

Kansas Detention Assessment Instrument Validation Report

The Crime and Justice Institute

August 2024

EXECUTIVE SUMMARY

At the request of the Kansas Department of Corrections (KDOC), Division of Juvenile Justice Services and Office of Judicial Administration (OJA), the Crime and Justice Institute (CJI) conducted a validation study of the Kansas Detention Assessment Instrument (KDAI) risk assessment. This is the first validation of the KDAI and CJI worked with the KDOC and OJA to obtain accurate and reliable data for the study. Ordinarily, a validation of a pre-adjudicatory risk assessment involves determining how well the risk assessment predicts two types of behavior: 1) new offending during the pre-adjudicatory release period and 2) failure to appear (FTA) at future court hearings. However, in Kansas FTA data is not currently collected and could not be provided for this validation. Thus, this validation could only assess the ability of the KDAI to predict new delinquent activity likelihood among youth released pre-adjudication. CJI aimed to answer two related research questions during the validation analysis to test the predictive ability of the risk assessment.

1. Is the KDAI a valid instrument for predicting new delinquent activity among youth released pre-adjudication?
2. Does the KDAI consistently predict the risk of new delinquent activity during the pre-adjudicatory period for various subgroups?

This executive summary is not intended for consumption independent of comprehensively reviewing the entirety of the full validation report. Information in the full validation report details the KDAI administration practices, development of assessment instruments, validation methodology, analysis findings, limitations, considerations for improvements. Suggested next steps for implementation are provided in the subsequent sections; and offer essential context to supplement this executive summary.

The validation process included multiple analyses of KDOC and OJA data to determine the ability of the KDAI to predict new delinquent activity likelihood among youth released pre-adjudication. Based on the data provided by KDOC and OJA, the results indicated that the KDAI is not predicting new delinquent activity likelihood among youth released pre-adjudication; and therefore, the KDAI is not operating as designed. Data limitations likely impacted the validation results, demonstrating a need for improved data collection and entry procedures related to KDAI administration. More specifically, CJI was unable to examine some predictors due to missing data, such as total risk score, post-assessment final placement decision, and indication of whether the KDAI placement recommendation was followed, as well as data discrepancies. The full validation report includes specific considerations for improving the design of the Kansas Detention Assessment Instrument (KDAI) and related procedures to strengthen the KDAI's operation and predictive validity. In addition, the full report highlights recommended next steps for implementation of the KDAI.

Sampling of Validation Results

After analyzing data from calendar year 2017 to 2023, provided by KDOC and OJA, CJI found:

- **Only one domain of the KDAI (Domain 4 – prior adjudications/closed cases) accurately predicts new delinquent activity likelihood among youth released pre-adjudication.** Thus, based on the available data, the KDAI itself is not operating as designed – it does not offer a prediction of new delinquency risk among youth released during the pre-adjudicatory period.
- **KDAI Domain 4 (prior adjudications/closed cases) is also a predictor of new delinquent activity likelihood among gender and race subgroups; however, the validation results demonstrate some inconsistency in the prediction of new delinquency risk for gender and race subgroups.** The predictive effect is stronger for boys and Black youth than girls and white youth, respectively.

