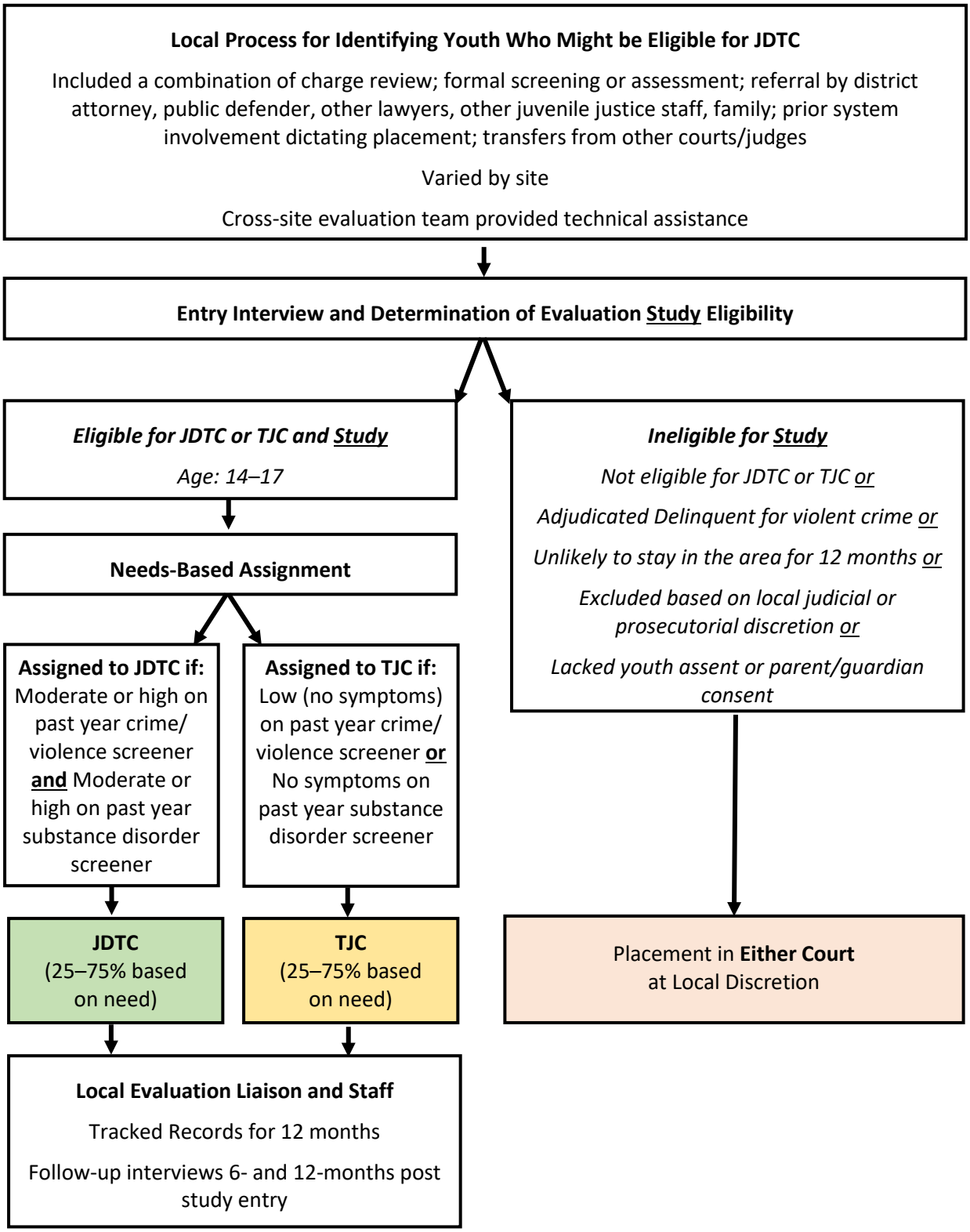


Figure 3c. GAIN Substance Use Disorder Screener & Crime & Violence Screener

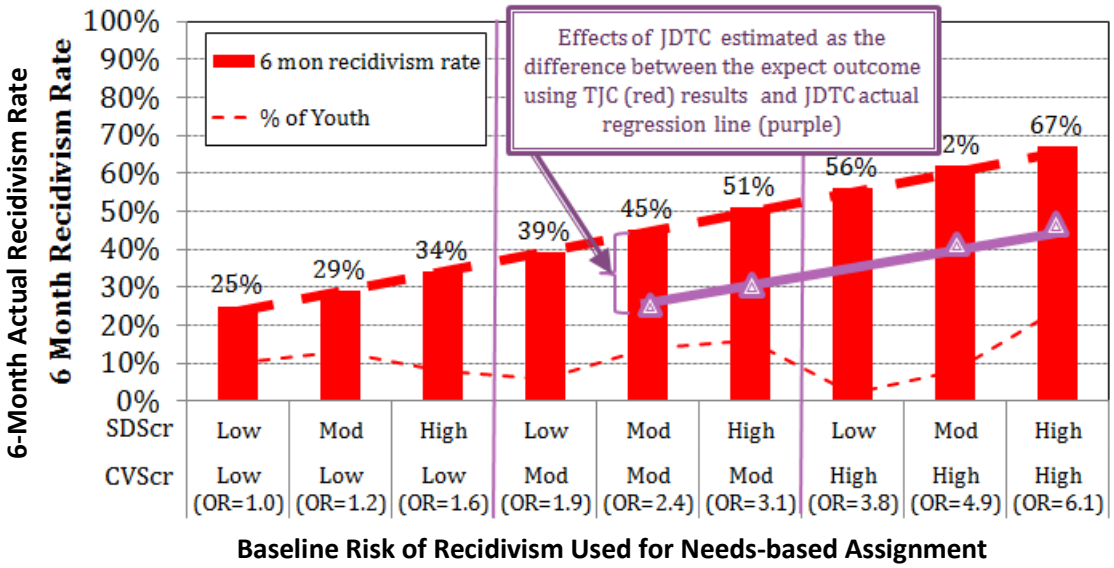
(Continued) After each of the following questions, please tell us the last time, if ever, you had the problem by answering whether it was in the past month, 2 to 3 months ago, 4 to 12 months ago, 1 or more years ago, or never.	Past month	2 to 3 months ago	4 to 12 months ago	1+ years ago	Never
	4	3	2	1	0
SDScr 3. **When was the last time** that…					
a. you used alcohol or other drugs weekly or more often?	4	3	2	1	0
b. you spent a lot of time either getting alcohol or other drugs, using alcohol or other drugs, or recovering from the effects of alcohol or other drugs (e.g., feeling sick)?	4	3	2	1	0
c. you kept using alcohol or other drugs even though it was causing social problems, leading to fights, or getting you into trouble with other people?	4	3	2	1	0
d. your use of alcohol or other drugs caused you to give up or reduce your involvement in activities at work, school, home, or social events?	4	3	2	1	0
e. you had withdrawal problems from alcohol or other drugs like shaky hands, throwing up, having trouble sitting still or sleeping, or you used any alcohol or other drugs to stop being sick or avoid withdrawal problems?	4	3	2	1	0
CVScr 4. **When was the last time** that you…					
a. had a disagreement in which you pushed, grabbed, or shoved someone?	4	3	2	1	0
b. took something from a store without paying for it?	4	3	2	1	0
c. sold, distributed, or helped to make illegal drugs?	4	3	2	1	0
d. drove a vehicle while under the influence of alcohol or illegal drugs?	4	3	2	1	0
e. purposely damaged or destroyed property that did not belong to you?	4	3	2	1	0

Each screener was scored based on the number of items out of five that were endorsed in the past year. Youth were classified as low (0 symptoms in the past year), moderate (1–2 symptoms), and high (3–5 symptoms). A high score on the Substance Disorder Screener (SDScr) and the Crime and Violence Screener (CVScr) suggests the need for substance use treatment and high risk of recidivism, respectively. A low score on the two screeners suggests low need for treatment and low risk of recidivism, respectively. We use "low" instead of "none" because these are only screeners and may miss 1 to 3% of those who might be identified in a more detailed clinical assessment or who may have underreported risk behaviors.

Next, we combined the data from the two screeners from the 2012 GAIN dataset to create the nine-level risk groups shown on the x axis in Figure 3d. As one moves from left to right in Figure 3d, the rates of 6-month recidivism on the red regression line are consistently increasing. Moreover, higher scores on the Crime and Violence Screener (CVScr) are associated with more recidivism; and within each level of CVScr (bottom row of x axis), higher scores on the Substance Disorder Screener (SDScr; top row of x axis) are associated with more recidivism as well. These same short 5-item screeners have been found to be highly correlated with 16- to 40-item versions in the full GAIN clinical assessment (correlations of .9), accurately predicting who will or will not score high or moderate to high in the crime problems area on the longer versions of the scale and moderate to high on substance use disorders based on the longer version of the scale in the full GAIN (sensitivity = .9, specificity = .9, area under the curve [AUC] = .9; Dennis et al., 2006; Dennis & Davis, 2021). Combined, they have also proven to be a

particularly efficient predictor of recidivism in the next 12 months and do as well as longer or more expensive recidivism risk tools (Garner et al., 2013).

Figure 3d. Feasibility of Using Needs-Based Assignment to Predict Recidivism



Note: SDScr = Substance Use Disorder Screener; CVScr = Crime and Violence Screener; past year symptom groups coded as low (0 symptoms), moderate (1–2) or high (3–5); *OR* = odds ratio, where odds (recidivism rate / 1-recidvism rate) are for each group divided by the odds for the first group (low/low). Red line is based on real data (*n* = 9,399), purple is "hypothetical" and what was expected.

We also assessed the extent to which using the proposed needs-based assignment method (a.k.a. regression discontinuity) represented a major change over current practice. Table 3a looks at the distribution of these same 9 need/risk groups for all juvenile justice cases, repeating the recidivism rate, the odds ratio (comparing each row to the first row), and recommended court assignment from Figure 3d. Under "Type of Court Assignment," the first three columns compare the percentage of youth in the juvenile justice system across the 9 risk groups, the subset percentage assigned to TJC, and the subset percentage assigned to JDTC. The last column looks at the odds ratio of being assigned to JDTC vs. TJC within each risk group (i.e., within rows). Contrary to the 2016 Guidelines research, which suggested that the first five groups (lowest recidivism risk and lowest need for substance use treatment) would be the least likely to benefit from JDTC, all of the first five groups were *more* likely (OR of 1.21 to 11.93) to be assigned to JDTC in actual court assignment. Conversely, of the next four groups that the 2016 Guidelines research suggested were *most* likely to benefit from JDTC (moderate to high risk of recidivism and moderate/high need for substance use treatment), three were significantly less likely to be assigned to JDTC in actual court assignment (OR of 0.32 to 0.82). This is a focal problem that the Guidelines and needs-based assignment method try to address: specifically, to see if a relatively simple screening rule can make assignment to JDTC more consistent with the 2016 Guidelines and, consequently, reduce recidivism and substance use further. The key limitation of this analysis is that the TJC and JDTC data come from different jurisdictions/sites/assignment processes. The needs-based design addresses this limitation by having both types of courts yoked within the same jurisdiction/site and by using the same process within site and close to the same process across sites.

Table 3a. GAIN Crime & Violence Screener & Substance Use Disorder Screener Groups based on Past Year Symptoms: Case Distribution & Ability to Predict Recidivism

Risk Group	Needs-Based Assign-ment	6-Month Recidivism		Type of Court Assignment			
		Rate	Odds Ratio[a] (to 1st row)	All JJ Cases (*N* = 9,399)	TJC Cases (*n* = 8,234)	JDTC Cases (*n* = 1,105)	Odds Ratio[b] (JDTC /TJC)
Low CVScr/**Low** SDScr	TJC	25%	1.00	10%	10%	13%	1.41
Low CVScr/Mod SDScr	TJC	29%	1.23	13%	13%	16%	1.32
Low CVScr/High SDScr	TJC	34%	1.55	8%	7%	14%	2.10
Mod CVScr/**Low** SDScr	TJC	39%	1.92	6%	6%	7%	1.21
High CVScr/**Low** SDScr	TJC	56%	3.82	2%	1%	10%	11.93
Mod CVScr/Mod SDScr	JDTC	45%	2.45	14%	14%	12%	0.82
Mod CVScr/High SDScr	JDTC	51%	3.12	16%	17%	10%	0.52
High CVScr/Mod SDScr	JDTC	62%	4.89	8%	7%	13%	1.89
High CVScr/High SDScr	JDTC	67%	6.09	24%	26%	10%	0.32

Note: Distribution comparing recidivism outcomes, the recommended assignment based on the 9 levels of recidivism risk, and the actual court assignment to Juvenile Drug Treatment Court (JDTC) or Traditional Juvenile Court (TJC). *CVScr* = Crime and Violence Screener. *SDScr* = Substance Disorder Screener. *Needs-based assignment to type of court based on individual risk of recidivism.*

[a] The likelihood (rate/1-rate) of recidivism at 6-months relative to the lowest risk group (Low/Low).

[b] The JDTC assignment Odds Ratio calculating the odds of being assigned to JDTC over the odds of being assigned to TJC within the same level of risk (i.e., same row).

As noted earlier, the needs-based assignments were open quasi-experiment. As with the random assignment sites, while judges or prosecutors maintained their respective existing legal and ethical prerogatives to reassign youth to another court, detention, or release them after initial assignment—such actions, or overrides, were viewed as "outcomes" for the purpose of the evaluation. We also tracked the rate of overrides in the first 90 days to identify potential problems in the pre-RD exclusion process. Monthly, the cross-site evaluation team reviewed the reasons given for all assignment overrides to make sure they did not indicate problems in pre-RA exclusion. The cross-site evaluation team discussed higher rates of overrides with the local judges and prosecutors to see if there were any changes to the process we could make to reduce the incidence. There were 33 overrides due to court discretion, going approximately equally from JDTC to TJC vs. TJC to JDTC. Two of the 8 sites drove most of this, including the one site that dropped out (but is still included above).

Unlike in the randomized experiment design, in the needs-based assignment design, the JDTC and TJC groups of youth were expected to be different, with only those who were moderate or high on both the Substance Use Disorder and Crime and Violence screeners assigned to JDTC. Here, we used the expected risk based on the original 9 groups to control for these differences and the actual rates in the TJC group (red line in Figure 3d) to project the expected outcome for the JDTC group. The average difference between the actual and expected for each court type was compared and used to estimate the effect of JDTC over TJC. While the GAIN screener items were explicitly picked because they lacked differential item functioning by gender, race, age, and primary substance (Conrad et al., 2010; Riley et al., 2007), we also checked for potential differences in this context by examining differences in

demographics as well as the baseline rates of the outcome variables to evaluate whether there were any unexpected biases and to understand how they were related to the placement rule.

We tried to maximize the likelihood that local staff would be willing to collect the baseline survey by limiting the duration of the survey to less than 30 minutes once interviewers were "proficient" with the survey (which took from 2 to 4 surveys for most staff). The evaluation team also maintained a list of questions and answers for use by cross-site evaluation team and local Evaluation Liaisons in addressing questions that came up. The survey length ended up being a potential concern based on challenges sites had engaging youth in the 6- and 12-month follow-ups. On 9/22/2020, we implemented a shortened version of the follow-up survey which included only the two primary outcomes—Crime and Violence and Substance Use Disorder screeners—for staff to offer as an alternative to the full survey to encourage more youth to complete their follow-ups. These surveys took approximately 13.5 minutes compared to the original 30-minute follow-up.

3.2 Data Sources, Tools, & Primary Outcome Measures

3.2.1 Youth Juvenile Justice Records Abstraction

The record abstract tool was an adaptation of one initially developed for the Juvenile Justice Translational Research on Interventions for Adolescents in the Legal System (JJ-TRIALS) conducted with juvenile community supervision records from 36 counties in 7 states (Belenko et al., 2017; Dennis et al., 2019b; Knight et al., 2016). For this study, we dropped items that JJTRIALS site could rarely get, expanded details on recidivism-based items to be consistent with OJJDP's recidivism risk group definitions (Harris et al., 2011), and added items to better track movement through courts and treatment.

Appendix C contains the specifications for the record abstraction data set. It includes numerical IDs for the grant site, local jurisdiction, and specific docket so that the data could be linked for the court self-assessment and site visit data (for developing potential higher-level moderators of youth outcomes), as well as the specific youth and youth episodes to link to the youth survey data. The youth records data tracked 6 main items: a) the baseline record in terms of referral date to the justice system, charges, baseline urine or screening tests, and status (i.e., diversion, informal probation, probation, parole, other), b) each court assignment and disposition, c) each substance use treatment episode and status (e.g., referral source, intake date, level of care, type of treatment, discharge dates, discharge status), d) dates and charges for first subsequent arrest and referral to the juvenile court, e) the dates and results of all subsequent urine tests, and f) the date that the record was last updated (for censoring). Sections b, c, and e allowed for multiple entries per youth. The evaluation focused on unique youth. To track this information, there were fields for indicating if there were multiple episodes or cases combined into one record. The juvenile justice records did not always include treatment data. In those cases, we asked the Evaluation Liaison to collect it from the treatment programs (releases were provided to help with this process, as discussed further below in the section on human subjects). We attempted to update each record for at least 12 months, but when there were readily available electronic records on recidivism, we abstracted records for longer periods of time and used right-hand censoring as needed to model variations in follow-up intervals.

Youth records are the primary source of data on recidivism and urine test results were used to cross validate or supplement youth reports of substance use. Recidivism was defined as the first rearrest that occurred after entry into the study; substance use was a dichotomous measure of whether the youth had one or more positive urine tests for any drug.

3.2.2 Youth Surveys

Appendix D contains copies of the youth assent, parent consent, and youth survey that was used at enrollment and at 6 and 12 months post enrollment. This survey was used to determine study and JDTC eligibility for both the random assignment and needs-based sites, provided demographics and biopsychosocial history (baseline only), and the measures of crime/violence, substance use, mental health and wellbeing, family functioning, academic performance, and the other youth outcomes we tracked over time. The measures included the GAIN Short Screener (Dennis et al., 2006) used for the needs-based assignment, as well as the mental health continuum short form (MHC-SF) measure of mental well-being (Keyes & Simoes, 2012), the Family Effectiveness Measure (FAM; McCreary et al., 2013), the National Mentor Resource Center's "very important non-parent adult" (Herrera et al., 2007), and Out of School Time questions (Scales et al., 2006). These data collection instruments were selected based on cross-site evaluation team consensus and for having empirically validated measurement properties. Table 3b provides details of the Youth Survey instrument. The first column indicates the domain, the second column the primary source for the survey items, and the third column modifications that were made of the source items used (if applicable). As noted above, the instrument sections placed premiums on a) mapping onto the requested outcomes; b) mapping onto the other JDTC cooperative activities; c) mapping onto other data sources; d) having adolescent norms/psychometrics ideally in juvenile justice or adolescent treatment samples; and e) brevity, given the need to balance the scientific rigor of having the same measure across sites vs. the potential logistical burden for sites of having this plus other local required measures. The youth survey took approximately 33 minutes once interviewers reached proficiency (approximately 2 to 4 surveys with quality assurance feedback). As noted above, in year 3, to accommodate program changes due to COVID and to maximize follow-up rates for our key outcomes, we developed a briefer self-report youth survey that is also included in Appendix D.

Table 3b. Crosswalk of Data Source, Primary Instrument Source, & Modifications Made

Section	Primary Instrument Source	Modifications Made
A. Exclusion and Consent Checklist, start time, time anchoring	GAIN Q3 (Titus et al., 2013)	• Time anchoring period modified to past 6 months to match study design.
B. Background Information	GAIN Q3 (Titus et al., 2013)	• Added custody (B2b). • Dropped half the items. • Added Lifetime substance use treatment, arrests, and adjudication (B5-B7).
WB. Wellbeing	Mental Health Continuum Short Form (Keyes & Simoes, 2012; McGaffin et al., 2015)	• Only changed format.

Section	Primary Instrument Source	Modifications Made
FE. Family Environment	Family Effectiveness Measure (FEM; McCreary et al., 2013) and Very Important Adult (VIA; Herrera et al., 2007) questions from National Mentoring Resource Center (NMRC)	• Used a Factor and Rasch analysis to sort FEM into two subscales and cut it from 44 items to 20 items while maintaining the two factors (each with 10 items). • Modified FEM from giving to parents about their own children to giving to youth about their family broadly defined. • Modified VIA from pick one to all that apply format.
SP. School and Peers	GAIN Q3 (Titus et al., 2013), Social Environment Scale (SES; Godley et al., 2005) and Out-of-school time (OST) structured activity scale from NMRC (Scales et al., 2006).	• Modified recency response set to match study design. • Added average grades on most recent report card. • Added SES (SP3) to capture risk and protective factors from peers. • Added OST (SP4) to capture involvement in structured activities outside of school; modified wording to clarify that these were alcohol and drug free activities, and to make the time period 6 months to match the study design.
RB. Risk Behavior	GAIN Q3 (Titus et al., 2013; Dennis & Davis, 2021).	• Modified recency response set to match study design. • Dropped half the items.
MH. Mental Health	GAIN Q3 (Titus et al., 2013; Conrad et al., 2010; Conrad et al., 2012).	• Modified recency response set to match study design.
SU. Substance Use *	GAIN SS (Dennis et al., 2006; Garner et al., 2013; Riley et al., 2007)	• Modified recency response set to match study design. • Added use of Narcan or naloxone after overdose (SU2e). • Revised categories of days of use to reduce the number of questions. • Dropped pre-controlled environment questions.
CV. Crime and Violence *	GAIN SS (Dennis et al., 2006; Garner et al., 2013; Conrad et al., 2010)	• Modified recency response set to match study design. • Collapsed jail into detention to shorten questions.
Z. End *	GAIN Q3 (Titus et al., 2013)	• No change.
XADM Administration	GAIN Q3 (Titus et al., 2013)	• Added “Evaluation Liaison or other court office” to locations in (XADMg)

** Kept in shortened follow-up*

3.2.3 Youth Survey Procedures

Evaluation Liaisons were trained on record abstraction on the tool in Appendix C and to the level of a "GAIN Trainer" on the study-specific youth survey in Appendix D. Online survey training tools were provided by the evaluation team in cases where they needed to train other local staff to help. The GAIN training protocol has been demonstrated to produce high reliability/validity while also reducing the time to administer (Titus et al., 2012; Dennis et al., 2019b). This training protocol includes in person and online training sessions, practice, and feedback on digital recordings of surveys until mastery is achieved. This step was important since many of the Evaluation Liaisons had other local staff conducting some of the baseline surveys. During the course of the project, we sought out both questions and suggestions from the Evaluation Liaisons about procedures, questions, or response sets that might not be clear in practice. All feedback was reviewed by the evaluation team, OJJDP and TTA providers. The final replies with any changes were discussed in the monthly call with all local Evaluation Liaisons and posted to their shared resources file as a frequently asked question.

To the extent possible, surveys were conducted by the Evaluation Liaison or other personnel not directly responsible for youth's supervision (e.g., probation officer or other staff directly involved in status or sanction decisions). This process was established to avoid the demand characteristics of having youth surveyed by JDTC or TJC staff and to reduce the risk of accidental disclosure. The Evaluation Liaisons were allowed to train other local staff to conduct the survey and incorporate them into court procedures, like pre-trial or pre-sentence investigation processes. The type of person doing the survey was documented. Anyone who conducted surveys needed to be trained, certified, and agree to follow the consent procedures. The cross-site evaluation team set up the software so that the survey could be self-administered or staff-administered, completed online, or on a hard copy and keyed.

Whether during an interview or data entry after the fact, the electronic survey software (called the Assessment Building System or ABS) conducts range checks, makes simple and complex skips, and allows immediate consistency checks. If a survey needed to be done with paper and pencil, the staff edited the survey in the field, followed by a second edit to verify that key fields were complete when entered online, provided feedback and/or clarified questions, and marked any missing/bad data. When done online, a validation report was immediately generated to identify any inconsistent or missing data so that they could be reviewed while the staff was still with the youth. When the data were keyed, the computer system again checked for range and consistency across multiple items. Monthly management reports were used to monitor performance and error reports were reviewed weekly until there were no major problems (or when there was new staff), then monthly thereafter. All records and youth survey data were checked for unexpected patterns of increased or decreased activity.