Recommended Next Steps

- **Reestablish the KDAI Steering Committee to oversee and guide next steps to improve and implement the KDAI.** The KDAI Steering Committee was initially established when the KDAI was developed and provided recommendations to specific stakeholders and work groups within the Steering Committee to implement activities related to the KDAI. Due to inactivity and staffing changes, new membership will be required to establish the Steering Committee. Membership should include representatives from Kansas Department of Corrections (KDOC) and Office of Judicial Administration (OJA), and if possible, include representatives from local jurisdictions that are able to provide perspectives from staff who are responsible for administering the KDAI. Steering Committee members should review considerations provided in this report, identify a specific action plan for making improvements, collaborate with state agencies and local jurisdictions for implementing improvements, and plan for ongoing oversight of KDAI implementation and a future validation.
- **Design a strategy for making needed improvements.** After reviewing the considerations provided in this validation report, those overseeing next steps in implementing the KDAI should come to consensus on which considerations to adopt and develop a plan for moving forward. This plan should outline the necessary activities associated with each consideration, assign certain tasks to specific agencies responsible for making the improvements, and include target dates for completing the work. The strategies utilized to address needed improvements should focus on evidence-based practices and fidelity and should strive to increase consistency across practices statewide.
- **Disseminate information related to KDAI improvements to stakeholders and develop a statewide training protocol.** It will be important to communicate with stakeholders regarding any changes in the KDAI design or procedure. Communications should clearly convey to stakeholders, a) what change is being made, b) why the change is necessary, c) how to correctly implement the change moving forward, and d) plans for retraining/training stakeholders. To sustain training efforts over time it is crucial to develop a training protocol which documents training requirements for new staff, a schedule for booster trainings, and any guidelines for providing coaching.
- **Develop an ongoing quality assurance process for continuous monitoring of the KDAI.** Finally, the next steps described above should not be treated as a one-time occurrence; to maintain fidelity in implementing the KDAI, ongoing monitoring is essential. An effective quality assurance process should include a process for assessing inter-rater reliability, a schedule for reviewing data, and an evaluation of practices and assessment of the instrument's administration. In addition, this process should identify dates for future validations, and determine a communication process to routinely address and troubleshoot challenges, including continuing to ensure clarification is provided around how the KDAI is used, how it's administered and how KDAI results can be used to inform detention recommendations.

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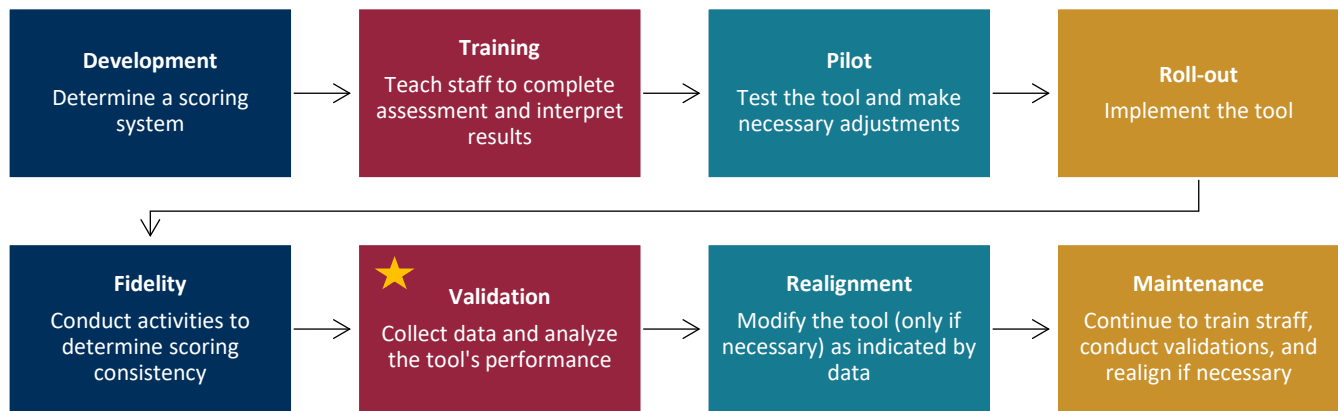
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INTRODUCTION

Background

The Kansas Detention Assessment Instrument (KDAI) was initially rolled-out statewide in 2017 but the origins of the assessment date back to around 2010, having been modified from the previously used Detention Risk Assessment Instrument (DRAI). While this process, and supporting documents such as training materials, reference guides and the KDAI scoring guide, provide detailed information about how the KDAI is used across Kansas, information around the assessment’s origination is limited and little is known about the reasoning behind KDAI scoring ranges and corresponding decisions for detention or release.

Understanding more about the development of the KDAI may provide additional context around the considerations for improvement outlined in this report. However, in absence of this information, it is important to understand the general timeline for developing an assessment and to take into consideration how validation supports the overall implementation of the KDAI. Regardless of methods used to develop this assessment, all assessments should follow a similar process of implementation, evaluation, and maintenance to ensure that the tool becomes or remains evidence-based. The chart below shows the various phases required to develop a valid, evidence-based assessment.



Individual activities throughout **development phase** differ depending on the exact methods used to develop each assessment, however the remaining phases of the implementation process are generally consistent regardless of differing methods. The **training phase** ensures that all relevant administrators and staff are informed about the purpose of the assessment, and how to complete it and interpret the results. The **pilot phase** allows the tool to be tested, ensuring that potential issues are identified and mitigated prior to rollout. The **fidelity phase** assesses whether staff are scoring the assessment accurately, where there are areas for improvement, and where staff might benefit from additional training.

The next phase is **validation**, which is a collection of analysis methods that determine whether an assessment is predictive of the designated outcomes for a jurisdiction’s population. A comprehensive validation analysis will consider not only the predictiveness of the tool for the overall population assessed, but also for various subgroups (race, ethnicity, and gender). Validations also consider other quantitative and qualitative contexts, such as scoring fidelity, policies and practices, and demographic shifts in population during the data collection period. These contexts may impact the validity of the tool and should be used to inform whether changes to the tool itself are necessary, or if additional training or changes to policies surrounding the tool should instead be considered.

Validation is a key factor in administering the KDAI and ensuring its accuracy in supporting decision making. The findings presented in this report are intended to inform the next phases in this process: realignment and maintenance. **Realignment** involves making modifications, where necessary, and implementing any changes that will increase the validity of the tool based on validation results. **Maintenance** is an ongoing process that should occur throughout the life of the assessment.

Technical Assistance and Validation Overview

The Crime and Justice Institute (CJI) has been providing technical assistance to the state of Kansas, since the passage of the 2016 Senate Bill 367 (SB 367), the landmark legislation that re-envisioned the youth justice system in Kansas. SB 367 aimed to reduce detention and limit out of home placement for justice-involved youth and increase practices focused on evidence-based community supervision and treatment to reduce youth's likelihood of reoffending and increase public safety. Research overwhelmingly indicates that justice-involved youth who receive interventions in the community have more successful outcomes than youth who are removed from their homes and placed in detention or other out of home placements.¹

With growing understanding of this research, youth justice systems nationwide have increased their use of assessments to better inform decision-making, such as determining if youth have criminogenic needs² that can be addressed through services or programming in the community, or whether a youth is at risk of reoffending or failing to appear in court, and thus removing them from the community is necessary. Under SB 367, jurisdictions were required to develop, implement, and validate a statewide detention risk assessment and expand alternatives to detention.

Prior to SB 367, (dating back to 2010) the Kansas Department of Corrections (KDOC) and Office of Judicial Administration (OJA), in partnership with the Annie E. Casey Foundation, developed a version of a detention risk assessment (the DRAI as previously described) and piloted the tool amongst seven jurisdictions. Following the passage of SB 367, the DRAI was modified into the KDAI and has been rolled-out for statewide use. KDOC and Office of Judicial Administration (OJA), with technical assistance from CJI, developed trainings to support the administration of the KDAI and focused efforts on ensuring fidelity in KDAI practices.

In 2021, the KDOC and OJA, requested that CJI provide technical assistance and conduct the first validation study of the KDAI to determine if the assessment predicts new delinquent activity and failure to appear for youth released during the pre-adjudicatory period. In early 2023, CJI partnered with KDOC and OJA to validate the KDAI.

In March 2024, CJI shared general findings from the validation study with both KDOC and OJA. This report provides the full findings from the validation, includes considerations for making improvements, and offers suggested next steps as Kansas continues working towards its goals of improving services and outcomes for justice-involved youth.

¹ Sarah Cusworth and Jerald R. Herting, "The Impact of Pretrial Juvenile Detention on 12-Month Recidivism: A Matched Comparison Study," *Crime & Delinquency*, no. 66 (2020), <https://doi.org/10.1177/0011128720926115>.

² Criminogenic needs are risk factors associated with the likelihood of engaging in delinquent activity, including prior and current offenses/adjudications; family circumstances and relations; education and employment; peer relations; substance abuse; leisure and recreation; personality and behavior; and attitudes and orientation.

Administration of the KDAI

The KDAI is required statewide, but practices may vary between counties. The following describes how the KDAI is generally administered, though there may be differences in certain practices across counties.