The cross-site evaluation team trained the Evaluation Liaison in how to implement follow-up procedures based on Scott (2004). Steps included: a) contacting participants within 24–48 hours to collect additional locator information and mailing a schedule card for the next survey; b) receiving information; c) assigning each case to the Evaluation Liaison or other follow-up case tracker; d) verifying locator data; e) conducting outreach for unverified cases and discussing them at weekly meetings; f) mailing thank-you cards to participants and collaterals; g) scheduling follow-up appointments; h) mailing 3 and 6 week post-enrollment flyers; i) implementing returned-mail procedures; j) calling participants 6 weeks before each appointment to confirm the date and location (e.g., phone vs. Evaluation Liaison's office, other settings); l) completing follow-up surveys; and m) implementing a no-show protocol. Progress was monitored with monthly management reports.

3.3 Analyses

3.3.1 Administrative Data Record Abstraction

Administrative data were abstracted by the local Evaluation Liaison from justice records for SUD treatment, urine tests, and recidivism. These administrative data were available for the first 12 months or until release by the court; the average record length was 11 months with 85% having 11 or 12 months of data. There was no significant difference in the length of available records or any pattern of missing data by court type within jurisdiction/sites. The template used for record abstraction is provided in Appendix C. For these and all the other data below, analyses were conducted using SPSS version 27. Below are more details on the administrative data from the SUD treatment cascade, urine tests, and recidivism.

3.3.1.1 Administrative Data for SUD Treatment Cascade Outcomes

For youth with at least 3 months of administrative data after the court assignment, SUD treatment cascade variables were calculated as:

a) **All youth:** The number of youth assigned to the court type with at least 3 months of administrative data post assignment.
b) **Screened:** The subset of above youth in (a) screened with a standardized tool (e.g., MAYSI, GAIN-SS).
c) **In need of substance use treatment:** The subset of above youth in (a) who were found to be in need of substance use treatment based on any source (screener, urine test, staff recommendation).
d) **Referred to substance use treatment:** The subset of above youth in (c) who are documented in the record as having been formally referred to substance use treatment.
e) **Initiated substance use treatment:** The subset of above youth in (c) who are documented in the record as having initiated substance use treatment.
f) **Engaged in substance use treatment:** The subset of above youth in (e) who are documented in the record as having stayed in substance use treatment for at least 30 days.
g) **Continuing care:** The subset of above youth in (e) who are documented in the record as having any substance use treatment between 91 and 180 days from initiation of treatment.

The latter two items may include transfers between programs or levels of care and/or readmissions. Evaluation Liaisons completed an Excel record for each participant based on both justice system and their treatment partners' administrative records. Over 95% followed the above cascade, with the remainder having some missing steps. To simplify the analysis, latter steps were used to back code (e.g., if youth met criteria for continuing care, youth missing engaged or initiation were coded yes; if youth initiated, missing referral was back coded to yes). Starting with the second row above, the cascade figures can be calculated as the percentage of all youth or just the youth retained at each step (e.g., b/a; c/b) (Dennis et al., 2019b). Differences were tested with logistic regression by court type.

3.3.1.2 Administrative Data for Drug Test Results

For the 211 youth in JDTC, results were abstracted on 8,106 drug tests (915 in the first month and 7,191 in months 2–12). For the 120 youth in TJC, results were abstracted from 1,377 drug tests (189 in month 1 and 1,188 in months 2–12). Tests were primarily positive for marijuana, so in addition to "any drug," the results are also reported as the percentage of tests positive for marijuana and any other

drug. In the subset of 4 sites with 6-month outcomes, the Kappa between self-reported use and urine tests was 0.53 for any drug, 0.62 of marijuana, and 0.24 for other drugs. Sensitivity (relative to positive on either self-report or urine tests) was similar for past month self-report and urine for any drug use (85% and 89%) and any marijuana use (86% and 87% respectively); for any other drug, sensitivity was 17 points higher for self-report (74%) than urine test (57%). This result was largely due to the longer half-life of metabolites for marijuana vs. other drugs in urine.

3.3.1.3 Administrative Data for Recidivism Analyses

A variety of data relevant to establishing whether the youth recidivated were available for analysis, including flag variables indicating whether a recidivism event had occurred, dates for these, as well as specific charges and indication of offense severity (i.e., citation, status, misdemeanor, and felony). Also coded were indicators of whether a youth was adjudicated, the date of adjudication, and the adjudication event's disposition (i.e., not delinquent, delinquent, and pending).

The original coding for the recidivism flag variable indicated whether a recidivism event had occurred and included values of 0 (no rearrest), 1 (rearrested), 2 (adjudicated), 99 (other), and -2 (not accessible), -4 (missing) and -5 (not applicable/skipped). To create a binary rearrest variable where 1 = rearrested and 0 = not rearrested, data were recoded so that the values of 2 (adjudicated) and 99 (other) were changed to 1 (rearrested) because an arrest event logically preceded adjudication or coincided with a code of 99. A value of -5 was recoded to 0 (not rearrested), and -2 and -4 were missing.

Time until rearrest was computed as the difference between the date a youth was assigned to condition (i.e., TJC or JDTC) and the date rearrested. This initially produced 7 cases with negative values indicating the arrest had preceded assignment to court condition. These cases led to their scores on the binary rearrest variable being recoded to 0 (not rearrested) because logically these arrests predated involvement in the study. For cases without a rearrest, the time until rearrest variable was set to missing. This variable served as the basis for creating 6- and 12-month rearrest variables. That is, if a rearrest occurred between days 1 and 180 following assignment to court condition, these events were reflected on binary 6-month rearrest as (1); cases without a value were assigned a value of 0; cases with missing data left that way on the new variables. Similarly, another binary rearrest variable for 12 months was created by recoding time until rearrest (values 1 through 365 days) into a value of 1 (rearrested), those missing time until rearrest coded as 0 (no rearrest), and cases with missing data as "missing."

For the first set of analyses, the focus was placed on two types of recidivism, general and criminal, for both 6- and 12-month post-court assignment intervals. General recidivism included any type of rearrest, including status offenses. Criminal recidivism excluded status offenses (e.g., runaway, underage possession of tobacco), but if a status offense was one of several charges for the individual, with other charges being criminal, she/he was coded as being rearrested for a criminal offense. There were no status offenses in the random assignment research site, so findings for general and criminal recidivism are identical. There were several arrests of individuals only for status offenses in the needs-based condition. Therefore, the findings for general recidivism show higher rates of rearrest than the findings reported only for criminal offending.

Recidivism outcomes from administrative records were analyzed by "expected" risk based on the GAIN Q3's Crime and Violence and Substance Disorder Screeners, court type, and their interaction. For the expected risk variable, each screener was scored as low (0 symptoms in the past year), moderate (1–2 symptoms), or high (3–5 symptoms), then combined to make 9 levels of risk of recidivism using prior data (Dennis et al., 2019a). In data from 9,399 youth from 141 U.S. juvenile justice sites before the 2016 JDTC Guidelines were issued, these 9 levels had monotonically increasing 6-month recidivism rates (25%, 29%, 34%, 29%, 45%, 51%, 56%, 62%, 67%) and odds ratios of 1.0, 1.2, 1.6, 1.9, 2.4, 3.1, 3.8, 4.9,

6.1. For 12-month recidivism, the expected rate was increased by a factor of 1.38 to reflect the typical growth in cumulative recidivism rates between 6 and 12 months.

Because the needs-based assignment to courts is based on risk/need, there were significant differences in the expected risk of recidivism at baseline. Thus, our second set of analyses focused on the difference between the observed minus the expected rearrest rate. This calculation is like a pre-post change score and is particularly useful when focused on modifiable outcomes (Allison, 1990). Within and across the 4 sites we used both *t*-tests (parametric) and Mann-Whitney Rank order tests (non-parametric). The latter was necessary due to the unequal sample sizes by site/court type, a bimodal distribution, and an unexpected interaction between initial expected risk and the amount of change. The RD analytic model assumes that the baseline effect of the baseline covariate can be modeled with a difference in the a-intercept and no difference in the slope (i.e., two parallel lines). However, there was a significant impact of court type on slope as well.

3.3.2 Survey Data

Analyses of youth survey data were based on youth who had both a baseline and 6-month follow-up; in this report we limit the survey-based outcome analyses due to lower follow-up rates for the 12-month surveys and the shortened survey administered to some of the youth at 12-month follow-up. The characteristics of the full sample are described, and comparisons made between youth with and without follow-up surveys to assess for sampling bias. Descriptive analyses compared the baseline and outcome values of the key primary and secondary measures, controlling for the baseline value where appropriate. Ordinary least squares regression models were estimated for the needs-based sites for the primary outcome variable of days used marijuana. The small number of cases in the random assignment sample precluded additional multivariate analyses, and the small number of sites meant that multilevel modeling was not appropriate. Missing data for specific variables was not an issue for either the youth survey data.

3.3.3 Recruitment Case Flow & Compliance With Court Type Assignment

We recorded the overall recruitment of youth into the study across sites, and the number of baseline, 6-month, and 12-month surveys completed by month. Overall, 415 youth were recruited into the study and completed baseline surveys. The number is much lower than the original projected sample size of 1,500, reflecting both lower than anticipated JDTC admissions during our study recruitment, slower than planned start-up/staff training in some of the sites, and the impact of the COVID pandemic on JDTC and juvenile court operations.

Table 3c shows the mean number of youth recruited into the cross-site evaluation pre- and post-COVID, by type of survey. There was a substantial decrease in the number of intakes due to the COVID pandemic, from an average of 14.8 per month pre-COVID to 6.7 per month post-COVID, a decrease of 54.7%. The mean number of completed 6-month follow-up surveys also decreased post-COVID, but to a lesser extent. There was a monthly average of 10.6 6-month follow-ups conducted pre-COVID, compared with 8.0 post-COVID, a reduction of 24.5%. Finally, the average number of 12-month follow-up surveys per month actually increased post-COVID, from 8.1 to 9.8 (an increase of 21.0%). This result may have reflected a final push to collect 12-month surveys before the end of data collection in June 2021.

In summary, it appears that the largest impact of COVID on youth recruitment and surveys occurred during the first few months of the pandemic shutdown, when new intakes dropped considerably. Follow-up surveys were affected to a lesser degree and less consistently.

Table 3c. Mean Surveys Per Month Pre- & Post-COVID (All Sites)

	Pre-COVID (Through Mar. 2020)			Post-COVID (Apr. 2020 – Dec. 2021)		
Type	Number of Months	Number of Surveys	Mean Surveys /Month	Number of Months	Number of Surveys	Mean Surveys/ Month
Baseline (Intake)	24	354	14.8	9	60	6.7
6-month follow-up	16	169	10.6	15	120	8.0
12-month follow-up	10	81	8.1	15	147	9.8

3.3.4 Recruitment & Follow-up Survey Summary

Table 3d displays the number of youth recruited into the study and completing the baseline survey, and the percentage who completed 6- or 12-month follow-up surveys, by assignment type and site. Overall, 415 youth (240 JDTC and 175 TJC) completed baseline surveys. More than two-thirds of the full sample (69.3%) completed 6-month surveys, and 54.7% completed 12-month surveys. However, compared with TJC youth, JDTC youth were more likely to complete 6-month follow-up surveys (73.3% vs. 63.4%) and 12-month surveys (60.0% vs. 47.4%).

There was also substantial differences in sample attrition across individual sites. For example, one of the random assignment sites had very low 6- and 12-month follow-ups (14.3% and 21.4% respectively), compared with over 80% follow-ups for the other random assignment site. In the needs-based assignment sites (excluding the site that withdrew from the study and the site with only one youth), 6-month follow-up percentages ranged from 33.3% to 97.1% for JDTC youth, and 12-month follow-ups ranged from 45.8% to 84.1%. For TJC youth, follow-up percentages tended to be lower than for JDTC youth, ranging from 20.0% to 95.6% for the 6-month follow-up surveys, and 33.3% to 78.3% for the 12-month follow-up surveys.

Based on the overall follow-up rates, the number of TJC youth recruited, and the relative differences between the JDTC and TJC follow-ups within sites, only random assignment Site A and Needs-Based sites C, H, and I were included in the outcomes analyses presented later in this chapter. The total sample size of these 4 sites is 303 (167 JDTC, 136 TJC). At 6 months, the follow-up rate across these four sites was 84.5% and higher for JDTC than TJC (90.4% vs. 77.2%). At 12 months, the follow-up rate dropped to 65.7% (hence the focus here on 6 months for survey data).

Table 3d. Baseline *N* & Follow-up Completion at 6 & 12 months by Design & Site

	Baseline *N*			% Follow-ups Completed					
				6-month			12-month		
Design/ Site	Total	JDTC	TJC	Total	JDTC	TJC	Total	JDTC	TJC
Random Assignment Sites									
A*	50	25	25	88.0	84.0	92.0	80.0	88.0	72.0
D	28	14	14	14.3	21.4	7.1	21.4	35.7	7.1
Needs-Based Assignment Sites									
B**	37	23	14	0	0	0	0	0	0
C*	79	49	30	79.7	93.8	56.7	60.8	59.1	63.3
E	1	1	0	0	0	0	100.0	100.0	0.0
F	9	6	3	55.6	33.3	66.7	44.4	50.0	33.3
G	18	13	5	61.1	76.9	20.0	44.4	46.2	40.0

Design/ Site	Baseline *N*			% Follow-ups Completed					
				6-month			12-month		
	Total	JDTC	TJC	Total	JDTC	TJC	Total	JDTC	TJC
H*	92	69	23	96.7	97.1	95.6	82.6	84.1	78.3
I*	82	24	58	73.1	70.8	74.1	42.7	45.8	41.4
J	19	16	3	57.9	56.3	66.7	47.4	56.3	0
TOTAL	415	240	175	69.3	73.3	63.4	54.7	60.0	47.4
4 Sites* Subtotal	303	167	136	84.5	90.4	77.2	65.7	71.9	58.1

* Only sites A, C, H, & I were used in outcome analysis; other sites were dropped due to low *n* and/or low follow-up rates

** This site withdrew from the study before follow-up surveys began.

3.3.5 Attrition Analysis for 6-Month & 12-Month Follow-up

In this section, we compare the baseline characteristics for youth in the random assignment site who completed follow-up surveys at 6- and/or 12-months with those who did not, by study condition (JDTC vs. TJC). We separately compare 6- and 12-month survey attrition because there may be different patterns of characteristics for those who did not have 6-month vs. 12-month follow-ups. The purpose of this comparison is to assess whether there are any systematic differences between youth who completed follow-up surveys and those who did not, and whether these differences might bias the study outcomes in any way. The results are shown in Tables 3e and 3f.

3.3.5.1 Random Assignment Site (Table 3e)

JDTC sample, 6-month follow-up. In the JDTC sample, significantly more (90.5%) youth who completed a 6-month follow-up had reported no AOD use other than marijuana in the 90 days prior to the baseline survey, compared with 0.0% of youth who did not complete a 6-month follow-up ($p < .001$). Including those with no days of use, JDTC youth with a 6-month follow-up had an average of 63.7 days (*SD* 21.7) of marijuana use in the 90 days prior to baseline assessment, compared to 47.3 days (*SD* 33.0) for those who did not. One-third of youth with a 6-month follow-up had no arrests with charges (including status offenses) in the 90 days prior to baseline assessment compared to half of those without 6-month follow-up. In terms of drug use, those with a 6-month follow-up reported lower drug use at baseline but were more likely to have been arrested in the previous 90 days (*n.s.*). JDTC youth without a 6-month follow-up were assessed as having higher risk than those with a follow-up: 42.9% of those completing a 6-month follow-up were assessed as moderate risk for recidivism/relapse at baseline, 23.8% as high risk, and 33.3% as very high risk, compared with 50.0% assessed as being high risk and 50.0% as very high risk for youth not completing a 6-month follow-up. However, these differences were not statistically significant.

JDTC sample, 12-month follow-up. In the JDTC sample, 81.8% of youth who completed a 12-month follow-up had reported no AOD use other than marijuana in the 90 days prior to the baseline survey, compared with 33.3% of youth who did not complete a 12-month follow-up. Including those with no days of use, JDTC youth with a 12-month follow-up had an average of 62.7 days (*SD* 21.6) of marijuana use in the 90 days prior to baseline assessment, compared with 49.0 days (*SD* 40.6) for those who did not have a follow-up. Of youth with a 12-month follow-up, 27.3% had no arrests with charges

(including status offenses) in the 90 days prior to baseline assessment compared with 100.0% of those without a 12-month follow-up. Thus, youth without a 12-month follow-up used less drugs and were less likely to be arrested in the 90 days prior to baseline ($p < .001$). Again, similar to the 6-month follow-up findings, JDTC youth without a 12-month follow-up were classified as higher risk at baseline: 40.9% of youth with a 12-month follow-up were assessed as moderate risk for recidivism/relapse at baseline, 27.3% as high risk, and 31.8% as very high risk, compared with 33.3% who were assessed as high risk and 66.7% as very high risk among youth not completing a 12-month follow-up. However, none of these differences were significant as the sample sizes for both groups were small (22 vs. 3 respectively).

In summary, the findings were mixed. JDTC youth without follow-up surveys were classified as higher risk according to the baseline risk category but were less likely to have been arrested or report drug use in the 90 days prior to baseline. Only the difference for the 6-month follow-up in non-marijuana AOD use was significant, where those with no AOD use other than marijuana were less likely to complete a 6-month follow-up.

TJC sample, 6-month follow-up. In the random assignment TJC sample, 82.6% of youth who completed a 6-month follow-up reported no AOD use other than marijuana in the 90 days prior to the baseline survey, compared with 0.0% of youth who did not complete a 6-month follow-up ($p < .01$). Including those with no days of use, TJC youth with a 6-month follow-up had an average of 52.0 days of marijuana use in the 90 days prior to baseline assessment, compared with 56.5 days for those who did not. Those without a 6-month follow-up were more likely to have reported no arrests in the 90 days prior to baseline. Slightly more than one-third (34.8%) of youth with a 6-month follow-up had no arrests with charges (including status offenses) in the 90 days prior to baseline assessment compared with 50.0% of those without 6-month follow-up. None of these differences were statistically significant. Among TJC youth with a 6-month follow-up, 39.1% were assessed as moderate risk for recidivism/relapse at baseline, 13.0% as high risk and 48.7% as very high risk, compared with youth not completing a 6-month follow-up, who were 50.0% moderate risk and 50.0% high risk. Thus, youth without a 12-month follow-up appeared to be at somewhat lower risk.

TJC sample, 12-month follow-up. In terms of drug use, 83.3% of TJC youth who completed a 12-month follow-up reported no AOD use other than marijuana in the 90 days prior to the baseline survey, compared with 57.1% of youth who did not complete a 12-month follow-up. Including those with no days of use, TJC youth with a 12-month follow-up had an average of 55.2 days (*SD* 21.4) of marijuana use in the 90 days prior to baseline assessment, compared with 45.1 days (*SD* 21.5) for those who did not. Those without a 12-month follow-up were more likely to have no reported arrests in the 90 days prior to baseline. Of youth with a 12-month follow-up, 27.8% had no arrests with charges (including status offenses) in the 90 days prior to baseline assessment, compared with 57.1% of those without a 12-month follow-up. Finally, TJC youth with a 12-month follow-up were classified as higher risk: 33.3% were assessed as moderate risk for recidivism/relapse at baseline, 16.7% as high risk and 50.0% as very high risk, compared with 57.1% moderate risk, 14.3% high risk, and 28.6% very high risk of youth not completing a 12-month follow-up.

In summary, the findings were mixed but different than for the JDTC youth. TJC youth without follow-up surveys were classified as lower risk according to the baseline risk category but were less likely to have been arrested or report drug use in the 90 days prior to baseline.

3.3.5.2 Needs-based Assignment Sites (Table 3f)

JDTC sample, 6-month follow-up. Reported drug use at baseline was slightly higher for youth who completed the 6-month follow-up: 51.5% of youth who completed a 6-month follow-up had reported no AOD use other than marijuana in the 90 days prior to the baseline survey, compared with 66.7% of youth who did not complete a 6-month follow-up; 3.8% who completed the 6-month follow-up

reported no marijuana use at baseline compared with 33.3% of those who did not. These differences were not significant. However, including those with no days of use, JDTC youth with a 6-month follow-up had an average of 42.2 days (*SD* 30.4) of marijuana use in the 90 days prior to baseline assessment, compared with 22.2 days (*SD* 24.9) for those who did not ($p < .05$). Including status offenses, JDTC youth who completed a 6-month follow-up were less likely to report no arrests in the 90 days prior to baseline, with 20.8% reporting no arrests, compared to 50.0% of those without a 6-month follow-up ($p < .001$). Excluding status offenses, however, youth with a 6-month follow-up were slightly more likely to report no arrests: 66.9% vs. 58.3% ($p < .01$). JDTC youth with a 6-month follow-up were significantly less likely to be Black (30.0% vs. 58.3%, $p < .01$). More than two-thirds (69.2%) of those with a 6-month follow-up were male compared to 91.7% of those without a follow-up, though this difference was not significant. A higher percentage of youth with a 6-month follow-up were classified as very high risk (32.3% vs. 16.7% for youth without a 6-month follow-up), a lower percentage as high risk (26.9% vs. 50.0%), and a slightly higher percentage as moderate risk (40.8 vs. 33.3), though none of these differences were significant.

JDTC sample, 12-month follow-up. Reported use of drugs other than marijuana and the average number of days used marijuana at baseline was slightly higher for those with a 12-month follow-up than for those without, 48.0% vs. 63.9% (*n.s.*). Youth without a 12-month follow-up were also more likely to report no marijuana use in the 90 days prior to baseline (13.6% vs. 3.1% for those with a follow-up, *n.s.*). However, none of these differences were statistically significant. The patterns for arrests were like the 6-month follow-up findings. Including status offenses, youth who completed a 12-month follow-up were less likely to report no arrests in the 90 days prior to baseline (15.3% vs. 40.9%; $p < .01$). Excluding status offenses, youth with a 6-month follow-up were slightly more likely to report no arrests: 69.4% vs. 59.1% (*n.s.*). Youth with a 12-month follow-up were significantly less likely to be Black ($p < .05$). Baseline risk assessment indicated no significant differences in risk categories for youth with or without a 12-month follow-up. Of JDTC youth with a 12-month follow-up, 39.8% were assessed as moderate risk for recidivism/relapse at baseline, 28.6% as high risk, and 31.6% as very high risk, compared with 40.9% moderate risk, 29.5% high risk, and 29.5% very high risk for youth not completing a 12-month follow-up.

In summary, similar to the findings for the random assignment site, youth with a 6-month follow-up (and to a lesser extent 12-month follow-up) were more likely to be classified as higher risk and were more likely to report an arrest (including status offenses). However, they also had greater marijuana use at baseline.

TJC sample, 6-month follow-up. There were no significant differences in substance use history between TJC youth with or without a follow-up. Youth without a 6-month follow-up were less likely to have used marijuana in the 90 days prior to baseline: 65.4% of youth with a 6-month follow-up, compared with 79.3% of those without, reported no marijuana use. Including those with no days of use, youth with a 6-month follow-up had an average of 10.2 days (*SD* 22.8) of marijuana use in the 90 days prior to baseline assessment, compared to only 2.7 days (*SD* 9.1) for those who did not. In both groups, most youth reported not using alcohol or drugs other than marijuana in the 90 days prior to the baseline survey, although those with a 6-month follow-up had a slightly lower percentage reporting no use (*n.s.*). Whether including or excluding status offenses, youth with a 6-month follow-up were much less likely to report no arrests, indicating a higher risk level ($p < .05$). There were no significant differences in race or ethnicity between TJC youth with or without a 6-month follow-up. Risk categories were similar for both groups: among youth with a 6-month follow-up, 26.8% were assessed as low risk for recidivism/relapse at baseline, 64.6% as moderate risk, and 8.5% as high risk, compared with 34.5% low risk, 58.6% moderate risk, and 6.9% high risk for youth not completing a 6-month follow-up.

TJC sample, 12-month follow-up. There were no significant differences in substance use or delinquency measures among those with or without a 12-month follow-up. The patterns were very similar to those for the 6-month follow-up. Youth without a follow-up survey reported fewer days of marijuana use at baseline (*n.s.*) and a higher percentage reported no arrests during the 90 days prior to

baseline (*n.s.*). Those with and without 12-month follow-ups had similar percentages reporting no use of alcohol or drugs other than marijuana (86.9% vs. 92.0%). About two-thirds of youth (67.2%) with a 12-month follow-up were male, compared with 77.3% of those without a follow-up. TJC youth with a 12-month follow-up were less likely to be Black (39.3% vs. 58.0%). These differences were not significant. Finally, as with the 6-month follow-ups, risk categories for recidivism/relapse were similar for those with or without a 12-month follow-up. Of TJC youth with a 12-month follow-up, 27.9% were assessed as low risk for recidivism/relapse at baseline, 67.2% as moderate risk, and 4.9% as high risk, compared with 30.0% low risk, 58.0% moderate risk, and 12.0% high risk among youth not completing a 12-month follow-up.

In summary, TJC youth with and without follow-up surveys were not significantly different statistically, but there were some trends to have reported cannabis use, and more likely to be male or Black and be at high risk for rearrest.

Table 3e. Attrition Bias Analysis in the 1 Random Assignment Site

	JDTC		TJC	
6-Month Analysis	**With 6-mo. f/u (*n* = 21)**	**Without 6-mo. f/u (*n* = 4)**	**With 6-mo. f/u (*n* = 23)**	**Without 6-mo. f/u (*n* = 2)**
Substance Use History				
% Youth With No AOD Use Other Than Marijuana Past 90 Days	90.5	0.0 **(*p* < .001)**	82.6	0.0 (*p* < .01)
Avg. Days of Primary Drug: Marijuana Use in Past 90 Days (*SD*) (including zero)	63.7 (21.7)	47.3 (33.3)	52.0 (22.4)	56.5 (5.0)
% Youth No Marijuana Use in Past 90 Days	0.0	0.0	0.0	0.0
Delinquency				
% Youth With No Arrests & Charges (including status) in Past 90 Days[5]	--	--	--	--
% Youth With No Arrests & Charges (excluding status) in Past 90 Days	33.3	50.0	34.8	50.0
Demographic Characteristics				
% Male	100.0	100.0	100.0	100.0
% Black[6]	76.2	50.0	56.5	50.0
% Hispanic	28.6	50.0	30.4	50.0
% Risk category at baseline (Collapsed)				
Low	--	--	--	--
Moderate	42.9	--	39.1	50.0
High	23.8	50.0	13.0	50.0
Very High	33.3	50.0	47.8	--
% Risk/Need category at baseline (Expanded)				
Low/Low	--	--	--	--
Moderate/Low	--	--	--	--
High/Low	--	--	--	--
Low/Moderate	--	--	--	--
Moderate/Moderate	42.9	--	39.1	50.0
High/Moderate	23.8	50.0	13.0	50.0
Low/High	--	--	--	--
Moderate/High	14.3	25.0	8.7	--
High/High	19.0	25.0	39.1	--

[5] Site did not charge status offenses.

[6] Black and Hispanic are not mutually exclusive categories.

Table 3e. continued

12-Month Analysis	JDTC		TJC	
	With 12-mo. f/u (*n* = 22)	**Without 12-mo. f/u (*n* = 3)**	**With 12-mo. f/u (*n* = 15)**	**Without 12-mo. f/u (*n* = 4)**
Substance Use History				
% Youth With No AOD Use Other Than Marijuana Past 90 Days	81.8	33.3	83.3	57.1
Avg. Days of Primary Drug: Marijuana Use in Past 90 Days (*SD*) (including zero)	62.7 (21.6)	49.0 (40.6)	55.2 (21.4)	45.1 (21.5)
% Youth No Marijuana Use in Past 90 Days	0.0	0.0	0.0	0.0
Delinquency				
% Youth With No Arrests & Charges (including status) in Past 90 Days[7]	--	--	--	--
% Youth With No Arrests & Charges (excluding status) in Past 90 Days	27.3	100.0 **(*p* < .05)**	27.8	57.1
Demographic Characteristics				
% Male	100.0	100.0	100.0	100.0
% Black	77.3	33.3	55.6	57.1
% Hispanic	27.3	66.7	27.8	42.9
% Risk category at baseline (Collapsed)				
Low	--	--	--	--
Moderate	40.9	--	33.3	57.1
High	27.3	33.3	16.7	14.3
Very High	31.8	66.7	50.0	28.6
% Risk/Need category at baseline (Expanded)				
Low/Low	--	--	--	--
Moderate/Low	--	--	--	--
High/Low	--	--	--	--
Low/Moderate	--	--	--	--
Moderate/Moderate	40.9	--	33.3	57.1
High/Moderate	27.3	33.3	16.7	14.3
Low/High	--	--	--	--
Moderate/High	9.1	66.7	11.1	--
High/High	22.7	--	38.9	28.6

[7] This site did not charge any status offenses.

Table 3f. Attrition Bias Analysis in the 3 Needs-Based Assignment Sites

Needs-Based Assignment	JDTC		TJC	
6-Month Analysis	**With 6-mo. f/u (*n* = 130)**	**Without 6-mo. f/u (*n* = 12)**	**With 6-mo. f/u (*n* = 82)**	**Without 6-mo. f/u (*n* = 29)**
Substance Use History				
% Youth With No AOD Use Other Than Marijuana Past 90 Days	51.5	66.7	86.6	96.6
Avg. Days of Primary Drug: Marijuana Use in Past 90 Days (*SD*) (including zero)	42.2 (30.4)	22.2 (24.9) **(*p* < .05)**	10.2 (22.8)	2.7 (9.1)
% Youth No Marijuana Use in Past 90 Days	3.8	33.3	65.4	79.3
Delinquency				
% Youth With No Arrests & Charges (including status) in Past 90 Days	20.8	50.0 **(*p* < .001)**	54.3	89.7 **(*p* < .001)**
% Youth With No Arrests & Charges (excluding status) in Past 90 Days	66.9	58.3 **(*p* < .01)**	75.3	96.6 **(*p* < .05)**
Demographic Characteristics				
% Male	69.2	91.7	68.3	79.3
% Black	30.0	58.3 **(*p* < .01)**	43.9	58.6
% Hispanic	5.4	8.3	19.5	10.3
% Risk category at baseline (Collapsed)				
Low	--	--	26.8	34.5
Moderate	40.8	33.3	64.6	58.6
High	26.9	50.0	8.5	6.9
Very High	32.3	16.7	--	--
% Risk/Need category at baseline (Expanded)				
Low/Low	--	--	26.8	34.5
Moderate/Low	--	--	15.9	17.2
High/Low	--	--	6.1	3.4
Low/Moderate	--	--	42.7	37.9
Moderate/Moderate	40.8	33.3	--	--
High/Moderate	26.9	50.0	--	--
Low/High	00	--	8.5	6.9
Moderate/High	11.5	8.3	--	--
High/High	20.8	8.3	--	--

Table 3f. continued

12-Month Analysis	JDTC		TJC	
	With 12-mo. f/u (*n* = 98)	**Without 12-mo. f/u (*n* = 44)**	**With 12-mo. f/u (*n* = 61)**	**Without 12-mo. f/u (*n* = 50)**
Substance Use History				
% Youth With No AOD Use Other Than Marijuana Past 90 Days	48.0	63.6	86.9	92.0
Avg. Days of Primary Drug: Marijuana Use in Past 90 Days (*SD*) (incl. zero)	40.1 (30.4)	41.3 (30.8)	11.3 (24.3)	4.4 (13.4)
% Youth No Marijuana Use in Past 90 Days	3.1	13.6	65.0	74.0
Delinquency				
% Youth With No Arrests & Charges (including status) in Past 90 Days	15.3	40.9 **(*p* < .01)**	54.1	75.5
% Youth With No Arrests & Charges (excluding status) in Past 90 Days	69.4	59.1	75.4	87.8
Demographic Characteristics				
% Male	68.4	77.3	67.2	76.0
% Black	26.5	45.5 **(*p* < .05)**	39.3	58.0
% Hispanic	4.1	9.1	18.0	16.0
% Risk category at baseline (Collapsed)				
Low	--	--	27.9	30.0
Moderate	39.8	40.9	67.2	58.0
High	28.6	29.5	4.9	12.0
Very High	31.6	29.5	--	--
% Risk /Need category at baseline (Expanded)				
Low/Low	--	--	27.9	30.0
Moderate/Low	--	--	18.0	14.0
High/Low	--	--	8.2	2.0
Low/Moderate	--	--	41.0	42.0
Moderate/Moderate	39.8	40.9	--	--
High/Moderate	28.6	29.5	--	--
Low/High	--	--	4.9	12.0
Moderate/High	12.2	9.1	--	--
High/High	19.4	20.5	--	--

3.3.6 Comparison of Youth Characteristics at Baseline by Court Type

Baseline youth characteristics are based on a total of 415 surveys administered to youth in two Random Assignment sites (*n* = 78 youth; 39 in JDTC and 39 in TJC) and eight Needs-Based Assignment sites (*n* = 336 youth; 201 in JDTC and 136 in TJC). Tables 3g to 3j show the categorization by assignment mechanism and court type.

3.3.6.1 Demographics (Table 3g)

Across the two random assignment sites, JDTC and TJC groups were identical in their rates of being male (94.9% vs. 94.9%) and female (5.1% vs. 5.1%) and were similar in their rates of being Black (43.6% vs. 33%), Hispanic (28.2% vs. 35.9%), multiracial (20.5% vs. 23.1%), white (5.1% vs. 5.1%) and other races (5.2% vs. 2.6%). The two groups were comparable in average age (15.8 vs. 15.5) and the last grade completed at baseline (8.9 and 8.5). None of these differences were statistically significant at $p < .05$, but note the small sample sizes (39 per group).

Across the needs-based assignment sites, both JDTC and TJC youth were predominately male (71.6% vs. 69.1%). There were significant differences in race/ethnicity by court type, with the JDTC youth more likely than TJC youth to identify as white (49.5% vs. 30.1%) and less likely to identify as Black (30.0% vs. 41.9%), multiracial (16.0% vs. 21.3%), and Hispanic (3.5% vs. 5.9%). The two groups were comparable in average age (15.2 vs. 15.4) and the last grade completed at baseline (8.7 and 8.8).

3.3.6.2 Substance Use (Table 3g)

Youth were asked when they had last experienced various effects of using alcohol or drugs (AOD) with the GAIN Substance Disorder Screener (Dennis et al., 2006). Here, the table reports the rate of "**never**" having each of these problem in their lifetime (which is good). Across the random assignment sites, all youth in JDTC and TJC reported a history of weekly alcohol or other drug (AOD) use and over half reported spending a lot of time getting or using AOD, or AOD use leading to fights/trouble. Conversely, over half reported that they had not yet experienced AOD making them give up activities that they cared about or withdrawal. Endorsing two or more of these problems is associated with having a substance use disorder (Dennis et al., 2006). The majority of both JDTC and TJC youth had never been to AOD treatment in their lifetime (56.4% vs. 64.1%). The next rows show the percentage of youth who probably meet criteria for a substance use disorder based on reporting 2 to 5 of the symptoms above (not counting prior treatment) within each time frame. Both groups had similar rates of lifetime use (92.3% vs. 97.4%) and use in the 90 days prior to intake (87.2% vs. 84.6%). In the 90 days prior to intake, the JDTC group reported significantly ($p < .05$) more days of marijuana use than the TJC group (55.0 vs. 42.2) and were significantly less likely to report 0 days of marijuana use (2.6% vs. 15.4%). They were similar in terms of not reporting any other drug use (53.8% vs. 66.7%).

By design, youth in the needs-based assignment sites were assigned to JDTC if they had one or more of the Substance Disorder problems listed in the table during the past year (necessary but not sufficient). Thus, we expected the TJC youths' lifetime rates of saying "never" (i.e., lower severity) to be higher than JDCT youth. As predicted, relative to youth in JDTC, youth in TCJ were significantly ($p < .001$) more likely to report never having used AOD weekly (1.0% vs. 63.4%), spend a lot of time getting/using AOD (31.3% vs. 84%), having their AOD use lead to fights/trouble (44.8% vs. 86.6%), having AOD cause them to give up activities (65.2% vs. 91.8), and/or experiencing AOD withdrawal (76.2% vs. 98.5%). The majority of both JDTC and TJC had never been to AOD treatment in their lifetime (56.4% vs. 64.1%). The JDTC group was significantly more likely to meet criteria for substance use disorders in their lifetime (83.6% vs. 23.1%) and the 90 days prior to intake (76.6% vs. 11.9%; Recall that SUD alone was not

sufficient for JDTC placement). In the 90 days prior to intake, the JDTC group reported significantly ($p <$ .001) more days of marijuana use than the TJC group (39.4 vs. 9.5) and were significantly less likely to report 0 days of marijuana use (8.5% vs. 61.4%) or any other drug (52.2% vs. 88.8%). The youth assigned to JDTC in the needs-based assignment sites were similarly or slightly less severe than those assigned to JDTC or TJC in the random assignment sites (where both were eligible for JDTC). Conversely, the youth assigned to TJC in the needs-based assignment sites were consistently less severe than those assigned to TJC condition in the random assignment sites.

3.3.6.3 Delinquency Behaviors & Justice System Involvement (Table 3g)

To gauge their risk of recidivism, youth were asked about the recency of 5 behaviors on the GAIN Crime and Violence Screener (Dennis et al., 2006), where, within each time periods, 1–2 symptoms suggest moderate risk and 3–5 suggest high risk. The table shows the percentage of youth saying "never" (i.e., lowest severity). Across the random assignment sites, there were no significant differences between JDTC and TJC youth in the rates of having **never** pushed, grabbed, or shoved someone (12.8% vs. 23.1%); taken something from a store without paying (30.8% vs. 35.9%); sold, distributed, or made illegal drugs (51.3% vs. 43.6%); driven under the influence (79.5% vs. 56.4%); destroyed property (56.4% vs. 53.8%); or been previously involved with the juvenile justice system (0.0% vs. 5.1%). Youth who self-report two or more of these problems within a time period are the most likely to be rearrested in the future. Based on this criterion, the youth assigned to JDTC and TJC were similar in their lifetime (79.5% vs. 71.8%), past year (74.4% vs. 64.1%), and 90 days prior to intake (59.0% vs. 53.8%). There was also no significant difference in the mean days of self-reported illegal activity in the 90 days before enrollment (9.7 vs. 10.2) or in the percentage reporting 0 days of illegal activity (28.9% vs. 41.0%). Nor were there significant differences in the mean number of times having been arrested and charged (2.6 vs. 4.2), adjudicated guilty (1.8 vs. 2.0), or in the percentage **never** having been arrested for a status offense (38.5% vs. 38.5%) or other charges (43.6% vs. 46.2%).

In the 8 needs-based assignment sites and consistent with the design, the youth assigned to JDTC were significantly more severe than those assigned to TJC. Specifically, they had lower rates of having **never** pushed, grabbed, or shoved someone (10.9% vs. 48.5%); taken something from a store without paying (34.3% vs. 69.4%); sold, distributed, or made illegal drugs (64.7% vs. 92.5%); driven under the influence (70.1% vs. 96.3%); or destroyed property (53.7% vs. 79.9%). There was not a significant difference in having **never** been previously in the juvenile justice system (8.0% vs. 4.5%). Based on self-reporting two or more of the above problems (excluding just justice system involvement), the youth assigned to JDTC were significantly ($p <$ .001) more likely to meet this criterion their lifetime (81.6% vs. 32.8%), the past year (64.2% vs. 20.9%), and 90 days prior to intake (50.2% vs. 14.9%). This distinction was by design given the placement rule (which required both need and risk). The youth assigned to JDTC also self-reported significantly more days of illegal activity (8.0 vs. 4.5 days) and were significantly less likely to report zero days of illegal activity (32.5% vs. 76.9%). Significantly more youth assigned to JDTC reported being arrested and charged (13.0 vs. 1.5) and having been adjudicated guilty (1.8 vs. 1.01) in their lifetime. The youth assigned to JDTC were also less likely to have reported **never** having been arrested for a status offense (28.4% vs. 63.2%) or other charges (65.2% vs. 79.7%). In general, the youth assigned to JDTC in these sites were similarly or slightly less severe than the youth assigned to JDTC or TJC in the random assignment sites (where both had to be eligible for JDTC). Conversely, the youth assigned to TJC in the 8 Needs-Based Assignment sites were consistently lower severity on delinquency risk and justice system behaviors than those assigned to the TJC conditions in the random assignment sites.

Table 3g. Baseline Demographic, Substance Use, Justice, Characteristics by Assignment Method & Court Type

Characteristics	Random Assignment 2 sites JDTC *n* = 39	Random Assignment 2 sites TJC *n* = 39	Needs-Based 8 sites JDTC *n* = 201	Needs-Based 8 sites TJC *n* = 136	Total *N* = 415
Gender					
% Female	5.1	5.1	28.4	30.1	24.3
% Male	94.9	94.9	71.6	69.1	75.4
Race/ethnicity				**(*p* < .05)**	
% Black	43.6	33.3	30.0	41.9	35.5
% White	5.1	5.1	49.5	30.1	34.8
% Hispanic	28.2	35.9	3.5	5.9	9.7
% Multi-racial or mixed	20.5	23.1	16.0	21.3	18.8
% Other	5.2	2.6	1.0	0.7	1.1
Mean Age	15.8	15.5	15.2	15.4	15.5
Mean Last Grade Completed	8.9	8.5	8.7	8.8	8.8
Substance Disorder Problems (% Never)					
Used AOD weekly or more often	0.0	0.0	1.0	63.4 **(*p* < .001)**	21.1
Lot of time spent getting/using AOD	12.8	15.4	31.3	84.3 **(*p* < .001)**	45.3
AOD use led to fights/trouble	48.7	30.8	44.8	86.6 **(*p* < .001)**	57.4
AOD use caused give up activities	66.7	56.4	65.2	91.8 **(*p* < .001)**	73.1
Experienced AOD withdrawal problems	79.5	69.2	76.2	98.5 **(*p*<.001)**	83.1
Received AOD treatment	56.4	64.1	78.1	92.5 **(*p* < .001)**	79.4
Any Substance Use Disorder[c]					
Lifetime	92.3	97.4	83.6	23.1 **(*p* < .001)**	66.1
Past Year	89.7	94.9	82.1	15.7 **(*p* < .001)**	62.5
Past 90 days	87.2	84.6	76.6	11.9 **(*p* < .001)**	57.4
Substance use primary measures in the Past 90 days					
Mean # Days Marijuana Use in Past 90 Days (*SD*)	55.0 (28.3)	42.2(28.1) **(*p* < .05)**	39.4 (30.4)	9.5 (21.0) **(*p* < .001)**	31.6 (31.5)
% No Marijuana Use in Past 90 Days (0 days)	2.6	15.4 **(*p* < .05)**	8.5	61.4 **(*p* < .001)**	25.3
% No AOD Use Other Than Marijuana in Past 90 Days (0 days)	53.8	66.7	52.2	88.8 **(*p* < .001)**	65.6

Table 3g. continued

Characteristics	Random Assignment 2 sites JDTC *n* = 39	Random Assignment 2 sites TJC *n* = 39	Needs-Based 8 sites JDTC *n* = 201	Needs-Based 8 sites TJC *n* = 136	Total *N* = 415
% No AOD Use Other Than Marijuana in Past 90 Days (0 day)	53.8	66.7	52.2	88.8 **(*p* < .001)**	65.6
Crime and Violence Screener: % Never…					
Pushed, grabbed, shoved someone	12.8	23.1	10.9	48.5 **(*p* < .001)**	24.5
Taken something from store w/o paying	30.8	35.9	34.3	69.4 **(*p* < .001)**	45.5
Sold/distributed/made illegal drugs	51.3	43.6	64.7	92.5 **(*p* < .001)**	70.5
Drove under the influence	79.5	56.4	70.1	96.3 **(*p* < .001)**	78.2
Destroyed property	56.4	53.8	53.7	79.9 **(*p* < .001)**	62.5
Involved in Juvenile Justice System	0.0	5.1	8.0	4.5	5.8
Crime and Violence Problems					
Lifetime	79.5	71.8	81.6	32.8 ***(p < .000)***	64.6
Past Year	74.4	64.1	64.2	20.9 ***(p < .000)***	51.1
Past 90 days	59.0	53.8	50.2	14.9 ***(p < .000)***	40.0
Days involved in illegal activities					
Mean Days (*SD*)	9.7 (20.5)	10.2 (21.4)	8.6 (18.2)	1.1 (3.9) **(*p* < .001)**	6.4
Zero days	28.9	41.0	32.5	76.9 **(*p* < .001)**	47.4
Justice System Involvement					
Mean Lifetime Arrested & Charged	2.6	4.2	3.0	1.5 **(*p* < .000)**	2.6
Mean Lifetime Adjudicated Guilty	1.8	2.0	1.8	1.1 **(*p* < .001)**	1.6
% Youth With No Arrests & Charges					
With status	38.5	38.5	28.4	63.2 **(*p* < .001)**	41.5
Without status	43.6	46.2	65.2	79.7 **(*p* < .05)**	66.0

[a] Based on 2 to 5 of the symptoms.

Table 3h. Baseline Risk Behaviors & Victimization by Assignment Method & Court Type

	Random Assignment 2 sites		Needs-Based 8 sites		
Characteristics	**JDTC *n* = 39**	**TJC *n* = 39**	**JDTC *n* = 201**	**TJC *n* = 136**	**Total *N* = 415**
Risk Behavior % Never…					
Had 2+ sexual partners during the same time period	56.4	52.6	58.2	83.5 **(*p* < .001)**	65.7
Unprotected sex	34.2	28.6	38.3	69.4 **(*p* < .001)**	47.3
Had sex while high	59.0	45.9	49.8	89.6 **(*p* < .001)**	63.3
Used a needle to inject drugs	97.4	100.0	99.5	99.3	99.3
Victimization % Never…					
Attacked with a Weapon	59.0	48.7	73.0	87.3 **(*p* < .05)**	74.0
Physically beaten by someone	64.1	66.7	78.1	88.1	78.9
Sexually abused	94.9	97.4	86.6	94.7	91.0
Emotionally abused	64.1	64.1	62.7	77.6 **(*p* < .01)**	67.8

3.3.6.4 Health Risk Behaviors & Victimization (Table 3h)

The baseline survey asked youth about the last time they had ever engaged in various health risk behaviors or been the victim of physical, sexual, or emotional abuse using items from the GAIN Quick (Dennis & Jordan, 2021). Across the two random assignment sites, Table 3h shows that there were not significant differences between youth assigned to JDTC and TJC in terms of self-reporting **never** having had two or more sexual partners in the same time period (56.4% vs. 52.6 %), unprotected sex (34.2% vs. 28.6%), or sex while high (59.0 vs. 45.9%); and never having used a needle to inject drug (97.4% vs. 100.0%). Nor were they significantly different in the rates of having **never** been attacked by someone with a weapon (59.0% vs. 48.7 %), physically beaten (64.1% vs. 66.7%), sexually abused (94.9% vs. 97.4%), or emotionally abused (64.1% vs. 64.1%). These high prevalence rates across both groups are consistent with literature suggesting the need for trauma informed care to address these issues.

Across the 8 needs-based assignment sites, the youth assigned to JDTC were significantly more severe than those assigned to TJC in terms of risk behaviors and victimization. Specifically, the youth assigned to JDTC were less likely to self-reporting **never** having had two or more sexual partners in the same time period (58.2% vs. 83.5 %), unprotected sex (38.3% vs. 69.4%), or sex while high (49.8 vs. 89.6%), but not significantly different for never having used a needle to inject drug (99.5% vs. 99.3%). Youth assigned to JDTC were significantly less likely to report never having been attacked with a weapon (73.0% vs. 87.3%) or emotionally abused (62.7% vs. 77.6%), but had similar rates of having been physically beaten (78.1% vs. 88.1%), sexually abused (86.6% vs. 94.7%), or emotionally abused (64.1% vs. 64.1%). Relative to the random assignment sites, the youth assigned to JDTC in the needs-based assignment sites were again similar or slightly less severe and the youth assigned to TJC were generally less severe.