The KDAI is administered to all youth, ages 10 to 17, who have allegedly engaged in delinquent activity or were brought to a Juvenile Intake and Assessment Center (JIAC) due to a warrant or violation of a court order. JIAC staff use the KDAI to determine if youth should be placed in detention pre-adjudication or remain in the community awaiting their next hearing. This determination is made by assessing the youth's likelihood to engage in new delinquent activity (their risk of reoffending) and their risk of failing to appear (FTA) for an adjudication hearing if they remain in the community. For each youth, JIAC staff complete the KDAI scoring guide (see complete KDAI scoring guide in [Appendix A](#)) and input information across five domains.

The five domains of the KDAI include information related to the youth's most serious offense, their current supervision status, any history of FTA or running away, any prior adjudications or closed cases, and consideration of any mitigating factors. Each domain is associated with a specific number of points which are totaled to develop an overall score. A higher total score should be associated with a higher likelihood that the youth may engage in new delinquent activity and that there is a high risk of FTA, whereas a lower score should indicate a lower likelihood of engaging in delinquent activity and low risk of FTA.

Typically, youth who receive a high score are recommended for detention, while youth who receive a low score may remain in the community. Mandatory detention is required in certain circumstances for youth who qualify as "special detention cases".³ Regardless of responses provided for any domain in the KDAI, these youth must be placed in detention. The table below provides the Total KDAI Score and Risk Level associated with each recommended decision.

KDAI Total Score	KDAI Risk Level	Recommended Decision
Special detention case		Detention (regardless of total score or risk level)
14 or higher	High risk	Detention
8 to 13	Moderate risk	Recommend release with restrictions ⁴ and/or seek alternative placement ⁵ options
7 or lower	Low risk	Recommend release without restrictions

Once the KDAI is completed, a judge either approves the recommendation (to detain or to release) or determines that an "override" is necessary. An "override" means that the recommended decision was not followed; and this

³ Cases eligible for "special detention" include a mandatory detention warrant for a probation violation, a specific probable cause, a failure to appear, or an out-of-state warrant; a violation of a valid court order in a Child in Need of Care (CINC) case; an out of state absconder or youth who has run away; or a youth who is alleged to have committed a felony against a person and is a documented gang member.

⁴ Restrictions are determined on a case-by-case basis and may require the youth to adhere to a curfew, to avoid contact with specific people to follow a specified plan.

⁵ Alternative placement options vary across counties and may include home detention, electronic monitoring or supervision, reporting centers, residing with a designated adult, shelter or foster care.

can be made for a number of reasons.⁶ All override reasons must be documented on each youth's KDAI scoring guide, including a narrative further explaining any reasons.

Finally, data pertaining to each administered KDAI, including decisions made about overrides, are uploaded to case management and data collection systems maintained by the KDOC and OJA. These data are used to review practices, collect information about trends in the justice-involved youth population, and more recently, were shared with CJJ to conduct the current validation assessment. As will be explained in later sections of this report, there are discrepancies or missing information both regarding information collected for the KDAI and what or how information is included in data entry.

VALIDATION

The purpose of this validation study is to determine how well the Kansas Detention Assessment Instrument (KDAI) predicts intended pre-adjudicatory release outcomes for justice-involved youth in Kansas. Ordinarily, a validation of a pre-adjudicatory risk assessment involves determining how well the risk assessment predicts two types of behavior: 1) new offending during the pre-adjudicatory release period and 2) failure to appear (FTA) at future court hearings. However, in Kansas FTA data is not currently collected and could not be provided for this validation. Thus, this validation could only assess the ability of the KDAI to predict new delinquent activity likelihood among youth released pre-adjudication. CJJ used a series of statistical tests to answer two related research questions (listed below), which were designed to test the predictive ability of the risk assessment.

1. Is the KDAI a valid instrument for predicting new delinquent activity among youth released pre-adjudication?^{7,8}
2. Does the KDAI consistently predict the risk of new delinquent activity during the pre-adjudicatory period for various subgroups?