3.3.6.5 Mental Health & Wellbeing (Table 3i)

The survey asked youth about the most recent time they had experienced a range of internalizing and externalizing mental health problems from the GAIN Short Screener (Dennis et al., 2006) as well as a measure of wellbeing (Keyes & Simoes, 2012). Across the two random assignment sites, youth assigned to JDTC were not significantly different than youth assigned to TJC in terms of reporting having **never** had the internalizing symptoms of feeling trapped, lonely, or depressed (41.0% vs. 51.3%); having trouble sleeping (35.9% vs. 35.9%); feeling anxious, tense, or fearful (35.9% vs. 46.2%); feeling upset when reminded of the past (28.2% vs. 33.3%); having suicidal thoughts (79.5% vs. 86.8%); or experiencing visual or auditory hallucinations (76.9% vs. 84.6%). The next section shows the percentage of youth who probably have an internalizing mental health disorder (e.g., depression, anxiety, trauma, suicide, or early psychosis) by time period. Youth assigned to JTDC and TJC had high and similar rates in both their lifetime (84.6% vs. 89.7%), past year (71.8% vs. 66.7%), and 90 days before intake (61.5% vs. 64.1%).

Youth assigned to JDTC were not significantly different than youth assigned to TJC in terms of reporting having **never** had the externalizing symptoms of having frequently lied/conned to get things (28.2% vs. 28.2%), a hard time paying attention (28.2% vs. 20.5%), a hard time listening to instructions (23.1% vs. 23.1%), a hard time waiting their turn (53.8% vs. 35.9%), been a bully (69.2% vs. 76.9%), started fights (35.9% vs. 46.2%), or tried to win back gambling losses (82.1% vs. 79.5%). The next section shows the percentage probably having an externalizing mental health disorder (e.g., attention deficit hyperactivity disorder [ADHD], conduct disorder, pathological gambling) based on 2 to 6 symptoms in the past year. Youth assigned to JDTC and TJC were similar in their rates of externalizing disorders in their lifetime (84.6% vs. 89.7%), past year (82.1% vs. 84.6%) and in the 90 days prior to intake (61.5% vs. 64.1%). There were no significant differences in the self-reported mean days of being bothered by mental health problems (14.2 vs. 14.2 days), not meeting responsibilities due to mental health problems (8.1 vs. 7.1 days), being disturbed by memories from the past (10.5 vs. 12.2 days), or problems paying attention (16.7 vs. 21.3 days). Youth assigned to JDTC and TJC were similar in their self-reported ratings of their wellbeing, with similar rates of being classified as flourishing (65.1% vs. 53.8%), languishing (5.1% vs. 7.7%) or a mixture of both (30.8% vs. 38.6%). This is consistent with literature suggesting the need for treatment that addressed psychiatric comorbidity in general, and specifically for the externalizing disorders more common among youth. The well-being results are consistent with the advantage of intervening early (i.e., during adolescence) before as many bridges have been burned.

Across the 8 needs-based assignment sites, youth assigned to JDTC were as or more severe than youth assigned to TJC. Specifically, youth assigned to JDTC reported significantly lower rates than youth assigned to TJC in terms of reporting having **never** had the internalizing symptoms of feeling trapped, lonely or depressed (35.3% vs. 54.5%), trouble sleeping (24.4% vs. 47.8%), feeling anxious, tense or fearful (27.9% vs. 53.0%), or feeling upset when reminded of the past (32.3% vs. 50.0%). They were not significantly different in terms of having never had suicidal thoughts (70.6% vs. 83.6%) or experiencing visual or auditory hallucinations (82.1% vs. 91.0 %). Youth assigned to JTDC were more likely than those assigned to TJC to meet the GAIN criteria for an internalizing mental health disorder in both their lifetime (81.1% vs. 56.7%), past year (77.6% vs. 53.0%) and in the 90 days before intake (73.6% vs. 50.7%). Youth assigned to JDTC reported significantly lower rates of reporting **never** having the externalizing symptoms of having frequently lied/conned to get things (15.9% vs. 35.1%), having a hard time listening to instructions (17.4% vs. 31.3%), or having started fights (44.8% vs. 64.2%). They were not significantly different in terms of reporting never having had a hard time paying attention (15.9% vs. 22.4%) or waiting their turn (45.3% vs. 58.2%), having been a bully (70.1% vs. 82.1%), or having tried to win back gambling losses (90.0% vs. 94.8%). Youth assigned to JDTC were significantly more likely than those assigned to TJC to meet the GAIN criteria for an externalizing mental disorder in their lifetime

(93.5% vs. 79.9%), past year (90.0% vs. 74.6%), and 90 days prior to intake (69.2% vs. 49.3%). Youth assigned to JDTC had significantly higher self-reported mean days of being bothered by mental health problems (22.9 vs. 10.5 days), not meeting responsibilities due to mental health problems (9.7 vs. 3.5 days), being disturbed by memories from the past (12.0 vs. 6.8 days), or problems paying attention (27.1 vs. 16.2 days). Youth assigned to JDTC and TJC were not significantly different in their self-reported ratings of their well-being, with similar rates of being classified as flourishing (56.7% vs. 67.6%), languishing (5.5% vs. 2.2%), or a mixture of both (37.8% vs. 30.1%). Relative to the JDTC youth in random assignment sites, the JDTC youth in the needs-based assignment sites were similarly or slightly more severe while the TJC youth were consistently less severe than the TJC youth in the random assignment sites.

Table 3i. Baseline Mental Health & Wellbeing by Assignment Method and Court Type

	Random Assignment 2 sites		Needs-Based 8 sites		
Characteristics	**JDTC** ***n*** **= 39**	**TJC** ***n*** **= 39**	**JDTC** ***n*** **= 201**	**TJC** ***n*** **= 136**	**Total** ***N*** **= 415**
Internalizing Mental Health % Never…					
Feeling trapped, lonely, depressed	41.0	51.3	35.3	54.5 (***p*** **< .01**)	43.6
Sleep trouble	35.9	35.9	24.4	47.8 (***p*** **< .001**)	34.1
Feeling anxious, tense, fearful	35.9	46.2	27.9	53.0 (***p*** **< .001**)	38.5
Upset when reminded of past	28.2	33.3	32.3	50.0 (***p*** **< .01**)	37.8
Thoughts of suicide	79.5	86.8	70.6	83.6	77.2
See/hear things no one else could	76.9	84.6	82.1	91.0	84.7
Any Internalizing Mental Disorder[a]					
Lifetime	74.4	66.7	81.1	56.7 (***p*** **< .001**)	71.2
Past Year	71.8	66.7	77.6	53.0 (***p*** **< .001**))	68.0
Past 90 days	64.1	66.7	73.6	50.7 (***p*** **< .001**)	64.6
Externalizing Mental Health % Never					
Lied/conned to get things	28.2	28.2	15.4	35.1 (***p*** **< .01**)	24.2
Hard time paying attention	28.2	20.5	15.9	22.4	19.6
Hard time listening to instructions	23.1	23.1	17.4	31.3 (***p*** **< .05**)	23.0
Hard time waiting turn	53.8	35.9	45.3	58.2	49.4
Were a bully	69.2	76.9	70.1	82.1	74.6
Started fights with others	35.9	46.2	44.8	64.2 (***p*** **< .01**)	50.4
Tried to win back gambling losses	82.1	79.5	90.0	94.8	89.9
Any Externalizing Mental Disorder[a]					
Lifetime	84.6	89.7	93.5	79.9 (***p*** **< .001**))	87.9
Past Year	82.1	84.6	90.0	74.6 (***p*** **< .001**)	83.8
Past 90 days	61.5	64.1	69.2	49.3 (***p*** **< .001**)	61.5

Table 3i. continued

Characteristics	Random Assignment 2 sites		Needs-Based 8 sites		Total
	JDTC *n* = 39	TJC *n* = 39	JDTC *n* = 201	TJC *n* = 136	*N* = 415
Past 90 Days MH					
Bothered by MH problems – Mean Days (*SD*)	14.2 (27.0)	14.2 (28.0)	22.9 (32.8)	10.5 (22.6) **(*p* < .001)**	17.2
Days not meeting responsibilities – Mean Days (*SD*)	8.1 (20.8)	7.1 (18.4)	9.7 (23.0)	3.5 (11.7) **(*p* < .01)**	7.3
Disturbed by memories of past – Mean Days (*SD*)	10.5 (22.4)	12.2 (25.3)	12.0 (22.6)	6.8 (18.3) **(*p* < .05)**	10.2
Days had problems paying attention – Mean Days (*SD*)	16.7 (26.6)	21.3 (30.7)	27.1 (32.7)	16.2 (27.6) **(*p* < .01)**	22.0
Well-being Scale					
% Flourishing	64.1	53.8	56.7	67.6	60.7
% Mixed	30.8	38.5	37.8	30.1	34.7
% Languishing	5.1	7.7	5.5	2.2	4.6

[a] Based on 2 to 5 of the symptoms.

3.3.6.6 Family & Peer Risk (Table 3j)

At baseline, youth were asked several questions about their families' effective and ineffective practices from the Family Effectiveness Measure (McCreary et al., 2013) as well as the characteristics of their peers. Across the two random assignment sites, there were no significant differences between youth assigned to JDTC and TJC in the degree to which their families' functioning appeared to be low (5.1% vs. 7.7%), moderate (43.6% vs. 38.5%), or high (51.3% vs. 53.8%). While there were some families that were very problematic, most had some considerable strengths to build on. When asked to rate the percentage of their peers that they regularly socialized or hung out with in the 90 days prior to baseline, there were no significant differences in the percentage of youth assigned to JDTC and TJC who reported **none or few** of the following: being involved in illegal activities (70.3% vs. 62.8%); getting drunk or having 5 or more drinks in a day at least once a week (83.4% vs. 82.9%); using any illegal drugs in the past 90 days (40.5 vs. 54.3%); shouting, arguing, or fighting most weeks (79.0% vs. 68.5%); having ever been in drug or alcohol treatment (7.9% vs. 11.5%); describing themselves as in recovery (7.9 vs. 2.9%); or being employed, in school, or training full time (52.6% vs. 57.2%). These findings are consistent with possibility that they do have some positive peers to connect with and highlights the need many youth have for assistance connecting back to school or trainings.

Across the 8 needs-based assignment sites, youth assigned to JDTC had significantly riskier family and peer groups than youth assigned to TJC. Specifically, youth assigned to JDTC rated their family functioning worse, with more coming out low (12.4% vs. 6.0%) or moderate (48.3% vs. 30.6%) and fewer coming out high (39.3% vs. 63.4%). When asked to rate the percentage of their peers that they regularly socialized or hung out with in the 90 days prior to baseline, youth assigned to JDTC reported significantly fewer as **none or few** being involved in illegal activities (61.3% vs. 83.2%), getting drunk or having 5 or more drinks in a day at least once a week (83.1% vs. 96.8%), or using any illegal drugs in the past 90 days

Table 3j. Baseline Family & Peer Risk by Assignment & Court Type

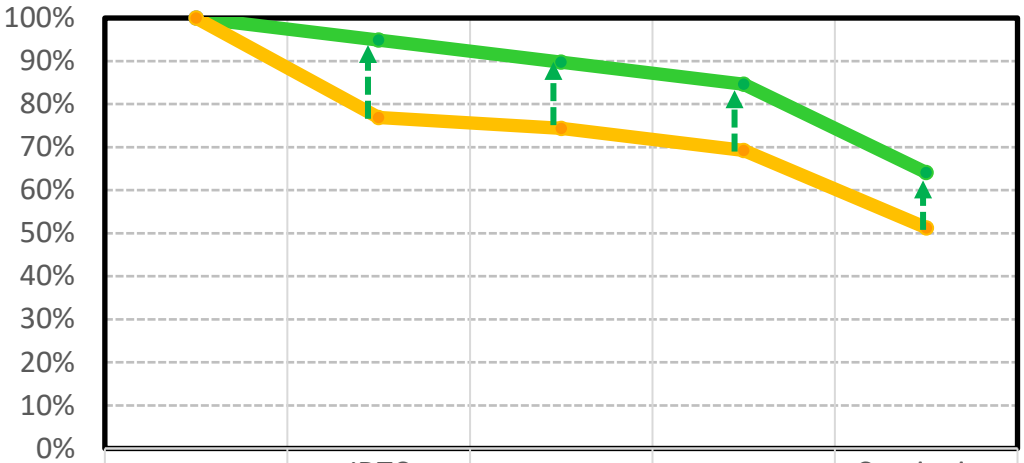
	Random Assignment 2 sites		Needs-Based 8 sites		
Characteristic	**JDTC *n* = 39**	**TJC *n* = 39**	**JDTC *n* = 201**	**TJC *n* = 136**	**Total *N* = 415**
Family Functioning Scale				**(*p* < .001)**	
% Low	5.1	7.7	12.4	6.0	9.2
% Moderate	43.6	38.5	48.3	30.6	41.2
% High	51.3	53.8	39.3	63.4	49.6
Of the people you have regularly socialized or hung out with, would you say that none, a few, some, most or all of them...% None or a Few:					
Were involved in illegal activity?	70.3	62.8	61.3	83.2 **(*p* < .001)**	69.5
Weekly got drunk or had 5 or more drinks in a day at least once a week?	83.4	82.9	83.1	96.8 **(*p* < .001)**	87.5
Used any (illegal) drugs during the past 90 days?	40.5	54.3	39.8	82.3 **(*p* < .001)**	55.0
Shout, argue and fight most weeks?	79.0	68.5	73.0	80.7	75.8
Have ever been in drug or alcohol treatment?	7.9	11.5	6.3	0.8	3.8
Would describe themselves as in recovery?	7.9	2.9	5.2	0.8	2.6
Were employed or in school or training full time?	52.6	57.2	71.9	76.0	70.0

(39.85 vs. 82.3%). Peers of youth assigned to JDTC and TJC were similar in terms the rate of **none or few** shouting, arguing, or fighting most weeks (73.0% vs. 80.7%); having ever been in drug or alcohol treatment (6.3% vs. 0.8%); describing themselves as in recovery (5.2% vs. 0.8%); or being employed, in school, or training full time (71.9% vs. 76.0%). The JDTC youth were largely similar to those in the random assignment sites. The TJC youth here were similarly or less severe than the TJC youth in the random assignment sites.

3.4 Substance Use Disorder (SUD) Services Cascade Outcome

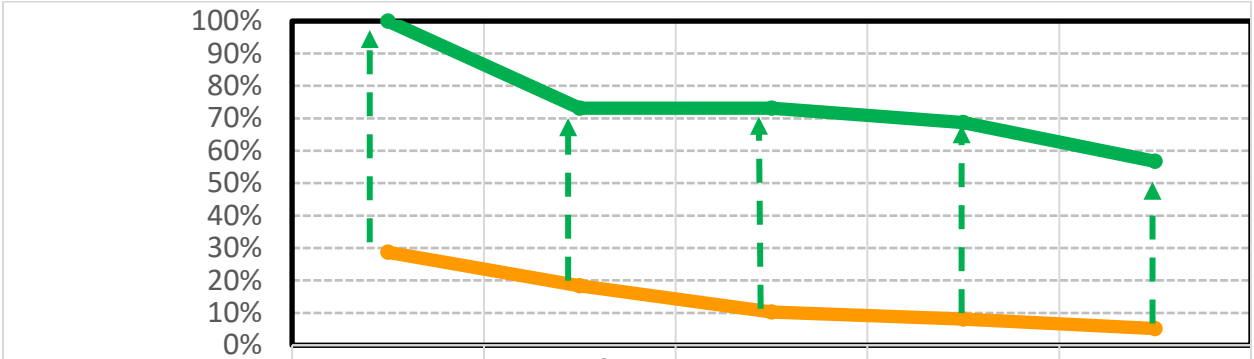
As noted earlier, the Evaluation Liaisons in each jurisdiction/site abstracted information from juvenile justice and local treatment records to track youth who were identified as being "in need of substance use treatment," then whether they were referred to treatment, initiated it, were engaged for at least 30 days, and were still getting continuing care between 91 to 180 days later. We hypothesized that JDTCs would do a better job of retaining youth along this service cascade. Figure 3e compares the service cascade results for the 78 youth across the two random assignment sites. The green line is for youth in JDTC, the orange line for youth in TCJ, and the dashed green arrow is the "effect" of JDTC. By design, "Need" for substance use treatment was required prior to randomization. Youth assigned to JDTC were significantly ($p < .05$) more likely than those assigned to TJC to be retained along each step of the cascade, including being referred to treatment (95% vs. 77%, *OR* = 5.5), initiating treatment (90% vs. 74%, *OR* = 3.0), engaging in treatment for at least 30 days (85% vs. 69%, *OR* = 2.4), and receiving continuing care 910 to 180 days laer (64% vs. 51%, *OR = 1.7). While TJC did well, JDTC did better.*

Figure 3e. SUD Service Cascade Outcomes: Random Assignment (78 youth from 2 sites)



	Need for SU Tx	JDTC Referrals to SU Tx (OR = 5.5)	Initiated SU Tx (OR = 3.0)	Engaged in SU Tx (OR = 2.4)	Continuing Care in SU Tx (OR = 1.7)
JDTC (n = 39)	100%	95%	90%	85%	64%
TJC (n = 39)	100%	77%	74%	69%	51%

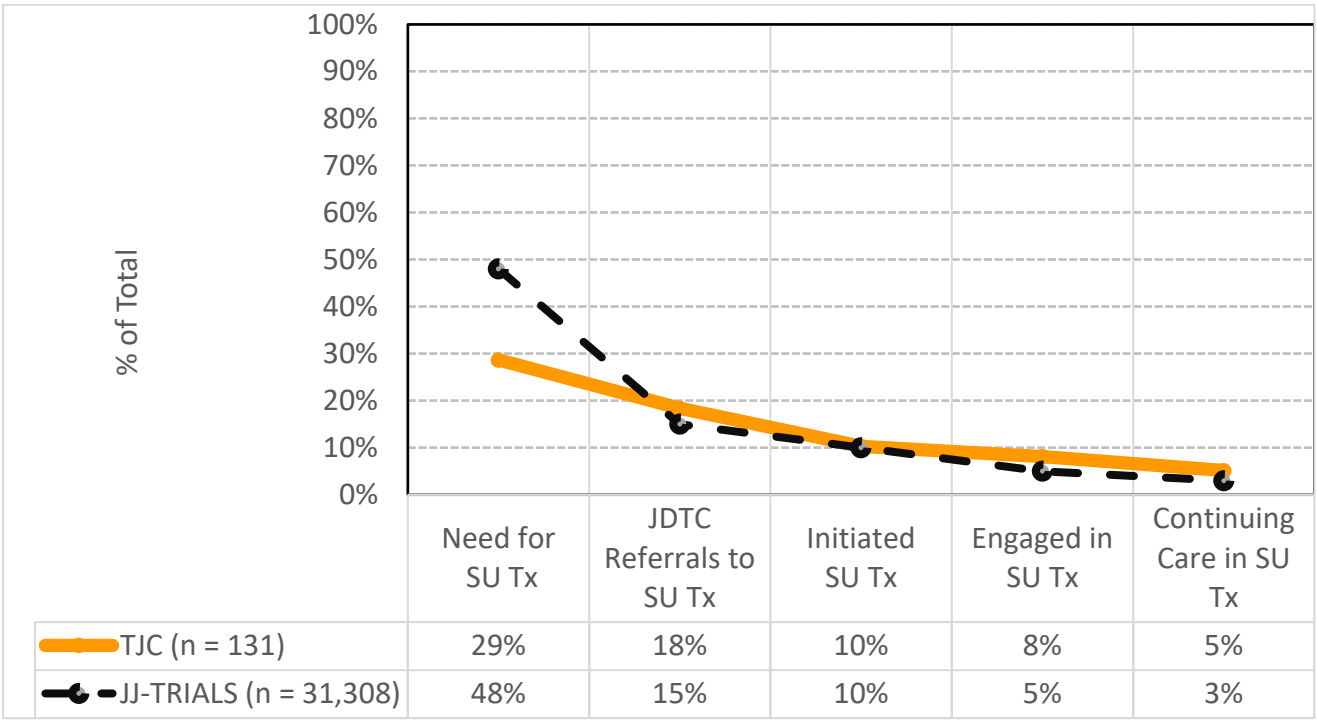
Figure 3f. SUD Service Cascade Outcomes: Needs-Based Assignment (331 youth from 8 sites)



	Need for SU Tx	JDTC Referrals to SU Tx (OR = 12.1)	Initiated SU Tx (OR = 23.7)	Engaged in SU Tx (OR = 24.9)	Continuing Care in SU Tx (OR = 24.1)
JDTC (n = 201)	100%	73%	73%	69%	57%
TJC (n = 131)	29%	18%	10%	8%	5%

Figure 3f presents the parallel information across the 331 youth from the 8 needs-based assignment sites. The large difference for need (100% vs. 29%) is by design where all those identified by the GAIN's Substance Disorder Screener were assigned to JDTC. The TJC groups is not 0% because, in practice, "need" in records can also be based on referrals (parent, staff, judge), urine tests, or other information. Youth assigned to JDTC were significantly ($p < .05$) more likely to be retained along each step of the cascade, including being referred to treatment (73% vs. 18%, *OR* = 12.1), initiating treatment (73% vs. 10%, *OR* = 3.0), engaging in treatment for at least 30 days (69% vs. 8%, *OR* = 24.9), and receiving continuing care 90 to 180 days later (57% vs. 5%, *OR* = 24.1). Even considering the baseline differences in need, JDTC does better at cascade retention than TJC. For example, dividing the 5% continuing care by the 29% in need is still only 17% and would only reduce the odds ratio of JDTC/TJC to 6.74. There were considerable site differences in service cascade outcomes. Note the differences between the JDTC outcomes for the courts in random assignment and needs-based sites. The percentage of youth in need making it to continuing care ranged from 25–100% for JDTC and from 0-50% for TJC—with one of the two best TJC doing better than the local JDTC. Figure 3g further compares the service cascade outcomes of the youth assigned to TJC in the needs-based assignment sites with the average outcomes from an earlier study of youth from 31,308 youth from 30 juvenile probation jurisdiction in 7 states (Dennis et al., 2019b; using % of total vs % of step). The need in the earlier study was higher because youth in need were not pulled out to send to JDTC like they were here. But otherwise, the cascade is, largely, very similar.

Figure 3g SUD Service Cascade: Needs-Based Assignment Sites TJC vs. JJ-TRIALS



	Need for SU Tx	JDTC Referrals to SU Tx	Initiated SU Tx	Engaged in SU Tx	Continuing Care in SU Tx
TJC (n = 131)	29%	18%	10%	8%	5%
JJ-TRIALS (n = 31,308)	48%	15%	10%	5%	3%

3.5 Urine Test Outcomes

The local Evaluation Liaisons abstracted information on the date and results of every urine test done on any of the participating youth between enrollment and either their release or 12 months later, whichever occurred first. As noted earlier, the average observation time across sites was 11 months and did not differ significantly by court type. The number of urine tests completed was much higher for JDTC than TJC sites (more below). To evaluate the impact of court assignment on urine test results, we compared the results from the first month post-enrollment with the results across months 2 to 12. Because marijuana was the most common drug, has one of the longest metabolite half-lives, is fat soluble, and, consequently, can still show up 1–4 weeks after last use, we looked at the percentage of any positive drug test, percentage positive for marijuana, and percentage positive for any other drug (e.g., cocaine, hallucinogens, opioids, other stimulants). Also note that because urine testing was suspended during COVID, tests are only available on a subset of youth. Figure 3h shows the results across the two random assignment sites. For youth assigned to JDTC, there were 230 tests on 22 unique individuals (mean of 10.5) in month 1 and 1,593 tests on 35 unique individual (mean of 45.5) in months 2 to 12. For youth assigned to TJC, there were 105 tests on 9 individuals (mean of 11.7) in month 1 and 780 tests on 27 unique individuals (mean of 28.9) in months 2 to 12. Again, the green line represents the JDTC results, and the orange dashed line representation the TJC results. Nominally, there are greater reductions in positive urine rates for youth assigned to JDTC than those assigned to TJC for any drug (-14% vs. +5% percentage points), marijuana (-8% vs. +19%) and any other drug besides marijuana (-15% vs. -11%). Table 3k shows the results of a regression analysis based on the subset of 28 youth with urine test results in both time periods as a function of the month 1 rate and court assignment.