CJJ used two statistical tests to answer the research questions: 1) **area under the curve-receiver operating characteristic (AUC-ROC)**, and 2) **multivariate logistic regression**. Descriptions of these analyses are included in [Appendix B](#). To be considered a valid instrument for predicting risk of offending during the pre-adjudicatory release period, the results of validation analyses must be statistically significant, meaning there is evidence to show that a reliable or meaningful relationship exists between KDAI scores and new delinquent activity, and that the findings are not random or due to chance. In other words, the relationships between KDAI factors and new delinquent activity must be consistently related, so that if such relationships were tested repeatedly with different samples of people, the results would be the same. The results must also meet certain thresholds for minimum effect size, meaning AUC-ROC scores should reach 0.5 to demonstrate any predictive ability and regression coefficients should reflect a positive relationship between KDAI factors and new delinquent activity likelihood. Results for all statistical tests are listed in [Appendix C](#).

⁶ An override may be made by judicial discretion for reasons including: no appropriate alternative available; release for out of state youth; holds for the Immigration and Customs Enforcement; parental refusal to take custody; gang motivated/associated offenses; no available parent or guardian available to take custody; if the victim resides in the home; to place the youth in an alternative option; due to medical or psychiatric needs that are better served with an alternative option. The full list and explanations of override reasons are included in appendix A.

⁷ New delinquent activity is defined as an offense date that occurs after the date of intake but before the final disposition date.

⁸ Originally, the validation also aimed to test whether the Kansas Detention Assessment Instrument is a valid instrument for predicting failure to appear for youth released pre-adjudication. However, neither the Kansas Department of Corrections nor Office of Judicial Administration were able to provide failure to appear data.

Data Preparation

The first step in the validation process was to prepare the data to be used in the analysis. To do this, CJI merged the Kansas Department of Corrections (KDOC) data with the Office of Judicial Administration (OJA) data, as files from each agency were provided separately and included different information vital to the analysis. For example, the KDOC data did not include information about new delinquent activity among youth released pre-adjudication; however, this information was obtainable from OJA. The data were merged by matching youth present in both KDOC's and OJA's data via a unique identifier where available and a combination of name and gender when a unique identifier was not available.

Sample Criteria

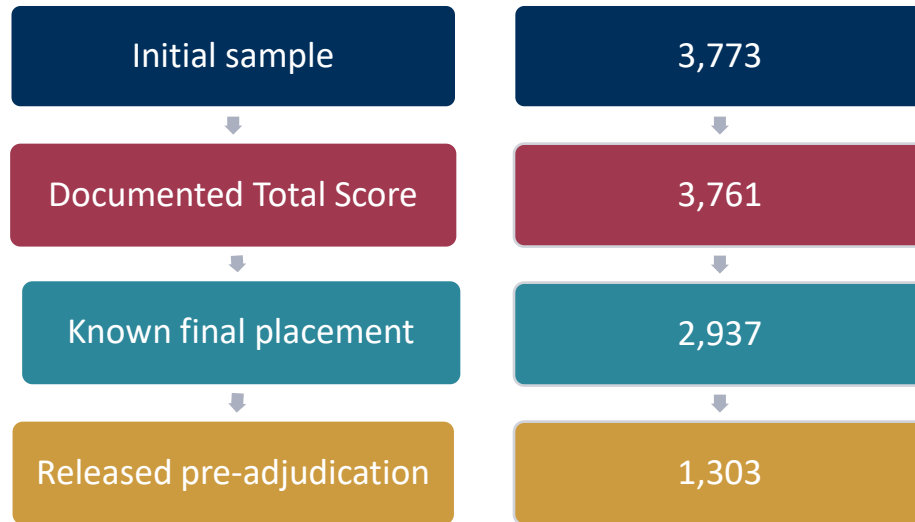
After preparing the data files, the next step in the validation process was to narrow the population to youth who were eligible for the validation. Specifically, youth who met all the following criteria were included in the validation:

1. Received a risk assessment using the KDAI,
2. Had an intake date between 2017 and 2023 and had a disposition date (i.e., the case was disposed),
3. Had a documented total risk score for the risk assessment,
4. Had a known placement documented post risk assessment, and
5. Were released (i.e., not detained) during the pre-adjudication period. Youth who are detained do not have the opportunity to engage in new delinquent activity in the community.