Figure 3h. Urine Test Results: Random Assignment (2 sites)

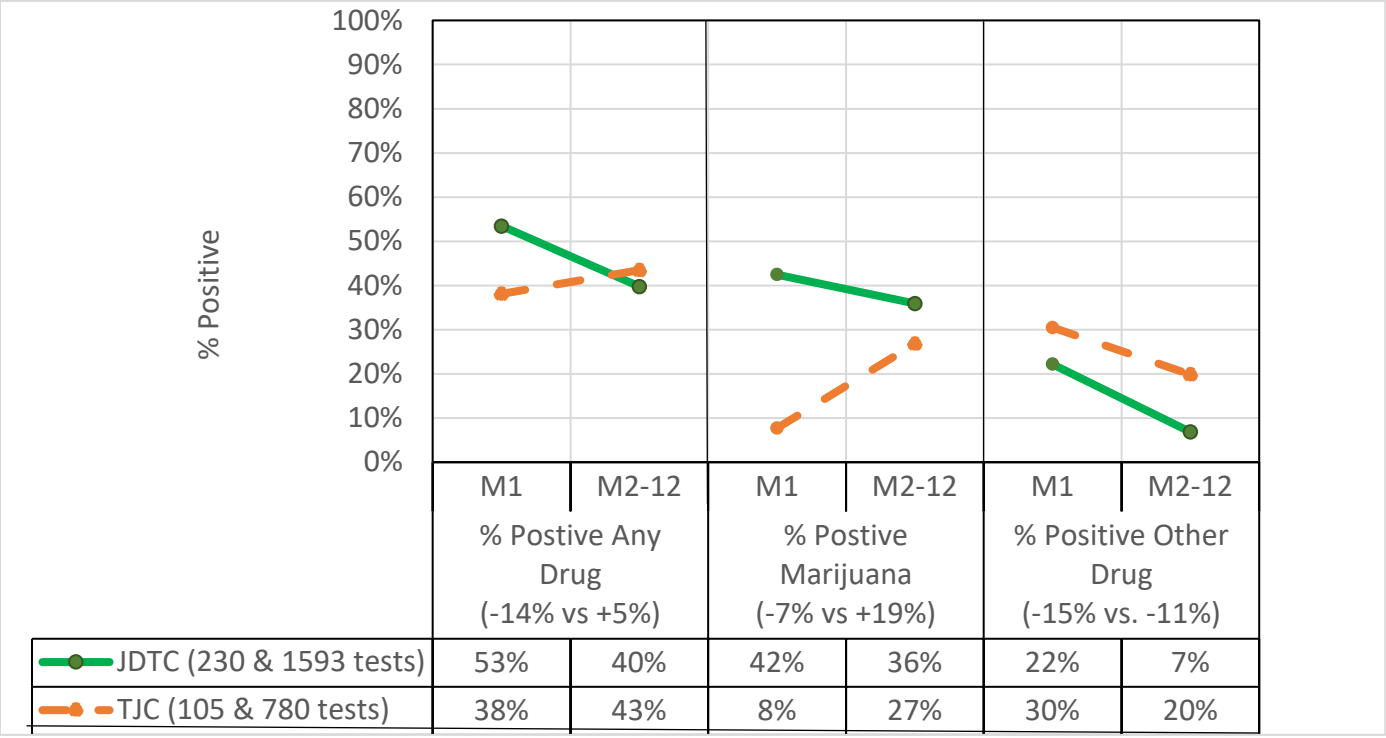


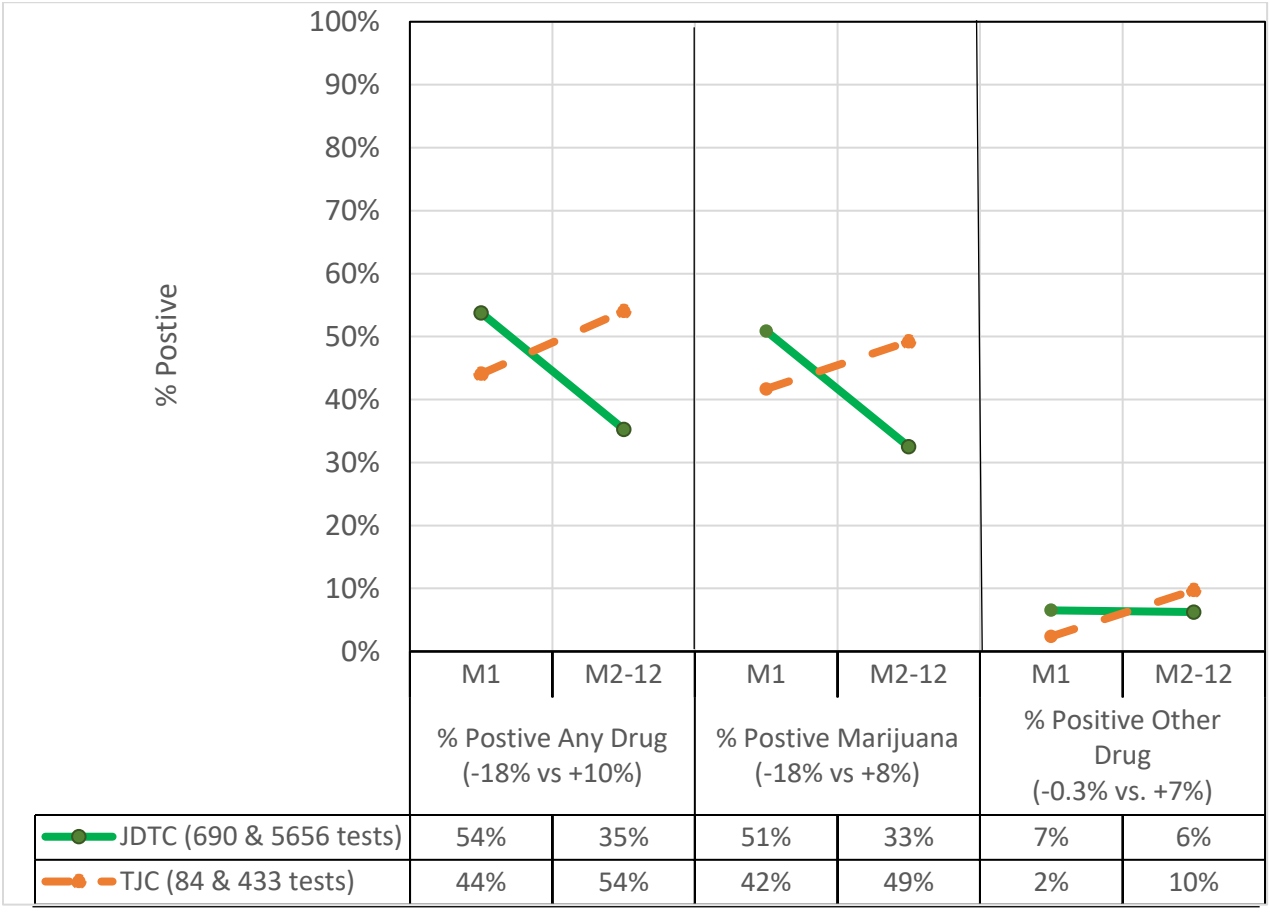
Table 3k. Regression Analysis Controlling for Baseline Use

Design/Outcome	Variable	Beta	Std. Err.	*t*-test	Significance
Random Assignment Sites (*n* = 28)					
% Any Drug	Constant	27.34	12.81	2.13	***p* < 0.05**
	Baseline Rate	0.49	0.15	3.29	***p* < 0.01**
	JDTC	-15.26	13.46	-1.13	0.268
% Positive For Marijuana	Constant	11.41	11.68	0.98	0.338
	Baseline Rate	0.52	0.14	3.76	***p* < 0.001**
	JDTC	-7.69	13.91	-0.55	0.585
% Positive for Any Other Drug	Constant	11.51	6.99	1.65	0.112
	Baseline Rate	0.76	0.11	6.64	***p* < .001**
	JDTC	-10.54	7.58	-1.39	0.177
Needs-Based Assignment Sites (*n* = 108)					
% Any Drug	Constant	21.83	4.59	4.76	***p* < .001**
	Baseline Rate	0.47	0.05	9.62	***p* < .001**
	JDTC	-10.12	4.95	-2.04	***p* < 0.05**
% Positive For Marijuana	Constant	19.58	4.50	4.35	***p* < .001**
	Baseline Rate	0.47	0.05	9.76	***p* < .001**
	JDTC	-10.15	4.97	-2.04	***p* < 0.05**
% Positive for Any Other Drug	Constant	5.05	2.04	2.48	***p* < 0.05**
	Baseline Rate	0.27	0.05	5.38	***p* < .001**
	JDTC	-0.80	2.35	-0.34	0.735

While the baseline rate of being positive in month 1 is associated with the rate of being positive in months 2 to 12 for all three measures, assignment to JDTC did not reach statistical significance. Note the very low *n* and power of this analysis.

Figure 3i shows the parallel results across the 8 needs-based assignment sites. For youth assigned to JDTC, there were 690 tests on 141 unique individuals (mean of 11.7) in month 1 and 5,656 tests on 163 unique individuals (mean of 34.7) in months 2 to 12. For youth assigned to TJC, there were 84 tests on 58 individuals (mean of 1.4) in month 1 and 433 tests on 73 unique individuals (mean of 5.9) in months 2 to 12. Nominally, there are greater reductions in positive urine rates for youth assigned to JDTC than those assigned to TJC for any drug (-18% vs. +10% percentage points), marijuana (-18% vs. +8%), and any other drug (-0% vs. +7%). Table 3k shows the results of a regression analysis based on the subset of 108 youth with urine test results in both time periods as a function of the month 1 rate and court assignment. Here both the baseline rate of being positive in month 1 and being assigned to JDTC were significantly related to lower rates of being positive for any drug and marijuana. The baseline rate for any other drug was significant, but JDTC did not reach statistical significance for any other drug. While matched in this analysis, there are several potential threats to the validity for simple interpretation, including that more urine testing might have a positive effect in its own right (i.e., monitoring) or that it might increase detection. Conversely, it may be that in TJC urine testing was only done when on-going substance use was suspected.

Figure 3i. Urine Test Results: Needs-Based Assignment (8 sites)



	% Postive Any Drug (-18% vs +10%)		% Postive Marijuana (-18% vs +8%)		% Positive Other Drug (-0.3% vs. +7%)	
	M1	M2-12	M1	M2-12	M1	M2-12
JDTC (690 & 5656 tests)	54%	35%	51%	33%	7%	6%
TJC (84 & 433 tests)	44%	54%	42%	49%	2%	10%

3.6 Recidivism Outcomes

The local Evaluation Liaisons abstracted information on the date, charges, and court outcome of the initial and each subsequent rearrest for each youth in the site across court types. This data gathering was done for 12 months regardless of whether the youth was discharged earlier or not. It is, however, possible that rearrests in other jurisdictions are not fully accounted for here. For randomization site Table 3l shows the general rate of recidivism including status offenses, then the rate of criminal recidivism (excluding status offenses). Within each, it gives the cumulative results 6 and 12 months after assignment, as well as the odds ratio (as a measure of effect size). Because none of these 50 youth were rearrested for status offenses, the results for this first analysis are the same. Youth assigned to JDTC had a trend for lower rates of rearrest at 6 months (28% vs. 40%, *OR* = 0.58) and significantly lower rates at 12 months (32% vs. 60%, *OR* = 0.31, $p < .05$).

Table 3l. Recidivism Within 6 and 12 Months of Assignment by Court Type: Random Assignment Site A

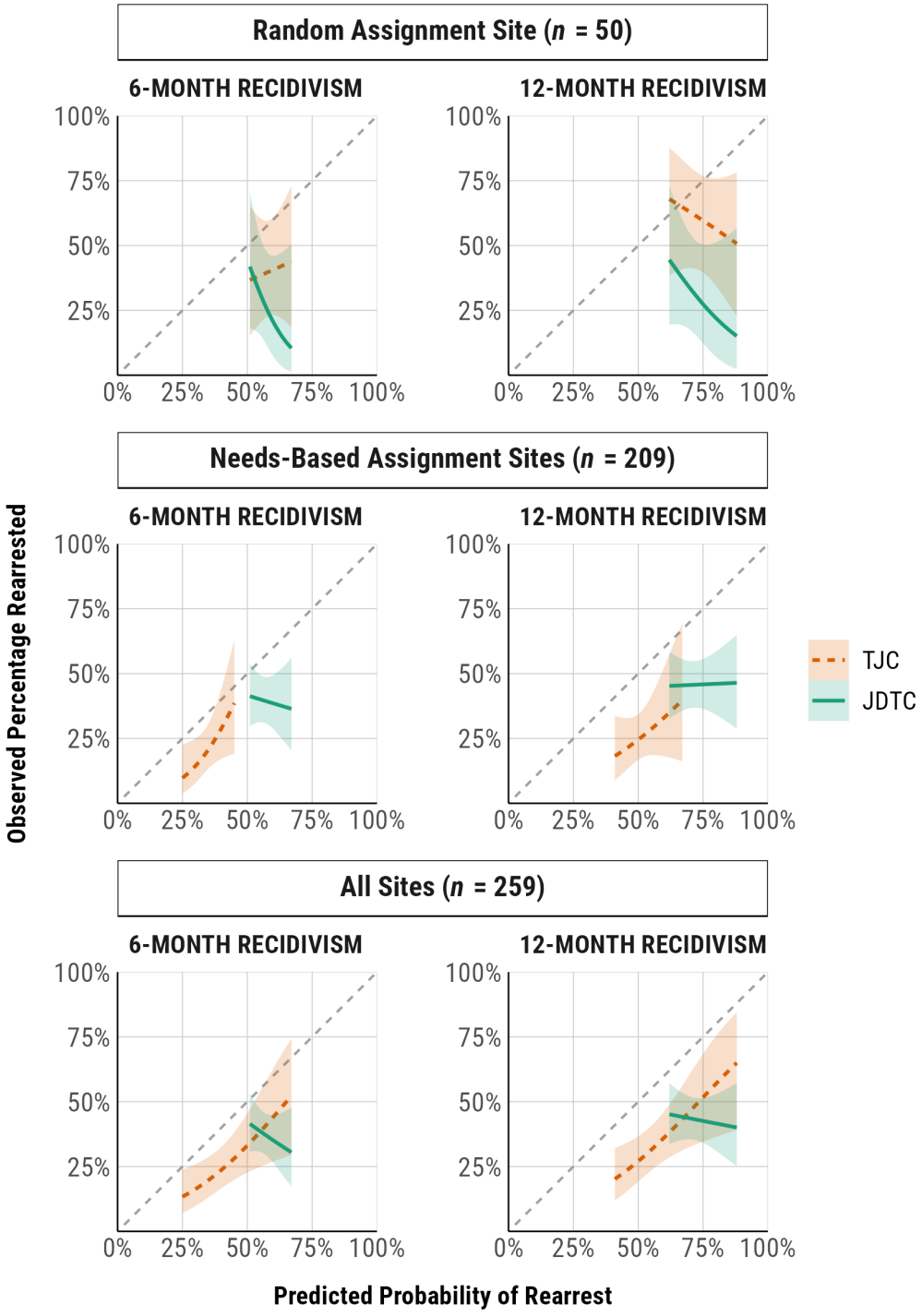
Recidivism Measure/ Interval	**Study Condition**		**Total**	**Odds**
	JDTC (*n* = 25)	**TJC (*n* = 25)**	**(*N* = 50)**	**Ratio**
General Recidivism (including status)				
6 Months	28%	40%	34%	0.58
12 Months*	32%	60%	46%	**0.31 (*p* < .05)**
Criminal Recidivism (excluding status)[a]				
6 Months	28%	40%	34%	0.58
12 Months*	32%	60%	46%	**0.31 (*p* < .05)**

*X^2 (1, *n* = 50) = 3.95; ***p* = .047**

[a] Because no one was rearrested for a status offense, these results are the same

In the needs-based assignment sites, the risk of recidivism was used to create unequal groups by design. Thus, any comparison controlled for this planned difference. Assignment was based on the 9 risk/need groups shown earlier in Figure 3d. To evaluate this plan, we compared the rate of predicted and actual criminal recidivism for the TJC group in the random assignment sites, the needs-based sites, and the combined sites at 6 and 12 months in Figure 3j (with the bottom right panel being for all data for the longest time period). The diagonal dashed gray line (from lower left to top right) represents a perfect match between the predicted and actual. A shift up or down from this reference line to the orange TJC line would represent a change in the study average rates relative to the original 2000-2018 sample used to estimate the predicted rates. A change in slope would represent something different going on (e.g., shifting from a general population to the subset in need of substance use treatment as in the top panels or a shift from 6 to 12 months on the left and right panels). If there were no difference between the green JDTC and orange TJC line, this result would suggest that there was no effect of JDTC. Conversely, differences in the level or slope of the JDTC line relative to the TJC line would suggest an effect of JDTC. Given the smaller than expected sample sizes, around each line we have plotted 95% confidence intervals. Because there were also large differences between jurisdictions in the quality and nature of the records (which widen 95% confidence intervals), we limited this analysis to the 4 sites (A, C, H, and I) that provided the majority of the data and the best data. In all the 6-month panes (on the left) and two of the three 12-month panes on the right, the dashed line for TJC is roughly parallel to the reference line—suggesting the risk adjustment worked very well at 6 months. At 12 months, the evaluation with the largest *n* is the combined sample on the bottom right. The solid line for JDTC is

Figure 3j. Evaluation of Recidivism Risk Adjustment



Shaded areas represent 95% confidence intervals

showing effects on not just the level, but also, the slope of the relationship. It shows little effect in the middle range of severity (i.e., no difference with dashed line), but growing effects with predicted risk on the x-axis (see bottom two panes where the solid and dashed lines diverge the most). While programmatically good, this means that the originally planned regression-discontinuity evaluation

design (which assumed only a shift in parallel lines) would not work. Thus, we switched to a quasi-experimental model by looking at the difference in actual less the predicted recidivism.

Table 3m and Figure 3k show the expected recidivism based on the baseline risk prediction (used in Figure 3d and 3k), observed criminal recidivism (based on rearrest for a non-status offense), and their difference in the 12-month rearrest percentage by design, court type, and site. By design, the one random assignment site had nearly identical risk distributions for JDTC and TJC, while in the three needs-based assignment sites, the JDTCs had higher expected risk than the TJCs. Table 3m also displays the results of *t*-tests (differences in the means) and Mann-Whitney rank order tests (differences in the rank and overall distribution). The rank order test is important because within and across sites the distributions in expected arrests were found to have multiple modes and to be right skewed (Belenko et al., 2022). For the mean percentile rank, 1% is the most reduced rearrest rate and 100% is the most increased rearrest rate (i.e., lower numbers are good). Using this method in the one random assignment site, relative to the difference (observed minus expected) in the TJC, the JDTC reduced recidivism significantly more (-14% vs. 40%, $t_{(49)} = -3.91$, Cohen's $d = -0.49$). Because of nearly identical distributions due to randomization, the *t*-test has more statistical power than the Mann Whitney rank order test, which goes in the same direction but did not reach significance (mean rank 57% vs. 47%, $Z_{rank} = -1.4$, $p = .172$).

In the three needs-based assignment sites, assignment to JDTC was associated with significantly more reductions in recidivism in Site H (-4% vs. +11%, $t_{(91)} = -2.94$, $p < 0.01$) and Site I (-44% vs. -35%, $t_{(81)} = -1.99$, $p < .05$). JDTC was associated with less reductions in recidivism in Site C (-13% vs. -25%, $t_{(78)} = +2.26$, $p < .05$). Because of the different distributions of the two groups and non-normal distributions, Table 3m also shows the results of the Mann-Whitney rank order test. Again, assignment to JDTC was associated with lower (better) average ranked differences (actual minus expected) for sites H (*Z*-Rank = -3.1, $p < .01$) and I (*Z*-Rank = -3.8, $p < .001$). In site C, the difference between JDTC and TJC was no longer significant but slightly favored JDTC. Recall from Figure 2d that site C had the smallest difference between JDTC and TJC in terms of overall Guideline achievement at baseline, followed by H and I (second largest contrast across all sites). Also note that TJC is clearly an active comparison condition that is also associated with reductions in recidivism in 3 out of 4 sites itself. This reality further limits the power of the contrast between JDTC and TJC.

While there was greater *n* across the 4 sites (the last column), the variations by site and distributional issues led to no significant difference between the JDTC and TJC on a *t*-test on the pooled data across sites. Similarly, variation in the direct of the 4 effect sizes ($d = -0.49$, +0.25, -0.31, and -0.22) led to an unweighted average of $d = -0.19$, and d=+0.17 for the poled data. Using the Mann-Whitney rank order test, however, assignment to JDTC was consistently associated with lower (better) average ranked differences (actual minus expected) in all 4 sites (-1.4, -0.7,-3.1,-3.8,-2.4), the unweighted average across sites (*Z*-Rank = -2.3), and for data pooled across sites (*Z*-Rank = -2.4, $p < .05$). Given the limited *n* per and across sites and distributional issues, we believe that the latter result provides the best evidence of the positive effect of JDTC over TJC.

Table 3m. Rearrests for Non-status Offense in 12 Months after Assignment by Design, Site, & Court Type[a]

Design	**Rand. Assign.**		**Regression Discontinuity**							
Site	**Site A**		**Site C**		**Site H**		**Site I**		**Across 4 Sites**	
Court Type (number of participants)	JDTC (25)	TJC (25)	JDTC (49)	TJC (30)	JDTC (69)	TJC (23)	JDTC (24)	TJC (58)	JDTC (167)	TJC (136)
Expected Rearrest Rate[b]	72%	74%	72%	52%	72%	50%	69%	51%	72%	55%
Observed Rearrest Rate	32%	60%	59%	27%	68%	61%	25%	16%	54%	34%
Difference (Obs. – Exp.)	-40%	-14%	-13%	-25%	-4%	+11%	-44%	-35%	-18%	-21%
Difference (JDTC-TJC)	**-26%**		**+12%**		**-15%**		**-9**		+3	
Cohen's *d*	**-0.49**		**+0.25**		**-0.31**		**-0.22**		+0.07[c]	
t-test	**-3.91**		**+2.26**		**-2.94**		**-1.99**		+1.26	
df	**49**		**78**		**91**		**81**		302	
p (*t*)	***p* < .001**		***p* < 0.05**		***p* < 0.01**		***p* < 0.05**		= 0.208	
More Reduction in	***JDTC***		***TJC***		***JDTC***		***JDTC***		--	
Mean Rank % (low is good)	45% vs. 57%		49% vs. 54%		**45% vs. 67%**		**32% vs. 58%**		**47% vs. 55%**	
Mann-Whitney based *Z*-Rank	-1.4		-0.7		**-3.1**		**-3.8**		**-2.4** [d]	
p (*Z*-Rank)	= 0.172		= 0.484		***p* < 0.01**		***p* < 0.001**		***p* < 0.05**	
More reduction in	--		--		***JDTC***		***JDTC***		***JDTC***	

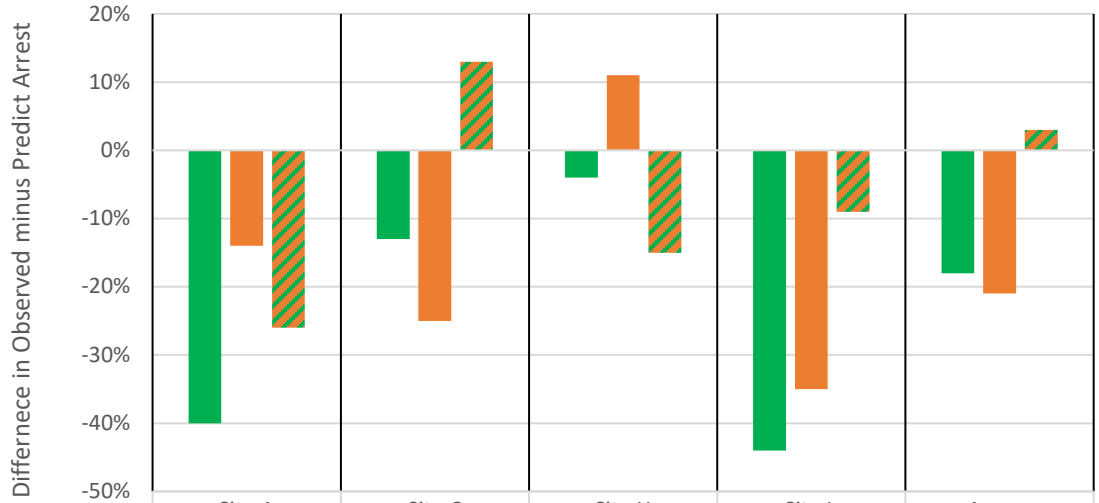
[a] Bold means that the probability of the *t*-test or *Z*-rank values is less than 0.05 (i.e., reliably measured) and/or that the Cohen's effect size is greater than |0.20| or *Z*-rank is greater than 1.96 (i.e., clinically significant); Red text means that the effect is going in the wrong direction.

[b] Based on earlier data presented in Figure 3d

[c] Unweighted average *d* across sites is -0.19

[d] Unweighted average *Z*-rank across sites is 2.3

Figure 3k. Rate of 12-month Rearrest for Non-status Offense by Design, Site, & Court



	Site A	Site C	Site H	Site I	Across
JDTC	-40%	-13%	-4%	-44%	-18%
TJC	-14%	-25%	11%	-35%	-21%
Difference	-26%	13%	-15%	-9%	3%

3.7 Self-Reported Youth Outcomes

In this section, the analyses of youth outcomes from the follow-up survey are limited to the subset of 4 sites (Site A with random assignment and sites C, H, and I with needs-based assignment) that had sufficient numbers of youth recruited (50 or more) and adequate follow-up rates (70% or more) as reported earlier in Table 3d. The analysis focuses on 6 months due to limited *n* and follow-up rates at 12 months. The youth survey outcomes focus on the primary outcomes related to substance use and recidivism, comparing JDTC and TJC youth in the random assignment and needs-based assignment designs.

3.7.1 Substance Use

Table 3n displays the changes in cannabis and other drug use from the 90 days before the baseline survey to the 90 days before the 6-month follow-up for the two assignment mechanisms. In the one random assignment site, there was a trend for a greater decrease in mean days of marijuana use in youth assigned to JDTC vs. TJC (-29.0 vs. -12.1, $t = -1.71$, $p < .10$), as well as a greater increase in the percentage reporting no marijuana use (+33.3% vs. +17.4%); but, due to limited sample size, it did not reach statistical significance. The youth in the two court types were similar in their reduction in reports of no alcohol or other drug use (-4.8% vs. -4.3%).

Across the three needs-based assignment sites, there were significant ($p < .001$) reductions in mean days of marijuana use in youth assigned to JDTC vs. TJC (-18.6 vs. -1.5, t = -3.73, $p < .001$), as well as a greater increase in the percentage reporting no other alcohol or other drug use (+12.3% vs. +2.4%). Though there was also a trend for increased reports of no marijuana use (+31.6% vs. +12.6%), it did not reach statistical significance. Relative to the youth assigned to JDTC in the random assignment site, youth in the needs-based sites started with fewer days of marijuana use and had fewer reductions in use over the 6 months. Conversely, the youth in needs-based sites started with a lower percentage reporting no alcohol or other drug use than those in the random assignment site, but their percentage

increased by the 6-month follow-up. Regression analysis did not identify any other variables that helped predict the change in use after controlling for baseline use, though use slightly decreased for those assigned to JDTC. Note that these results are consistent with the analyses of change in urine test results presented earlier.

Table 3n. Change in Youth-Reported Substance Use by Study Design

	Baseline	6-month	Change	Baseline	6-month	Change
Random Assignment Site (1 site)	**JDTC (*n* = 21)**			**TJC (*n* = 23)**		
Days marijuana use (*SD*)	63.7 (21.7)	34.7 (38.9)	-29.0	52.0 (22.4)	39.9 (31.7)	-12.1
% Youth with no marijuana use	0.0	33.3	+33.3	0.0	17.4	+17.4
% Youth with no alcohol or other drug use	90.5	85.7	-4.8	82.6	78.3	-4.3
Needs-Based Assignment Sites (3 sites)	**JDTC (*n* = 130)**			**TJC (*n* = 82)**		
Days marijuana use (*SD*)	42.2 (30.4)	23.6 (29.6)	-18.6	10.2 (22.8)	8.6 (20.5)	-1.5 **(*p* < .001)**
% Youth with no marijuana use	3.8	35.4	+31.6	65.4	78.0	+12.6
% Youth with no alcohol or other drug use	51.5	63.8	+12.3	86.6	89.0	+2.4 **(*p* < .001)**

3.7.2 Self-reported Arrest

Table 3o displays the changes in the percentage of youth with no arrests in the 90 days before baseline and 6-month interviews. The rows illustrate these rates with and without status offenses. Note that youth reported more arrests than found in the juvenile justice records, particularly for status offenses. This finding may be because the records only considered those arrested and charged, while youth might also have included incidents that were never formally recorded as arrests, such as being stopped by law enforcement and/or turned over to their parents. In the one random assignment site, there were no significant differences from baseline to 6 months in either of the rearrest rates (criminal or criminal plus status offenses). There was a trend for more improvement in youth assigned to JDTC vs. TJC when status offenses were excluded (+57.2% vs. +28.2%), but the trend reversed when status offenses were included (+0% vs. +65.2%).

In the three needs-based assignment sites, there were no significant differences from baseline to 6 months in either of the rearrest rates. There was a trend for more improvement in youth assigned to JDTC vs. TJC when status offenses were included (+43.8% vs. +23.7%) that disappeared when status offenses were excluded (+9.1% vs. +10.1%). Relative to the youth in the random assignment site, youth in the needs-based assignment sites were less likely to report status and non-status related arrests in the 90 days before baseline, but then had more arrests in the 90 days before the 6-month follow-up.

Table 3o. Change in Youth-Reported Arrests by Study Design

	Baseline	6-month	Change	Baseline	6-month	Change
Random Assignment Site	**JDTC (*n* = 21)**			**TJC (*n* = 23)**		
% No rearrests including status offenses	0.0	0.0	0.0	0.0	65.2	+65.2
% No rearrests excluding status offenses	33.3	90.5	+57.2	34.8	69.6	+28.2
Needs-Based Assignment Sites (3 sites)	**JDTC (*n* = 130)**			**TJC (*n* = 82)**		
% No rearrests including status offenses	20.8	64.6	+43.8	54.3	78.0	+23.7
% No rearrests excluding status offenses	66.9	76.0	+9.1	75.3	85.4	+10.1

3.7.3 Mental Health

Table 3p summarizes changes in the number of days of being bothered by mental health problems and the percentage of youth receiving any outpatient mental health treatment—each in the 90 days before baseline and the 90 days before the 6-month interview. In the one random assignment site, there were no significant differences in either the rate of mental health problems or receiving outpatient mental health treatment. There were trends of youth assigned to JDTC to have less increases in days being bothered by mental health problems and less receipt of outpatient mental health. The latter may be partially related to most substance use treatment now providing co-occurring services.

In the three needs-based assignment sites there was a significant ($p < .001$) reduction in the days of being bothered by mental health problems (-5.4 vs. +1.9) and increase in the receipt of any outpatient mental health services (+38.8% vs. +5.3%). Relative to youth in the random assignment site, youth in the needs-based assignment sites in JDTC appeared to be more severe, while youth assigned to TJC appeared to be less severe.

Table 3p. Change in Youth-Reported Mental Health by Study Design

	Baseline	6-month	Change	Baseline	6-month	Change
Random Assignment Site (	**JDTC (*n* = 21)**			**TJC (*n* = 23)**		
Days bothered by mental health problems	61.9	66.7	+4.8	69.6	81.8	+12.2
% Received any outpatient mental health treatment	9.5	23.8	+14.3	8.7	27.3	+20.3
Needs-Based Assignment Sites (3 sites)	**JDTC (*n* = 130)**			**TJC (*n* = 82)**		
Days bothered by mental health problems	76.6	71.2	-5.4	50.0	51.9	+1.9 ***(p < .001)***
% Received any outpatient mental health treatment	21.7	60.5	+38.8	17.1	22.4	+5.3 ***(p < .001)***

3.8 Summary & Recommendations from Youth-Level Findings

The youth-level data collection for the JDTC Guidelines Cross-site Evaluation involved baseline assessment via youth survey; evaluation of the substance use treatment cascade, urine tests, and recidivism outcomes via records; and evaluation of substance use, rearrest, and mental health problems via follow-up youth surveys. The study was challenged by much lower-than-expected recruitment rates into the courts, follow-up rate problems in several sites, the COVID epidemic, the non-normal distribution of several outcomes, and violations of the assumption of the needs-based assignment model (a.k.a. regression discontinuity) that JDTC would produce a shift in the regression line and not the slope (it changed both). While these factors limited the number of sites/youth and power of many analyses, the multiple sources of data still provide a consistent emerging picture.

3.8.1 Key Takeaways

To briefly recap some of the key results from the cross-site evaluation:

- Youth presenting to JDTC had high rates of co-occurring problems (mental health, trauma, victimization) and environmental risk; these problems were higher than those presenting to TJC (youth without a need for substance use treatment).
- The short 10-item screener from the GAIN used in this study was able to reliably distinguish between those who needed substance use treatment and those who did not, predict retention along the service cascade, and predict recidivism risk.
- Youth assignment to JDTC was associated with increased retention in the substance use treatment cascade and reductions in cannabis, alcohol, and other drug use—though the effects varied by site.
- Youth assignment to JDTC was associated with reduced rearrest, but the effect interacted with need and risk; youth with moderate need and risk had similar effects to those in TJC, but as need and risk increased in severity, the beneficial effects of JDTC vs. TJC also grew.
- Youth assignment to JDTC was associated with some increases in mental health treatment and reductions in mental health problems.

3.8.2 Recommendations

JDTC (and to a lesser extent TJC) invest a lot of human and financial resources on drug testing. Yet, many protocols are done by rote and in ways that may not be effective or correctly interpreted, and, at worse, may cause harm. The main drug used by youth, marijuana, has a long metabolite half-life, is fat soluble, and, consequently, may show up 1–4 weeks later. Urine tests alone are not typically sufficient to demonstrate need for substance use treatment. They do not instantly or consistently produce negative results, and positive urine tests in early treatment are typically better interpreted as confirmation of the diagnosis (vs. failure). Even after a period of abstinence, relapse is still common because of the nature of substance use disorders combined with high rates of victimization, co-occurring problems, and environmental risk. Relapse events also represent teachable moments to review what happened and how to avoid it in the future. While some states have a criterion of 90 days of negative urine test results for JDTC graduation, in practice this standard is more aspirational than the reality of what happens because at 90 days brain activity has only returned to half of what it was prior to addiction (Volkow et al., 1992, 1993). Some key recommendations for JDTC (and TJC) staff going forward:

1. Ensure that staff who administer drug tests:
    a. are trained on trauma, cultural humility, and implicit/institutional bias
    b. look like the youth they serve (in terms of race/ethnicity/sexual identity)
    c. understand how to interpret and react to positive urine tests (particularly for marijuana)
2. Revise drug testing processes to:
    a. emphasize respect in interactions with youth and families by showing how this is a tool to help them enter and sustain recovery and not monitoring to punish
    b. give youth voice and choice
    c. state the why, how, what, and who of the testing and results
3. Refer youth to culturally appropriate treatment services and support for positive tests to see what else might be done
4. Provide meaningful and positive reinforcement for negative tests

5. Ensure access to drug testing services (as noted above, it is a positive tool for reducing use)
6. Avoid a fixed criteria for duration of abstinence and focus on incremental change towards abstinence and recovery and additional measures of success and progress in addition to abstinence

A second set of recommendations is to improve the extent to which JDTC keep track of a youth's referral, access, entry, attendance, and retention in treatment and track it in the kind of cascade of care presented in this report. The lack of access to this kind of data on substance use treatment is a national problem (Dennis et al., 2019b; Scott et al., 2020) and was true for most of the study sites. To conduct the cascade analysis presented here, local Evaluation Liaisons had to make multiple requests of their treatment providers. In some cases, they even had to manually retrieve this information from the provider's records. So, some key recommendations are to:

7. Implement a structured process for continuous quality improvement
8. Collaborate with treatment providers to collect, enter, and analyze current data on a quarterly basis
9. Implement standardized screening and ensure that it leads to referral to substance use treatment when needed
10. Improve connections between referral and treatment initiation with more assertive practices (e.g., facilitating intake appointment, transportation assistance, verifying insurance coverage)
11. Set attainable benchmarks for improvement, including:
    a. timeliness for referral completion
    b. target rates of initiation, engagement, and continuing care
12. Improve collaboration and communication between JDTC and community treatment providers through interagency workgroups, shared trainings, MOUs that specify protocols for sharing treatment progress data, etc.
13. Identify gaps in the treatment process that might be related to problems in the current practices and/or health disparities
    a. Work as a team to identify and implement changes to practice that could improve performance and reduce disparities (which can also increase performance)

As noted earlier in this chapter, youth presenting to JDTC have high rates of co-occurring problems where multiple issues are the norm. The most common of these concerns are related to mental health. Ideally, JDTC should:

14. Implement a validated mental health assessment tool, including items related to critical concerns (e.g., victimization/trauma, suicide, early psychosis), and externalizing disorders like ADHD and conduct disorder that are among the most common issues for these youth. Note that:
    a. Many of the most widely used adult mental health screeners do NOT include some of these items
    b. Many of the most widely used tools in juvenile and adult justice are not recognized as standardized mental health tools by providers
15. Work closely with behavioral health providers to deliver services for co-occurring disorders
16. Assess referral to and provision of mental health services in a parallel cascade process to ensure youth in need get their needs met. This plan should include tracking:
    a. at the individual level to meet their needs
    b. across individuals to guide program planning

Finally, a key problem for this evaluation was the small size of courts and the combined sample size. It would be useful if federal and state agencies providing support for JDTC would encourage courts

to use one or more common tools/metrics to collect records and youth data, to pool these data, and publish reports on how each court compares to the cross-site average in terms of:

17. Baseline needs and comorbidity
18. Retention along the substance use and mental health service cascades
19. Reductions in positive urine tests
20. Reductions in recidivism with and without status offenses

The above could also be used to guide potential training and technical assistance, as well as to group courts with similar needs. It may be premature based on these data alone, but, currently, it appears that instead of JDTC targeting youth with moderate to severe need and risk, it might be more effective and cost-effective if JDTC only focused on youth with severe need and risk.

4. CONCLUSIONS & RECOMMENDATIONS

4.1 Reprise of Project & Findings

4.1.1 Chapter 1: The Cross-site Evaluation Project

OJJDP/NIJ funded a multi-year, multisite evaluation to:

1. Determine the extent to which it was feasible to implement the 2016 JDTC Guidelines and the kinds of adaptation courts make to use them
2. Examine the impact on youth of juvenile drug treatment courts (JDTC) relative to traditional juvenile courts (TJC)
3. Identify if there was evidence for some components being more, less, or not important
4. Recommend changes to the JDTC Guidelines

The evaluation included 10 sites in nine states. The evaluation looked at characteristics of the JDTC programs themselves, as well as characteristics of their jurisdiction's TJC, to measure the extent to which—and how—they were meeting the JDTC Guidelines. Multiple measures were used, including a court-self assessment tool, observations of program operations, a youth self-report survey, and analysis of administrative juvenile justice records.

4.1.2 Chapter 2: Court-Level Findings

Overall, the JDTCs implemented a substantial percentage of the Guidelines and, with few exceptions, increased their implementation over time.

- Overall, achievement of JDTC Guidelines ranged from 72% to 92% at follow-up; with half the sites achieving 88% or more.
- All JDTC improved their implementation with training and technical assistance.
- *Thus, the Guidelines are feasible to implement and JDTC practice can be improved further with help.*

There were similarities in practice between the JDTC and TJC:

- Both court types provide similar treatment environments, including family interventions
- Strategies to engage families in the court process.
- Judges having direct communication with youth in court and being rated as consistent in follow-through on warnings.
- Access to interpreters when needed.
- Thus*, the similarities between JDTC Guidelines and generic juvenile justice reform impacting TJC are probably a good thing, but represent a distinct challenge when comparing their effectiveness.*

There are also stark differences between JDTC and TJC:

- JDTCs heavily used incentives to motivate behavior change and favor incentives over sanctions.
- Screening, assessment, and urine testing were also much more common in JDTCs.
- JDTCs were more likely than their respective TJCs to have processes or policies in place to ensure equity of access to services and to review their data to assess equity.
- JDTCs also typically implemented more new practices between the two court self-assessments.

- *Thus, the Guidelines, training, and technical assistance targeting JDTCs, specifically, do appear to be beneficial to the courts and have led to further improvements in their practices.*

Some Guidelines were more likely to be implemented and met than others.

- JDTCs varied widely in *how* they implemented some Guidelines, demonstrating a range of creative strategies for achieving the broader goals described in the Guidelines.
- JDTCs were strongest in the areas of family engagement and screening/assessment.
- JDTCs' biggest area of challenge was related to use of detention—none of the sites met the goals of having brief detention stays (generally 2 days or less) or using detention only when the youth is a danger to themselves or others or may abscond.

4.1.3 Chapter 3: Youth-Level Findings

The study was challenged by much lower-than-expected recruitment rates into the courts, follow-up rate problems in several sites, the COVID epidemic, the non-normal distribution of several outcomes, and violations of the assumption of the needs-based assignment (a.k.a. regression discontinuity) model that JDTC would only produce a shift in the regression line. In practice, JDTC changed both the regression line and the slope. While this result limited the number of sites/youth and power of many analyses, the multiple sources of data still provide a consistent emerging picture:

- Youth presenting to JDTC had high rates of co-occurring problems (mental health, trauma, victimization) and environmental risk; these issues were higher than those presenting to TJC (youth without a need for substance use treatment).
- The short 10-item screener from the GAIN used in this study was able to reliably distinguish between those who needed substance use treatment and those who did not, predict retention along the service cascade, and predict recidivism risk.
- Youth assignment to JDTC was associated with increased retention in the substance use treatment cascade and reductions in cannabis, alcohol, and other drug use—though some effects varied by site.
- Youth assignment to JDTC was associated with reduced rearrest, but the effect relative to TJC primarily came only from the subset with high need and high risk.
- Youth assignment to JDTC was associated with some increases in mental health treatment and reductions in mental health problems.
- Sites varied in their effectiveness, with the TJC in one site doing better than JDTC—the site with the smallest difference in Guideline implementation between JDTC and TJC.

4.2 Implications & Recommendations Related to the JDTC Guidelines

4.2.1 Changes to Existing Guidelines

Consistent with a parallel validation of the court self-assessment (CSA), the cross-site evaluation found that most courts were able to complete the CSA with no or minor assistance. Some request for clarification was used to update instructions and passed on to the validation project, but no Guideline seemed inappropriate or recommended for deletion. What several courts sought and we recommend is that OJJDP and its training/technical assistance providers consider making available "examples" of how some of the Guidelines have been implemented. This suggestion includes resources like model memoranda of understanding, roles and responsibilities, policies, and incentive and sanction protocols; reviews of standardized screening tools; guidelines for evaluating treatment quality; alternatives to

detention; and data guidelines for what information courts should collect going forward. (Expanded further below.)

4.2.2 Additions to the JDTC Guidelines

Below are some expansions that could easily be incorporated into the revised (forthcoming) Guidelines, but where more detailed examples, training, and technical assistance will likely be required:

1. Focus on the importance of the behavioral health services cascade (as used in Chapter 3); that is, keeping track of youths' pathway from referral to treatment, entry into treatment, retention in treatment, and completion of treatment.
    a) Currently, many programs do not monitor or record this information and some youth are not receiving needed services. We want JDTCs to make sure youth who need treatment have engaged.
    b) Retention along the cascade can also be used to identify problems in the process and/or health disparities—that, if addressed, would further improve performance.
2. Provide protocols, training, and technical assistance to improve the use of urine testing results in JDTCs, with a particular focus on marijuana (an issue that came up in Chapter 2 site visits).
3. Provide protocols, training, and technical assistance on how to reduce the duration of detention with alternative approaches (an issue in Chapter 2).
4. Provide additional detail about the importance of and protocols for supporting prosocial activities, mentoring, and family engagement (needs that came up in Chapters 2 and 3).
5. Expand descriptions of multidimensional screening and case management to address other co-occurring problems and access issues (needs that came up in Chapters 2 and 3).
6. Enhance research and practice considerations such as using common data, pooling the results, and facilitating comparisons of individual JDTCs with the average across JDTCs (an issue that came up in Chapter 3).

4.2.3 Other Issues to Clarify in the Guidelines

We also identified several issues that were considered vague or missing from the Guidelines. Ideally, the new Guidelines could clarify:

- What to do when someone is not appropriate for JDTC (e.g., moderate to severe need for substance use treatment but no recidivism risk or violent crimes history).
- Clarify that fees should not be used as sanctions.
- Clarify that the research and Guidelines do NOT support the use of a 90-day period of negative urines prior to graduation.

The above are each issues that the Guidelines were largely silent on that people in the field struggle to interpret.

4.3 Implications & Recommendations Related to JDTC Training & Technical Assistance

4.3.1 Immediate Steps

Some of the immediate steps already being considered by OJJDP and its training/technical assistance providers include:

- Rolling out the revised Guidelines and providing information to the field to highlight the changes.
- Revamp the court self-assessment and its feedback report to address changes and make it publicly available.
    - Develop questions to better assess (or observe) JDTCs' success at achieving Guidelines in those areas that were previously measured with a lower standard (that is, explore the gaps between services that are available, offered, and received; look at actual family engagement now that we know most programs have strategies in place to encourage engagement; focus on program achievement in addition to intentions; etc.)
- Revamp the technical assistance model to emphasize areas identified as needing support in the court self-assessment and address Guideline updates.
- Develop methods for rating concepts that are hard to self-report or observe at one point in time or across multiple youth, such as judicial fairness or consistent follow-through.
- Consider economic analysis (cost-benefit) of JDTCs.
- Further explore the value of limiting JDTCs to high need/high risk youth.
- Further explore potential benefits of a scaled down JDTC-lite-type approach for youth with high treatment need and low to moderate risk of recidivism that could be used in TJC.
- Work with juvenile justice systems to educate them on research-based practices, support the JDTC in their jurisdiction, and integrate practices that are applicable across the entire system.

4.3.2 Specific Training & Technical Assistance Needs

Below are several additional areas that may require development to support further training and technical assistance.

1. **Universal screening and assessment process.** Provide juvenile courts with one (or more) universal screening and assessment processes based on validated tools/training models to determine youth needs at intake and identify which youth should be diverted and which need informal or formal/intensive supervision. Assess for risk and serve higher-risk youth. Specific steps include:
    a. Evaluate the system's ability to **assess service needs** and create individualized, integrated, holistic, and coordinated service planning and support for youth and families.
    b. Link to treatment (that is, connect youth and families to treatment services) when it is needed. Place renewed emphasis on assessing mental health needs. Measure mental health services received.
2. **Basic Training for JDTC staff.** Ensure that all staff who work with youth and families are fully trained in:
    a. Adolescent brain/behavior/social development, trauma, strength-based practices, and contingency management and appropriate responses to youth behavior.
    b. The definition of substance use disorder for purposes of JDTC eligibility.
    c. The use of incentives and rewards throughout juvenile court systems.
    d. The use of urine testing, interpretation, and how to best respond to continued positive urines and/or relapse.
    e. How to evaluate the quality of substance use treatment and the degree to which it is well designed for adolescents with, primarily, marijuana use. This resource could be an updated version of the Drug Strategies 2005, "Bridging the Gap: A Guide to Drug Treatment in the Juvenile Justice System."