Of the initial sample of 3,773 youth who received a risk assessment using the KDAI, had an intake date between 2017 and 2023, and whose cases were disposed (i.e., meeting criteria one and two), 12 youth did not have known total risk scores on the risk assessment, 824 youth did not have a known final placement documented in the data⁹ (i.e., their final placement was missing or undocumented), and 1,634 youth had a final placement of detention and were therefore excluded from the analyses. Among youth with documented total risk scores and with known final placements (2,937 youth), 44 percent were released (versus 56 percent detained). Per **Figure 1**, there were 1,303 youth within the study timeframe that met the validation criteria.

⁹ The KDOC could not confirm final placements for the 824 youth that had missing placement information. Thus, to maintain the integrity of the analysis, those youth were excluded because it could not be confirmed whether they were released or detained pre-adjudication.

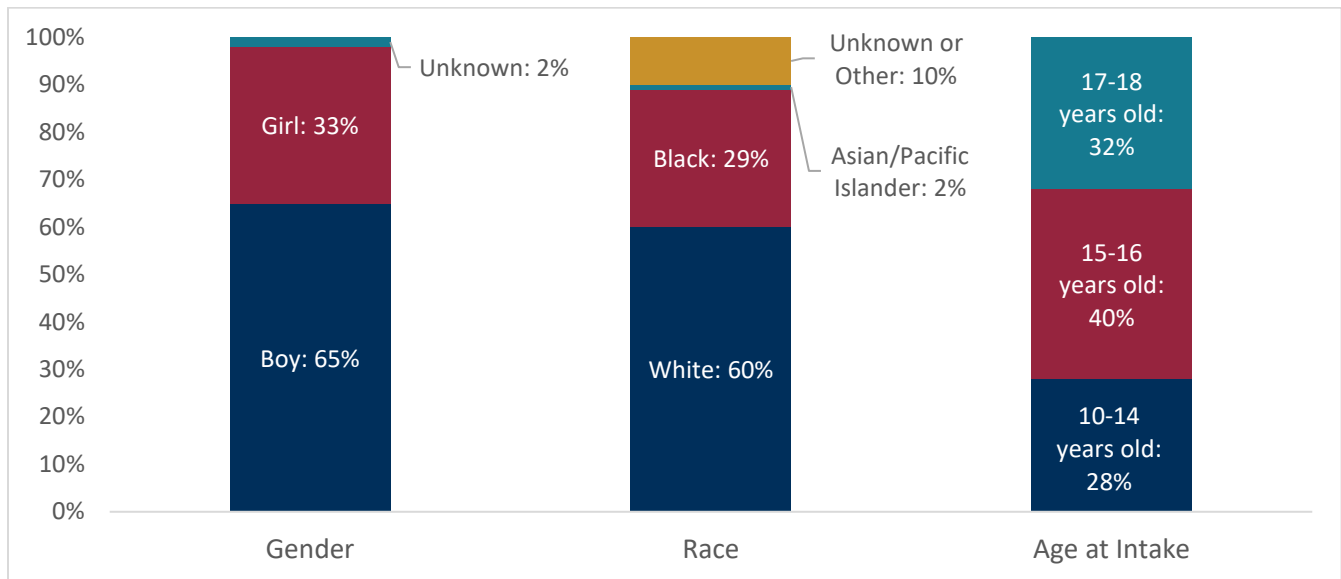
Figure 1: Process to Obtain the Final Validation Sample



Sample Statistics

Figure 2 displays the demographic makeup of the final sample. Most youth in the sample were male (65 percent), white (60 percent), and between 15 and 17 years old at intake (72 percent).^{10,11}

Figure 2: Demographic Makeup of the Final Validation Sample (N=1,303)



¹⁰ The average age at intake was 16. Approximately 1% of the final validation sample was 18. Based on individual ages, it appears that the reason some individuals are 18 is because they had a birthday right before their date of intake; for example, the highest individual age among the final validation sample of 1,303 is 18.01096, just slightly over 18.

¹¹ Per the KDOC Division of Juvenile Services, the maximum age of juvenile court jurisdiction in Kansas is 17 (see [https://www.doc.ks.gov/juvenile-services/library/basics/terms/view#:~:text=Juvenile%20offender%20\(JO\)%20%2D%20a,by%20the%20State%20of%20Kansas](https://www.doc.ks.gov/juvenile-services/library/basics/terms/view#:~:text=Juvenile%20offender%20(JO)%20%2D%20a,by%20the%20State%20of%20Kansas)). Therefore, some youth may have a history of delinquent and criminal charges. For more information on juvenile court jurisdiction, visit https://ojdp.ojp.gov/statistical-briefing-book/structure_process/faqs/qa04101.

Among the final sample of 1,303 youth, total risk assessment scores ranged from -2 to 22 and the median risk assessment score for the sample was three. Most youth were assessed as low risk (80 percent). The risk level recommendation (based on total risk score) was followed for 86 percent of the sample, while eight percent had their recommendation overridden.¹² Most youth in the sample were released without restrictions pre-adjudication (72 percent), and 11 percent of the sample were involved in new delinquent activity while released pre-adjudication.¹³

VALIDATION FINDINGS

To assess whether the assessment predicts risk of new delinquent activity while released pre-adjudication, CJI examined the relationship between new delinquent activity and specific factors of the Kansas Detention Assessment Instrument (KDAI), including:

- Domain 1: Most serious current offense
- Domain 2: Supervision status
- Domain 3: History of failure to appear/running away within the past 12 months
- Domain 4: Prior adjudications/closed cases
- Domain 5: Mitigating factors
- Total Risk Score
- Risk Level

The following section outlines key validation findings for each research question and provides considerations on how to use the results to improve outcomes.

Research Question 1: Is the Kansas Detention Assessment Instrument (KDAI) a valid instrument for predicting new delinquent activity among youth released pre-adjudication?

CJI used two approaches to test whether the KDAI is a valid instrument for predicting new delinquent activity among youth released pre-adjudication: the AUC-ROC and multivariate logistic regression. The **AUC-ROC** is used to determine if the KDAI predicts risk of new delinquent activity during the pre-adjudicatory release period. The AUC-ROC score generally varies from 0.5 to 1, with scores above 0.5 indicating any predictive capacity and higher scores indicating better performance.¹

Multivariate logistic regression analysis shows the relationship between KDAI factors and pre-adjudication outcomes when controlling for other factors such as demographics, charge severity, or case processing time. The results for this analysis are coefficients indicating a directional relationship between the KDAI factors and likelihood of new delinquent activity, where increases in KDAI factor scores may have a positive or negative relationship with new delinquent activity likelihood. Positive coefficients, indicating a positive relationship, indicate that as a KDAI factor score increases, new delinquent activity is more likely to occur; while negative coefficients, indicating a negative relationship indicate as a KDAI factor score increases, new delinquent activity is less likely to occur.

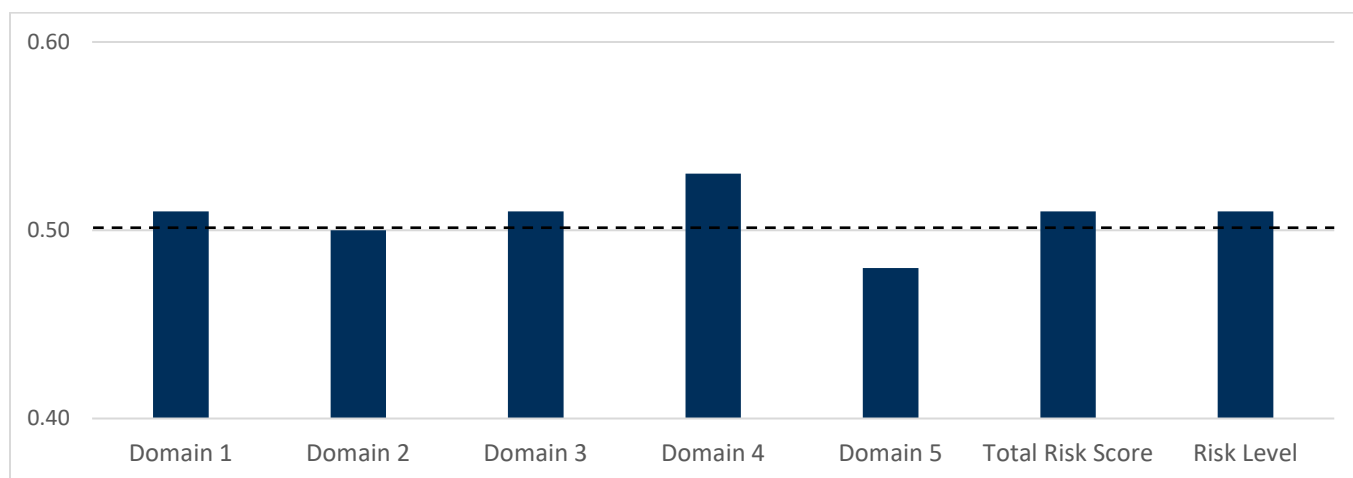
¹² For 6 percent of the sample, it was not documented whether the risk level recommendation was followed.