3. **Collaboration models.** Provide agreements and models, and expand training for facilitating collaboration between:
    a. The juvenile justice system and community resources, including schools, treatment providers, employment/career exploration opportunities, artistic/creative outlets, mentors, and safe recreational activities. Increasing effective collaboration and communication between JDTC and community treatment staff are particularly important.
    b. Effective family engagement practices and how to remove barriers to family participation. Reinforce the goal of moving from intention and encouragement to achieving meaningful family participation.
        - One example involves the perception of programs that they are flexible, while holding court sessions during the regular workday.
        - Ironically, the COVID pandemic promoted innovations, such as calling into court by phone or video link, that many programs may retain because they provide access to involvement by more families.
4. **Alternatives to detention.** One of the hardest Guidelines for the JDTCs to implement was limiting the use of detention. Ideally, the field needs:
    a. A focused review on this topic, and
    b. Concrete examples of alternatives to detention and protocols for using them that can be shared.
5. **Service Cascade Model.** Given the limited access of most courts to the data to track retention along the treatment cascade, it would be useful to provide courts with:
    a. Data element requirements to add to their systems,
    b. Model agreements and protocols for getting these data from their treatment partners while adhering to confidentiality requirements,
    c. Examples of a dashboard or management report for tracking retention along the service cascade, identifying gaps and their causes (including health disparities),
    d. Examples of using a plan-do-study-act (PDSA; see www.niatx.org) approach to address above problems and improve performance,
    e. Support program use of electronic management information systems, and the collection, entry, and use of key data elements for program monitoring and improvement.
6. **Diversity, Inclusion, and Equity.** Identify other examples of how to improve diversity, inclusion, and equity for youth, their families, and staff. This suggestion includes demonstrating the value of doing so.
7. **JDTC goals.** Provide examples of appropriate goals and expectations for JDTC youth, the supports needed to achieve them, how success was measured, and examples of outcomes.
    a. Ideally, ensure that measures of success include a wide range of indicators of wellness and functioning (including, but not limited to: not reoffending; reduced substance use; reduced mental health symptoms and service needs; improved communication skills; reduced family conflict and improved family functioning; increased school attendance, engagement, and academic achievement; improved emotional self-management skills; etc.).
8. **Workforce Development.** Provide examples of how to establish a workforce development infrastructure and build staff capacity. It was clear during the evaluation that programs that had a foundation and dedicated staff were better able to manage change and make improvements. Having procedures and protocols in place helped the whole team work together and having a person with time (and authority) to guide the implementation process facilitated adoption of

new practices. Written position descriptions are an example of a simple, achievable product that helps all team members understand each other's roles. Project management training may also be helpful for JDTC coordinators.

REFERENCES

Allison, P. D. (1990). Change scores as dependent variables in regression analysis. *Sociological Methodology, 20,* 93–114. https://doi.org/10.2307/271083

American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders: DSM-5™ (5th ed.)*. American Psychiatric Publishing. https://doi.org/10.1176/appi.books.9780890425596

Belenko, S., Dennis, M., Hiller, M., Mackin, J., Cain, C., Weiland, D., Estrada, B., & Kagan, R. (2022). The impact of juvenile drug treatment courts on substance use, mental health, and recidivism: Results from a multisite experimental evaluation. *Journal of Behavioral Health Services & Research, 49,* 436–455. https://doi.org/10.1007/s11414-022-09805-4

Belenko, S., Knight, D., Wasserman, G. A., Dennis, M. L., Wiley, T., Taxman, F. S., Oser, C., Dembo, R., Robertson, A. A., & Sales, J. (2017). The Juvenile Justice Behavioral Health Services Cascade: A new framework for measuring unmet substance use treatment services needs among adolescent offenders. *Journal of Substance Abuse Treatment, 74,* 80–91. https://doi.org/10.1016/j.jsat.2016.12.012

Campie, P. E., & Sokolsky, J. (2016). *Systematic review of factors that impact implementation quality of child welfare, public health, and education programs for adolescents: Implications for juvenile drug treatment courts.* American Institutes for Research. https://www.ojp.gov/pdffiles1/ojjdp/grants/250483.pdf

Choo, K., Petrosino, A., Persson, H., Fronius, T., Guckenburg, S., & Earl, K. (2016). *Juvenile drug courts: Policy and practice scan.* WestEd Justice and Prevention Research Center.

Conrad, K. J., Conrad, K. M., Mazza, J., Riley, B. B., Funk, R., Stein, M. A., & Dennis, M. L. (2012). Dimensionality, hierarchical structure, age generalizability, and criterion validity of the GAIN's Behavioral Complexity Scale. *Psychological Assessment, 24*(4), 913–924. https://doi.org/10.1037/a0028196

Conrad, K. J., Riley, B. B., Conrad, K. M., Chan, Y-. F., & Dennis, M. L. (2010). Validation of the Crime and Violence Scale (CVS) against Rasch measurement model including differences by gender, race, and age. *Evaluation Review, 34,* 83. https://doi.org/10.1177/0193841X10362162

Dennis, M. L., Chan, Y-. F., & Funk, R. R. (2006). Development and validation of the GAIN Short Screener (GSS) for internalizing, externalizing, and substance use disorders and crime/violence problems among adolescents and adults. *American Journal on Addictions, 15,* 80–91. https://doi.org/10.1080/10550490601006055

Dennis, M. L., & Davis, J. P. (2021). Screening for more with less: Validation of the Global Appraisal of Individual Needs Quick v3 (GAIN-Q3) screeners. Journal of Substance Abuse Treatment, 126, 108414. https://doi.org/10.1016/j.jsat.2021.108414

Dennis, M., Estrada, B., Baumer, P., Smith, C., Miles, C. Belenko, S., Hiller, M., Carnevale, J., Ostlie, E., Kagan, R., Mackin, J., & Carey, S. (2019a). *Juvenile drug treatment court (JDTC) guidelines cross-site evaluation plan.* Chestnut Health Systems. https://www.ncjrs.gov/App/Publications/abstract.aspx?ID=274944

Dennis, M. L., Smith, C. N., Belenko, S., Knight, D., McReynolds, L., Rowan, G., Dembo, R., DiClemente, R., Robertson, A., Wiley, T. (2019b). Operationalizing a behavioral health services cascade of care model: Lessons learned from a 33-site implementation in juvenile justice community supervision. *Federal Probation, 83*(2), 52–64. PMCID: PMC8341285

Drug Strategies. (2005). *Bridging the gap: A guide to drug treatment in the juvenile justice system.* Drug Strategies. http://www.drugstrategies.com/resources-2/#guides

Garner, B. R., Belur, V. K., & Dennis, M. L. (2013). The GAIN Short Screener (GSS) as a predictor of future arrest or incarceration among youth presenting to substance use disorder (SUD) treatment. *Substance Abuse: Research and Treatment, 7,* 199–208. https://doi.org/10.4137/SART.S13152

Godley, M. D., Kahn, J. H., Dennis, M. L., Godley, S. H., & Funk, R. R. (2005). The stability and impact of environmental factors on substance use and problems after adolescent outpatient treatment. *Psychology of Addictive Behaviors, 19*(1), 62–70. https://doi.org/10.1037/0893-164X.19.1.62

Harris, P. W., Lockwood, B., Mengers, L., & Stoodley, B. H. (2011) Measuring recidivism in juvenile corrections. *Journal of Juvenile Justice, 1*(1), 1–10. https://www.ojp.gov/pdffiles/236317.pdf

Herrera, C., Baldwin Grossman, J., Kauh, T. J., Feldman, A. F., & McMaken, J. (2007). *Making a difference in schools: The Big Brothers Big Sisters school-based mentoring impact study.* https://www.issuelab.org/resource/making-a-difference-in-schools-the-big-brothers-big-sisters-school-based-mentoring-impact-study.html

Keyes, C. L., & Simoes, E. J. (2012). To flourish or not: positive mental health and all-cause mortality. *American Journal of Public Health, 102*(11), 2164–2172. https://doi.org/10.2105/AJPH.2012.300918

Knight, D., Belenko, S., Wiley, T., Robertson, A. A., Arrigona, N., Dennis, M., Bartkowski, J. P., McReynolds, L. S., Becan, J. E., Knudsen, H. K., Wasserman, G. A., Rose, E., DiClemente, R., Leukfeld, C., & the JJ-TRIALS Cooperative. (2016). Juvenile Justice—Translational Research on Interventions for Adolescents in the Legal System (JJ-TRIALS): A cluster randomized trial targeting system-wide improvement in substance use services. *Implementation Science, 11,* 57. https://doi.org/10.1186/s13012-016-0423-5

McCreary, L. L., Conrad, K. M., Conrad, K. J., Scott, C. K., Funk, R. R., & Dennis, M. L. (2013). Using the Rasch measurement model in psychometric analysis of the Family Effectiveness Measure. *Nursing Research, 62*(3), 149–159. https://doi.org/10.1097/NNR.0b013e31828eafe6

McGaffin, B. J., Deane, F. P., Kelly, P. J., & Ciarrochi, J. (2015). Flourishing, languishing and moderate mental health: Prevalence and change in mental health during recovery from drug and alcohol problems. *Addiction Research and Theory, 23*(5), 351–360. https://doi.org/10.3109/16066359.2015.1019346

Office of Juvenile Justice and Delinquency Prevention (OJJDP). (2016). *Juvenile drug treatment court guidelines* (NCJ 250368). U.S. Department of Justice.

Riley, B. B., Conrad, K. J., Bezruczko, N., & Dennis, M. L. (2007). Relative precision, efficiency and construct validity of different starting and stopping rules for a computerized adaptive test: The GAIN Substance Problem Scale. *Journal of Applied Measurement, 8*(1), 48–64.

Scales, P. C., Benson, P. L., & Mannes, M. (2006). The contribution to adolescent well-being made by nonfamily adults: An examination of developmental assets as contexts and processes. *Journal of Community Psychology, 34*(4), 401–413. https://doi.org/10.1002/jcop.20106

Scott, C. K. (2004). A replicable model for achieving over 90% follow-up rates in longitudinal studies of substance abusers. *Drug and Alcohol Dependence, 74,* 21–36. https://doi.org/10.1016/j.drugalcdep.2003.11.007

Scott, C. K., Dennis, M. L., Grella, C. E., & Watson, D. P. (2020). Improving retention across the OUD service cascade upon reentry from jail using recovery management checkups-adaptive (RMC-A) experiment. *Journal of Substance Abuse Treatment, 128,* 108245. https://doi.org/10.1016/j.jsat.2020.108245

Tanner-Smith, E. E., Lipsey, M. W., & Wilson, D. B. (2016a). Juvenile drug court effects on recidivism and drug use: A systematic review and meta-analysis. *Journal of Experimental Criminology, 12,* 477–513. https://doi.org/10.1007/s11292-016-9274-y

Tanner-Smith, E. E., Steinka-Fry, K. T., Kettrey, H. H., & Lipsey, M. W. (2016b). *Adolescent substance use treatment effectiveness: A systematic review and meta-analysis* (NCJRS document 250440). Vanderbilt University.

Tanner-Smith, E. E., Wilson, S. J., & Lipsey, M. W. (2013). The comparative effectiveness of outpatient treatment for adolescent substance abuse: A meta-analysis. *Journal of Substance Abuse Treatment, 44,* 145–158. https://doi.org/10.1016/j.jsat.2012.05.006

Titus, J. C., Feeney, T., Smith, D. C., Rivers, T. L., Kelly, L. L., & Dennis, M. L. (2013). *Global Appraisal of Individual Needs–Q3 3.2 (GAIN-Q3): Administration, clinical interpretation and brief intervention.* Chestnut Health Systems. http://www.gaincc.org/instruments

Wilson, D., Olaghere, A., & Kimbrell, C. S. (2016). *Developing juvenile court practices on process standards: A systematic review and qualitative analysis* (NCJRS document 250441). George Mason University.

University of Arizona - Southwest Institute for Research on Women. (2016). *National cross-site evaluation of juvenile drug courts and Reclaiming Futures: Eight site final report.* University of Arizona.

University of Arizona - Southwest Institute for Research on Women, & Carnevale Associates. (2012). *National cross-site evaluation of juvenile drug courts and Reclaiming Futures: Process evaluation data collection tool.* University of Arizona.

Volkow, N. D., Fowler, J. S., Wang, G. J., Hitzemann, R., Logan, J., Schlyer, D. J., Dewey, S. L., & Wolf, A. P. (1993). Decreased dopamine D2 receptor availability is associated with reduced frontal metabolism in cocaine abusers. *Synapse, 14*(2), 169–177. https://doi.org/10.1002/syn.890140210

Volkow, N. D., Hitzemann, R., Wang, G. J., Fowler, J. S., Wolf, A. P., Dewey, S. L., & Handlesman, L. (1992). Long-term frontal brain metabolic changes in cocaine abusers. *Synapse, 11*(3), 184–190. https://doi.org/10.1002/syn.890110303

APPENDICES

Appendix A. Court Self-Assessment (CSA)

Appendix B. Site Visit Protocol, Fidelity Coding Tool, De-identified JDTC Logic models

Appendix C. Excel File Used for Record Abstraction

Appendix D. Youth Assent, Parent Consent, & Youth Survey

Appendix E. Summary of Changes During COVID-19

Document Title: Juvenile Drug Treatment Court Data Elements Specifications

Author(s): No attribution of authors

Date Submitted: July 2022

This deliverable was developed as part of the Initiative to Develop and Test Juvenile Drug Treatment Court (JDTC) Guidelines (Award Number 2014-DC-BX-K001) funded by the Office of Juvenile Justice and Delinquency Prevention (OJJDP) and managed by the National Institute of Justice, Office of Justice Programs, U.S. Department of Justice. Opinions or points of view expressed are those of the author(s) and do not necessarily reflect the official position or policies of the U.S. Department of Justice.

Juvenile Drug Treatment Court

Record Abstraction Specifications

(Updated: 07/20/2022)

Tab 1 (Main Youth Record) provides a list of the variables that will be collected for the main youth record abstraction and includes consistency codes for any that are not collected locally, not available (e.g., requiring additional access), or missing.

Tab 2 (Court Transition - Anytime) list of variables for collection of data on youth placement and movement through the court system.

Tab 3 (SU Treatment - Anytime) provides specifications for a log of youth treatment services, level of care transitions, and dates of service before, during, and after JDTC enrollment.

Tab 4 (Bio Testing - Post Enroll) contains a list of variables for data collection on urine screens and results from the period post-enrollment to JDTC.

Tab 5 (Recidivism - Post Enroll) provides a list of variables for collection of recidivism data on youth in the main record.

Tab 6 (Value List) gives a list of values for items with a longer response set.

This resource was prepared by the author(s) using Federal funds provided by the U.S. Department of Justice. Opinions or points of view expressed are those of the author(s) and do not necessarily reflect the official position or policies of the U.S. Department of Justice.

	A	B	C	D
1	**Main Youth Record (Created after JDTC Placement)**			
2	**Variable**	**Variable Label**	**Data Source Timeframe**	**Description**
4	**Record Identifiers**			
5	XLYID	Local Youth ID		Local Youth ID - assigned by site to each unique youth in the site
6	XYEID	Youth Episode ID		Set to 1 for the first record covering the duration of involvement in justice system; if the youth comes back in later, the new record would be assigned a 2 (and 3 if a third time). This creates a record per youth-episode, but allows for the reality that the same youth do come back in multiple time over a period of several years.
7	XDTRJJS	Date of Referral to JJS	Pre-Enrollment	The Date (in MM/DD/YYYY format) the youth entered the juvenile justice system; it is also used to claculate the time to other events (e.g., screening). This is the start date of a youth JDTC episode.
8	XRUDT	Record Update Date		The Date (in MM/DD/YYYY format) this youth's record was last updated. Assumes that this version is that master copy and that any updated version of the records (based on this field) should override earlier versions.
9				
10	**Demographics at time of entering the JDTC**			
11	DEMAGE	Age	Pre-Enrollment	Age in years or coded as -1 Information not collected, -2 Information not accessible, -4 Information missing
12	DEMDOB	Date of Birth	Pre-Enrollment	Date of Birth (in MM/DD/YYYY format) if available.
13	DEMGEND	Gender	Pre-Enrollment	Gender coded as 1=female, 2=male, 99=other , -1 Information not collected, -2 Information not accessible, -4 Information missing
14	DEMHISP	Hispanic	Pre-Enrollment	Hispanic ethnicity coded as 1=yes, 0=no, -1 Information not collected, -2 Information not accessible, -4 Information missing
15	DEMRACE	Race	Pre-Enrollment	Race coded as 1=Asian/Hawaiian/Pacific Islander, 2=Black/African-American, 3=White/Caucasian, 4=Native American/Alaskan Native, 5=Other Race, 6=Mixed or Multiple Races , -1 Information not collected, -2 Information not accessible, -4 Information missing
16	DEMNOTES	Demographic Notes	Pre-Enrollment	Optional open text field for any other information to note
17				
18	**Biological Testing**			
19	BIOFLG	Biological Testing Flag	Pre-Enrollment	Prior to enrollment in JDTC, whether biological testing for substance use was done on the youth's urine, breath, saliva, blood, hair or other bio samples at all (detailed info should be added in Bio testing database), codes as 1 if yes, 0 if no, -1 Information not collected, -2 Information not accessible, -4 Information missing, -5 Not Applicable/Skipped

	A	B	C	D
1	**Main Youth Record (Created after JDTC Placement)**			
2	**Variable**	**Variable Label**	**Data Source Timeframe**	**Description**
20	BIOALC	Alcohol Results	Pre-Enrollment	Whether the biological samples tested positive for alcohol, coded as 2 for positive, 1 for negative, 0 for invalid, -1 Information not collected, -2 Information not accessible, -4 Information missing, -5 Not Applicable/Skipped
21	BIOAMP	Amphetamine Results	Pre-Enrollment	Whether the biological samples tested positive for amphetamines (including methamhetampines), coded as 2 for positive, 1 for negative, 0 for invalid, -1 Information not collected, -2 Information not accessible, -4 Information missing, -5 Not Applicable/Skipped
22	BIOCAN	Cannabis Results	Pre-Enrollment	Whether the biological samples tested positive for cannabis (including marijuana, blunts, hashish and other forms of THC), coded as 2 for positive, 1 for negative, 0 for invalid, -1 Information not collected, -2 Information not accessible, -4 Information missing, -5 Not Applicable/Skipped
23	BIOCOC	Cocaine Results	Pre-Enrollment	Whether the biological samples tested positive for cocaine (including powder and crack), coded as 2 for positive, 1 for negative, 0 for invalid, -1 Information not collected, -2 Information not accessible, -4 Information missing, -5 Not Applicable/Skipped
24	BIOOPI	Opioid Results	Pre-Enrollment	Whether the biological samples tested positive for opioids (including heroin, fentanyl, prescription drug misuse, and illegal methadone), coded as 2 for positive, 1 for negative, 0 for invalid, -1 Information not collected, -2 Information not accessible, -4 Information missing, -5 Not Applicable/Skipped
25	BIOOTH	Other Drug Results	Pre-Enrollment	Whether the biological samples tested positive for other drugs (anyhing other than alcohol, amphetamine, cannabis, cocaine, or opioids) - coded as 2 for positive, 1 for negative, 0 for invalid, -1 Information not collected, -2 Information not accessible, -4 Information missing, -5 Not Applicable/Skipped
26	BIONT	Biological Testing Notes	Pre-Enrollment	Optional open text field for any other information
27				
28	**Substance Use Screening**			
29	SUSCRFLG	Substance Use Screen Flag	Pre-Enrollment	Whether the youth was screened for substance use problems prior enrollment, coded as 1 if yes, 0 if no, -1 Information not collected, -2 Information not accessible, -4 Information missing, -5 Not Applicable/Skipped
30	SUSCRDT	SU Screen Date	Pre-Enrollment	The Date (in MM/DD/YYYY format) on the most recent screener prior to enrollment
31	SUSCRTYPE	SU Screen Type	Pre-Enrollment	Name or type of screener coded as from list A of screener and assessment types

This resource was prepared by the author(s) using Federal funds provided by the U.S. Department of Justice. Opinions or points of view expressed are those of the author(s) and do not necessarily reflect the official position or policies of the U.S. Department of Justice.

	A	B	C	D
1	**Main Youth Record (Created after JDTC Placement)**			
2	**Variable**	**Variable Label**	**Data Source Timeframe**	**Description**
32	SUSCRPOS	SU Screen positive	Pre-Enrollment	Screening indicated need for substance use treatment, based on instrument specific interpretation guidelines; coded 1 if yes, 0 if no, -1 Information not collected, -2 Information not accessible, -4 Information missing, -5 Not Applicable/Skipped
33	SUSCRNT	SU SCR notes	Pre-Enrollment	Optional open text field for any other information; Can indicate local names of instruments or if a package of multiple instruments were used here
34				
35	**Risk of Recidivism**			
36	RRFLG	Recidivisim Assessment Flag	Pre-Enrollment	Whether youth was assessed for recidivism risk prior to enrollment. Coded as 1 if yes, 0 if no, -1 Information not collected, -2 Information not accessible, -4 Information missing
37	RRTYPE	Recidivisim Assessment Type	Pre-Enrollment	Type of recidivism risk assessment done, coded from List C
38	RRCAT	Recidivism Risk Level	Pre-Enrollment	Recidivism risk level, coded as 4=very high, 3=high, 2=medimum, 1=low, -1 Information not collected, -2 Information not accessible, -4 Information missing, -5 Not Applicable/Skipped
39	RRNT	Recidivism Risk Notes	Pre-Enrollment	Open text field to enter any other information
40				
41	**Other Source of Information on Needs**			
42	OTHSUPOS	Other SU Positive	Pre-Enrollment	Any indications of SU Treatment need other than SU screener. Coded as 0 if no other indications of treatment need, 1=judicial mandate, 2=other staff recommendations, 4=Family Recommendation, 99=other (describe in notes)
43	OTHNT	Other Positive Notes	Pre-Enrollment	Optional open text field for any other information
44				
45	**Charges at time of entering the Juvenile Justice System (XDTRJJS)**			
46	CHRGCNTXT	Charge Event Context	Pre-Enrollment	For the charges being described, what is the context of the charges, coded as 1=arrest, 2=adjudication, 99=Other, -1 Information not collected, -2 Information not accessible, -4 Information missing
47	CHRGCNTXTDT	Charge Event Date	Pre-Enrollment	The Date (in MM/DD/YYYY format) of charge related event.
48	CHRGVO	Violent Charge	Pre-Enrollment	Violent offense against a person (including homicide, rape, robbery, aggravated assault, simple assault, other violent sex offenses), coded as 1=yes, 0=no, -1 Information not collected, -2 Information not accessible, -4 Information missing
49	CHRGPO	Property Charge	Pre-Enrollment	Property offense (including burglary, larceny-theft, motor vehicle, theft, arson, vandalism, trespassing, shoplifting), coded as 1=yes, 0=no, -1 Information not collected, -2 Information not accessible, -4 Information missing

	A	B	C	D
1	**Main Youth Record (Created after JDTC Placement)**			
2	**Variable**	**Variable Label**	**Data Source Timeframe**	**Description**
50	CHRGAOD	AOD Related Charge	Pre-Enrollment	Alcohol or drug law violations (including driving under the influence, distribution, manufacture, public intoxication, possession), coded as 1=yes, 0=no, -1 Information not collected, -2 Information not accessible, -4 Information missing
51	CHRGPPV	Porb or Parole Violation	Pre-Enrollment	Probation or parole violations, coded as 1=yes, 0=no, -1 Information not collected, -2 Information not accessible, -4 Information missing
52	CHRGWO	Weapons Offense	Pre-Enrollment	Weapons offenses, coded as 1=yes, 0=no, -1 Information not collected, -2 Information not accessible, -4 Information missing
53	CHRGOSO	Other Status Offense	Pre-Enrollment	Other status offenses, coded as 1=yes, 0=no, -1 Information not collected, -2 Information not accessible, -4 Information missing
54	CHRGOTH	Other Charges	Pre-Enrollment	Other charges (Please Specify in Notes), coded as 1=yes, 0=no, -1 Information not collected, -2 Information not accessible, -4 Information missing
55	CHRGMLEV	Charge Maximum Level	Pre-Enrollment	Charge Maximum Level, coded as 1=Felony, 2=Misdemeanor, 3=Summary/Citation, 4=Status, 99=Other, -1 Information not collected, -2 Information not accessible, -4 Information missing, -5 Not Applicable/Skipped
56	CHRGNT	Charge Notes	Pre-Enrollment	Open text field to enter information on local charges
57				
58	**Status prior to intake and study court assignment**			
59	STATJJ	JJ Status before intake	Pre-Enrollment	JJ System status immediately prior to enrollment in JDTC, coded as 0=New from community, 1=Probation, 2=Other/Informal Community Supervision, 3=Diversion without Community Supervision, 4=Child in need of supervision (CHIN, PIN, CIN, FINS), 5=Juvenile Drug Treatment Court, 6=Pre-adjudication Detention, 7=Post-adjudication Detention, 8=Other or Multiple Statuses (please describe in notes field for other/mutiple), -1 Information not collected, -2 Information not accessible, -4 Information missing, -5 Not Applicable/Skipped
60	STATNT	Status Notes	Pre-Enrollment	Open text field to enter other information
61				
62	**Referral to Substance Use Treatment**			
63	REFFLAG	Referral to Treatment Flag	Post-Enrollment	Whether youth was referred for substance use treatment, coded as 1=yes, 0=no, -1 Information not collected, -2 Information not accessible, -4 Information missing, -5 Not Applicable/Skipped
64	REFDT	Referral to Treatment Date	Post-Enrollment	The Date (in MM/DD/YYYY format) the youth was first referred for substance use treatment; will be used to calculate whether within time window.
65	REFNT	Referral Notes	Post-Enrollment	Optional open text field for any other information

This resource was prepared by the author(s) using Federal funds provided by the U.S. Department of Justice. Opinions or points of view expressed are those of the author(s) and do not necessarily reflect the official position or policies of the U.S. Department of Justice.

	A	B	C	D
1	**Main Youth Record (Created after JDTC Placement)**			
2	**Variable**	**Variable Label**	**Data Source Timeframe**	**Description**
66				
67	**Record Close Out**			
68	XADJDT	Adjudication Date	Any time	The Date (in MM/DD/YYYY format) of an adjudication hearing or disposition of case for the current JDTC referral.
69	XADJFLG	Adjudicated Delinquent Flag	Any time	Whether youth was adjudicated delinquent, coded as 0 if no, 1 if yes (adjudicated delinquent), 2 if case is still pending, -1 Information not collected, -2 Information not accessible, -4 Information missing, -5 Not Applicable/Skipped
70	XADJCHRGLEV	Adjudication Maximum Charge Level	Any time	Charge Maximum Level of charges youth was adjudicated delinquent for (if any), coded as 1=Felony, 2=Misdemeanor, 3=Summary/Citation, 4=Status, 99=Other, -1 Information not collected, -2 Information not accessible, -4 Information missing, -5 Not Applicable/Skipped
71	XECFLG	Episode Closed Flag		Whether the episode has closed (youth completed current JDTC referral episode) or remains open. Episode should be marked as closed if a new referral episode is begun. Coded 1 for Closed, 0 for open. -1 Information not collected, -2 Information not accessible, -4 Information missing, -5 Not Applicable/Skipped
72	XECDT	Episode Close Date		The Date (in MM/DD/YYYY format) this youth was released from the current JDTC referral episode or a new referral has begun (starting a new referral espisode row).
73	XRNT	Record Notes		An open text field for any other record notes staff want to put here.

This resource was prepared by the author(s) using Federal funds provided by the U.S. Department of Justice. Opinions or points of view expressed are those of the author(s) and do not necessarily reflect the official position or policies of the U.S. Department of Justice.

	A	B	C
1	**Court Placement Data: Any Time in JDTC Episode**		
2	**Variable**	**Variable Label**	**Description**
3	XLYID	Local Youth ID	Local Youth ID - assigned by site to each unique youth in the site
4	CRTNAME	Court name	Court name or division.
5	CRTPLCDT	Date placed with JDTC	The Date (in MM/DD/YYYY format) of assignment to JDTC.
6	CRTREFSRC	Referral source to JDTC	Source of referral to the JDTC, coded as 1=Pre-trial investigation, 2=Pre-sentence investigation, 3=Formal Court Staff Case review, 4=Prosecutor referral, 5=Referral from other attorney, 5=other staff recommendation, 6=other family recommendation, 99=other (please describe in notes), -1 Information not collected, -2 Information not accessible, or -4 Information Missing, -5 Not Applicable/Skipped
7	CRTJDGNAME	Judge/Magistrate name	Name of judge or magistrate overseeing assigned court.
8	CRTCLDT	Close date of episode/case.	The Date (in MM/DD/YYYY format) the current court case/episode with this court ended.
9	CRTCLDES	Court case/episode youth destination.	Upon completion of court episode, youth discharged/transfer destination, coded as 0=still in court; 1=completed and discharged to the community, 2=suspended sentence, 3=transferred to (another) juvenile drug treatment court (JDTC), 4= transferred to (another) traditional juvenile court (TJC), 5=transferred to adult court, 6=transferred to other court (please describe in notes) , 7=transferred to long term detention, 99=other (please describe in notes), -1 Information not collected, -2 Information not accessible, or -4 Information Missing, -5 Not Applicable/Skipped
10	CRTNT	Court Notes field	An open text field for any other record notes sites want to put here.

This resource was prepared by the author(s) using Federal funds provided by the U.S. Department of Justice. Opinions or points of view expressed are those of the author(s) and do not necessarily reflect the official position or policies of the U.S. Department of Justice.

	A	B	C
1	**Treatment and Transition Data:** **Any Time During JDTC Enrollment (record by episode of treatment)**		
2	**Variable**	**Variable Label**	**Description**
3	XLYID	Local Youth ID	Local Youth ID - assigned by site to each unique youth in the site
4	TXSID	Local SU Tx Provider ID	Local Site Provider ID - assigned by the site to each service provider within the juvenile justice system site.
5	TXINTDT	Treatment Intake Date	The Date (in MM/DD/YYYY format) the youth started this episode of substance use treatment; used to calculate initiation within time window
6	TXINTSTAT	Treatment Intake Status	1=New admission from community, 2=Readmission within 30 days of the previous discharge, 3=External transfer from another substance abuse treatment agency, 4=Internal transfer from a substance abuse treatment unit within the same agency, 5=Transfer from the juvenile justice/criminal justice system, 6=Transfer from another controlled environment, 98=Unspecified or unknown, 99=Other.
7	TXLOC	Tx Level of Care	Level of care coded as 1=outpatient, 2=intensive outpatient/day program, 3=group home, 4=residential/inpatient, 99=other (specify in notes), -1 Information not collected, -2 Information not accessible, -4 Information Missing, -5 Not Applicable/Skipped
8	TxTYPE	Treatment Type	Name or type of treatment coded as from treatment types (see list B);
9	TXDISCSTAT	Program Discharge Status	Is youth still in treatment, or description of destination upon discharge back to community or other treatment (see list of option in tab 6. Value Labels)
10	TXDISDT	Treatment Discharge Date	The Date (in MM/DD/YYYY format) the youth was discharged from current treatment episode; used to calculate engagement and continuing care.
11	TXNT	Treatment Notes	Optional open text field for any other information on treatment type.

	A	B	C
1	**Biological Testing Data: Post Assignment** **(record by test, can have multiple records per youth for each test)**		
2	**Variable**	**Variable Label**	**Description**
3	XLPID	Local Provider ID	Local Site Provider ID - assigned the site to each service provider within the juvenile justice system site; if testing done by juvenile justice system, set to 0.
4	XLYID	Local Youth ID	Local Youth ID - assigned by site to each unique youth in the site
5	BIOTYPE	Biological Test Type	Biological test type coded as 1=urine, 2=breath, 3=saliva, 4=blood, 5=hair, 99=other (specify in notes), -1 Information not collected, -2 Information not accessible, -4 Information missing, -5 Not Applicable/Skipped; Note can have multiple tests on the same date by entering more than one row.
6	BIOLOC	Biological Test Location	Biological test location coded as 1=off-site laboratory, 2=on-site laboratory, 3=on-site test, 4=monitoring device, 99=other (specify in notes), -1 Information not collected, -2 Information not accessible, -4 Information missing, -5 Not Applicable/Skipped; Note can have multiple tests on the same date by entering more than one row
7	BIOSMPLDT	Biological Sample Date	Biological sample date coded in MM/DD/YYYY format based on the date the sample was taken.
8	BIOTRDT	Biological Results Date	Biological test results date coded in MM/DD/YYYY format based on the date the test results were returned; longer difference between sample and test result dates associated with less impact on youth.
9	BIOALC	Alcohol Results	Whether the biological samples tested positive for alcohol, coded as 2 for positive, 1 for negative, 0 for invalid, -1 Information not collected, -2 Information not accessible, -4 Information missing, -5 Not Applicable/Skipped
10	BIOAMP	Amphetamine Results	Whether the biological samples tested positive for amphetamines (including methamhetampines), coded as 2 for positive, 1 for negative, 0 for invalid, -1 Information not collected, -2 Information not accessible, -4 Information missing, -5 Not Applicable/Skipped

	A	B	C
1	**Biological Testing Data: Post Assignment** **(record by test, can have multiple records per youth for each test)**		
2	**Variable**	**Variable Label**	**Description**
11	BIOCAN	Cannabis Results	Whether the biological samples tested positive for cannabis (including marijuana, blunts, hashish and other forms of THC), coded as 2 for positive, 1 for negative, 0 for invalid, -1 Information not collected, -2 Information not accessible, -4 Information missing, -5 Not Applicable/Skipped
12	BIOCOC	Cocaine Results	Whether the biological samples tested positive for cocaine (including powder and crack), coded as 2 for positive, 1 for negative, 0 for invalid, -1 Information not collected, -2 Information not accessible, -4 Information missing, -5 Not Applicable/Skipped
13	BIOOPI	Opioid Results	Whether the biological samples tested positive for opioids (including heroin, fentanyl, prescription drug misuse, and illegal methadone), coded as 2 for positive, 1 for negative, 0 for invalid, -1 Information not collected, -2 Information not accessible, -4 Information missing, -5 Not Applicable/Skipped
14	BIOOTH	Other Drug Results	Whether the biological samples tested positive for other drugs (anyhing other than alcohol, amphetamine, cannabis, cocaine, or opioids) - coded as 2 for positive, 1 for negative, 0 for invalid, -1 Information not collected, -2 Information not accessible, -4 Information missing, -5 Not Applicable/Skipped
15	BIONT	Biological Testing Notes	Optional open text field for any other information; Can indicate types of tests done and/or any other substances used (e.g., K2) here.

	A	B	C
1	**Recidivism Data: Post Assignment** **(record first event and set of charges subsequent to date of youth enrollment in JDTC)**		
2	**Variable**	**Variable Label**	**Description**
3	XLYID	Local Youth ID	Local Youth ID - assigned by site to each unique youth in the site
4	R_CHRGCNTXT	Charge Event Context	For the charges being described, what is the context of the charges, coded as 1=arrest, 2=adjudication, 99=Other, -1 Information not collected, -2 Information not accessible, -4 Information missing
5	R_CHRGCNTXTDT	Charge Event Date	The Date (in MM/DD/YYYY format) of charge related event.
6	R_CHRGVO	Violent Charge	Violent offense against a person (including homicide, rape, robbery, aggravated assault, simple assault, other violent sex offenses), coded as 1=yes, 0=no, -1 Information not collected, -2 Information not accessible, -4 Information missing
7	R_CHRGPO	Property Charge	Property offense (including burglary, larceny-theft, motor vehicle, theft, arson, vandalism, trespassing, shoplifting), coded as 1=yes, 0=no, -1 Information not collected, -2 Information not accessible, -4 Information missing
8	R_CHRGAOD	AOD Related Charge	Alcohol or drug law violations (including driving under the influence, distribution, manufacture, public intoxication, possession), coded as 1=yes, 0=no, -1 Information not collected, -2 Information not accessible, -4 Information missing
9	R_CHRGPPV	Porb or Parole Violation	Probation or parole violations, coded as 1=yes, 0=no, -1 Information not collected, -2 Information not accessible, -4 Information missing
10	R_CHRGWO	Weapons Offense	Weapons offenses, coded as 1=yes, 0=no, -1 Information not collected, -2 Information not accessible, -4 Information missing
11	R_CHRGOSO	Other Status Offense	Other status offenses, coded as 1=yes, 0=no, -1 Information not collected, -2 Information not accessible, -4 Information missing
12	R_CHRGOTH	Other Charges	Other charges (Please Specify in Notes), coded as 1=yes, 0=no, -1 Information not collected, -2 Information not accessible, -4 Information missing
13	R_CHRGMLEV	Charge Maximum Level	Charge Maximum Level, coded as 1=Felony, 2=Misdemeanor, 3=Summary/Citation, 4=Status, 99=Other, -1 Information not collected, -2 Information not accessible, -4 Information missing, -5 Not Applicable/Skipped
14	R_XADJDT	Adjudication Date	The Date (in MM/DD/YYYY format) of an adjudication hearing or disposition of case for the current JJ referral.

This resource was prepared by the author(s) using Federal funds provided by the U.S. Department of Justice. Opinions or points of view expressed are those of the author(s) and do not necessarily reflect the official position or policies of the U.S. Department of Justice.

	A	B	C
1	**Recidivism Data: Post Assignment** **(record first event and set of charges subsequent to date of youth enrollment in JDTC)**		
2	**Variable**	**Variable Label**	**Description**
15	R_XADJFLG	Adjudicated Delinquent Flag	Whether youth was adjudicated delinquent, coded as 0 if no, 1 if yes (adjudicated delinquent), 2 if case is still pending, -1 Information not collected, -2 Information not accessible, -4 Information missing, -5 Not Applicable/Skipped
16	R_XADJCHRGLEV	Adjudication Maximum Charge Level	Charge Maximum Level of these new charges youth was adjudicated delinquent for (if any), coded as 1=Felony, 2=Misdemeanor, 3=Summary/Citation, 4=Status, 99=Other, -1 Information not collected, -2 Information not accessible, -4 Information missing, -5 Not Applicable/Skipped
17	R_CHRGNT	Charge Notes	Open text field to enter information on local charges

	A	B
1	**[Lists of values below are used in validation for the forms or data and/or for syntax. These are the cross-site codes onto which local system codes (which will vary) should be mapped onto. You may add more if needed.]**	
2		
3	**List A value label list: Type of Screeners\[a] or Clinical Assessments\[b] where those in blue are typically used ONLY for assessment (not a screener)**	
4	**Value**	**Value Label**
5	0	Not screened or assessed
6	1	1 Our agency uses a local measure we created or borrowed from another agency
7	2	2 Addiction Severity Index (ASI)
8	3	3 Adolescent Alcohol and Drug Involvement Scale (AADIS)
9	4	4 Adolescent Drinking Index (ADI)
10	5	5 Adolescent Drug Abuse Diagnosis (ADAD) instrument
11	6	6 Adolescent Obsessive Compulsive Drinking Scale (A-OCDS)
12	7	7 Assessment of Substance Misuse in Adolescence (ASMA)
13	8	8 Behavioral and Emotional Rating Scale (BERS)
14	9	9 Brief Symptom Inventory (BSI)
15	10	10 CAGE (Cut-down, Annoyed, Guilty, Eye-opener)
16	11	11 Child and Adolescent Functional Assessment Scale
17	12	12 Child and Adolescent Needs and Strengths (CANS)
18	13	13 Child and Adolescent Services Assessment (CASA)
19	14	14 Composite International Diagnostic Interview (CIDI)
20	15	15 Comprehensive Adolescent Severity Index (CASI)
21	16	16 CRAFFT (Car, Relax, Alone, Forget, Friends, Trouble)
22	17	17 Diagnostic Interview for Children and Adolescents (DICA)
23	18	18 DISC - Predictive Scales (DPS)
24	19	19 DISC - Other scales
25	20	20 Drug Abuse Screening Test (DAST)
26	21	21 Drug Abuse Screening Test–Adolescents (DAST-A)
27	22	22 Fagerstorm Test for Nicotine Dependence (FTND)
28	23	23 Global Appraisal of Individual Needs–Initial (GAIN-I)
29	24	24 Global Appraisal of Individual Needs–Quick Version 3 (GAIN-Q3)
30	25	25 Global Appraisal of Individual Needs–Short Screener (GAIN-SS)
31	26	26 Hooked on Nicotine Checklist (HONC)
32	27	27 Jesness Inventory-Revised (JI-R)
33	28	28 Kiddie-Schedule for Affective Disorders and Schizophrenia (Kiddie-SADS)
34	29	29 Massachusetts Youth Screening Instrument-2 (MAYSI-2)
35	30	30 Michigan Alcoholism Screening Test (MAST)
36	31	31 Millon Adolescent Clinical Inventory (MACI)
37	32	32 Millon Adolescent Personality Inventory (MAPI)
38	33	33 Millon Clinical Multiaxial Inventory-III (MCMI-III)
39	34	34 Minnesota Multiphasic Personality Inventory-Adolescent (MMPI-A)
40	35	35 Ohio Youth Assessment System (OYAS)
41	36	36 Practical Adolescent Dual Diagnostic Interview (PADDI)

	A	B
4	**Value**	**Value Label**
42	37	37 Pediatric Symptom Checklist (PSC-35)
43	38	38 Personal Experience Inventory (PEI)
44	39	39 Personal Experience Screening Questionnaire (PESQ)
45	40	40 Personality Inventory for Youth (PIY)
46	41	41 Problem Oriented Screening Inventory for Teenagers (POSIT)
47	42	42 Profiles of Student Life: Attitudes and Behaviors (PSL-AB)
48	43	43 Psychiatric Research Interview for Substance and Mental Disorders (PRISM)
49	44	44 Rutgers Alcohol Problem Index (RAPI)
50	45	45 Scales for Predicting Successful Inclusion (SPSI)
51	46	46 Schedules for Clinical Assessment in Neuropsychiatry (SCAN)
52	47	47 Strengths and Difficulties Questionnaire (SDQ)
53	48	48 Structured Clinical Interview for DSM-IV (SCID)
54	49	49 Substance Abuse Subtle Screening Inventory (SASSI)
55	50	50 Symptom Checklist-90-Revised (SCL-90R)
56	51	51 TCU Criminal Thinking Scales (TCU CTS)
57	52	52 TCU Drug Screen II (TCUDS)
58	53	53 TCU HIV/Hepatitis Risk Form (TCU HVHPF)
59	54	54 Teen Addiction Severity Index (T-ASI)
60	55	55 Youth Self-Report (YSR)
61	99	99 Other standardized instruments related to substance use, HIV or other behavioral health problems or combinations of instruments (please specify in notes field)
62	-1	-1 Information Not Collected
63	-2	-2 Information Not Accessible
64	-4	-4 Information Missing
65	-5	-5 Not Applicable/Skipped
66	\a	A screening instrument is a relatively brief standard set of questions designed to identify youth who may be at high risk of having disorders that warrant brief intervention, more comprehensive assessment, or immediate referral for treatment. It does not require professional staff to administer, but may need professional staff to interpret.
67	\b	Formal clinical assessments are more comprehensive and multidimensional than screening instruments and are designed to support diagnosis, placement and treatment planning related to substance use disorders, HIV risk, and mental health disorders. Formal clinical assessments are typically conducted by trained professionals.
68		
69		
70	**List B value label list: Type of Substance Use Treatment, where those in Blue are typically used to also treat co-occurring mental health**	
71	**Value**	**Value Label**
72	0	0 No substance use treatment provided
73	1	1 Locally developed treatment program(s)
74	11	11 Adolescent Community Reinforcement Approach (A-CRA)
75	12	12 Adolescent Portable Therapy (APT)
76	13	13 Assertive Continuing Care (ACC)
77	14	14 Behavior Management through Adventure

This resource was prepared by the author(s) using Federal funds provided by the U.S. Department of Justice. Opinions or points of view expressed are those of the author(s) and do not necessarily reflect the official position or policies of the U.S. Department of Justice.

	A	B
4	**Value**	**Value Label**
78	15	15 Brief Strategic Family Therapy (BSFT)
79	16	16 Chestnut Health Systems Outpatient (CHS-OP)
80	17	17 Cognitive Behavior Therapy (CBT) w/o MET
81	18	18 Contingency Management /Motivational Incentives
82	19	19 Family Behavior Therapy (FBT)
83	20	20 Functional Family Therapy (FFT)
84	21	21 Family Matters
85	22	22 Family Support Network (FSN)
86	23	23 Mapping Enhanced Counseling (MEC)
87	24	24 Marijuana Checkup
88	25	25 Motivational Enhancement Therapy with Cognitive Behavior Therapy (MET/CBT)
89	26	26 Motivational Enhancement Therapy (MET) w/o CBT
90	27	27 Motivational Interviewing (MI)
91	28	28 Multidimensional Family Therapy (MDFT)
92	29	29 Multidimensional Treatment Foster Care (MTFC)
93	30	30 Multisystemic Therapy (MST)
94	31	31 Not On Tobacco (N-O-T)
95	32	32 Operation New Hope (aka Lifeskills ’95)
96	33	33 Parenting with Love and Limits (PLL)
97	34	34 Phoenix House Academy
98	35	35 Project ASSERT (Alcohol and Substance Abuse Services Education and Referral to Treatment)
99	36	36 Residential Student Assistance Program (RSAP)
100	37	37 Seeking Safety
101	38	38 Seven Challenges (7C)
102	39	39 Teen Intervene
103	99	99 Other substance use treatment program(s) (Please describe in notes)
104	-1	-1 Information Not Collected
105	-2	-2 Information Not Accessible
106	-4	-4 Information Missing
107	-5	-5 Not Applicable/Skipped
108		
109	**List C value label list: Type of Recidivism Risk Assessment**	
110	**Value**	**Value Label**
111	0	0 Site does NOT determine risk of recidivism
112	1	1 Staff rating based on their professional experience
113	2	2 Type of offense
114	3	3 Locally created measure
115	4	4 Council of Juvenile Correction Administrators (CJCA) Standards
116	5	5 Correctional Offender Management Profiling for Alternative Sanctions (COMPAS)
117	6	6 Global Appraisal of Individual Needs (GAIN)
118	7	7 Joint Risk Matrix (JRM)
119	8	8 Level of Service Inventory Revised (LSI-R)
120	9	9 North Carolina Assessment of Risk (NCAR)
121	10	10 Orange County Risk Assessment (OCRA)

	A	B
4	**Value**	**Value Label**
122	11	11 Positive Achievement Change Tool (PACT)
123	12	12 Psychopathy Check List Revised (PCL-R)
124	13	13 Psychopathy Checklist – Youth Version (PCL-YV)
125	14	14 Washington State Juvenile Court Assessment (WSJCA)
126	15	15 Youth Assessment Screening Instrument (YASI)
127	16	16 Youth Level of Service/Case Management Inventory (YLS/CMI)
128	17	17 Juvenile Assessment and Intervention System (JAIS)
129	99	99 Other measure (Please specify in notes)
130	-1	-1 Information Not Collected
131	-2	-2 Information Not Accessible
132	-4	-4 Information Missing
133	-5	-5 Not Applicable/Skipped
134		
135		
136		
137	**Program Discharge Status**	
138	0	Still in treatment.
139	1	Completed treatment and discharged to the community.
140	21	Internal transfer to the next level of care for substance abuse treatment within the same agency.
141	22	External referral to the substance abuse treatment program in another agency.
142	23	Transfer to medical treatment.
143	24	Transfer to psychiatric care.
144	25	Transfer to juvenile justice/criminal justice agency.
145	26	Other transfers.
146	31	At staff request/disciplinary.
147	41	Against medical advice - Away without leave or runaway.
148	42	Against medical advice - individual or family choice.
149	43	Against medical advice - insurance or benefit.
150	44	Against medical advice - juvenile justice/criminal justice agency request.
151	45	Against medical advice - transfer to other agency request.
152	97	Death.
153	98	Unspecified or unknown.
154	99	Other
155		
156		

This resource was prepared by the author(s) using Federal funds provided by the U.S. Department of Justice. Opinions or points of view expressed are those of the author(s) and do not necessarily reflect the official position or policies of the U.S. Department of Justice.