¹³ The data show that 14 percent of youth were released with restrictions (i.e., their releases were conditional upon meeting certain requirements during the pre-adjudicatory period). The remaining 14 percent of youth were released pre-adjudication, but it was unclear in the data whether their releases were conditional or without restrictions.

Per **Figure 3**, AUC-ROC scores range from 0.48 to 0.53. Domain 4 is the factor with the highest AUC-ROC score, indicating that Domain 4 is the most predictive factor of risk among all predictors tested. The magnitudes of these scores suggest that the other KDAI domains, the Total Risk Score, and the Risk Level either do not predict risk in the expected direction at all or demonstrate a predictive capacity that is less than fair.ⁱⁱ Overall, the AUC-ROC results show that the KDAI is not a valid predictor of new delinquent activity during the pre-adjudicatory release period.

Consistent with the AUC-ROC results, multivariate regression analyses show that Domain 4 is the only KDAI factor that predicts risk of new delinquent activity during the pre-adjudicatory release period. As Domain 4 scores increase, the likelihood of new delinquent activity during pre-adjudicatory release also increases. Multivariate results are consistent with bivariate correlation analyses (presented in **Appendix D**). This finding corresponds with risk assessment validation research demonstrating that delinquent and/or criminal history is a strong predictor of pre-adjudication release failure.ⁱⁱⁱ

Figure 3: AUC-ROC Scores for KDAI Factors and New Delinquent Activity



Note: The dashed line indicates any predictive capacity, which is an AUC-ROC score of 0.50. For more information on AUC-ROC performance benchmarks, see end note ii

Some factors displayed relationships with new delinquent activity risk in the opposite direction as would be expected for a valid risk assessment. These factors were Domain 2, Domain 5, and risk level. Data findings show that these factors all had negative relationships with new delinquent activity, suggesting that as youth are scored higher in Domain 2, Domain 5, or are assessed at higher levels of risk, they are *less likely* to offend during the pre-adjudicatory release period.¹⁴

Findings:

- Based on the data provided, the KDAI is not operating as designed and does not offer a valid instrument for predicting new delinquent activity risk among youth released during the pre-adjudicatory period, as Domain 4 is the only KDAI factor that predicts new delinquent activity risk.

¹⁴ Because the KDAI scores Domain 5 using negative numbers, “higher” Domain 5 scores mean that a youth was assessed as having fewer mitigating factors. See **Appendix A** for more information on KDAI scoring.

- Risk level is negatively correlated with new delinquent activity. This is not consistent with the direction of intentions of a pre-adjudication risk assessment. The finding indicates that Risk level does not appropriately reflect the risk of new delinquent activity.

Considerations:

- Revisit best practices and relevant research concerning new delinquency risk during pre-adjudicatory release to and determine specific needs for redesigning the KDAI. Such redesign may include dropping factors that are not predictive of new delinquent activity, reassigning points to risk factors so the total risk score is not biased by certain domains, and refocusing the tool on factors that are predictive of pre-adjudication release failure, especially delinquent and/or criminal history.
- Adjust the cut points¹⁵ of the total risk scores and realign risk levels with new delinquent activity outcomes, so that the risk levels and corresponding supervision practices appropriately reflect actual risk of pre-adjudication failure. To translate total risk scores to data-informed risk levels, consider a norming analysis. Norming is used to analyze both the number of risk levels and the cut points to maximize the correlation of a jurisdiction's risk levels with the risk of predicted pre-adjudication outcomes.
- Upon making the aforementioned adjustments as well as implementing adequate data collection and quality assurance procedures for at least one year, conduct future ongoing validations of the assessment.¹⁶

Research Question 2: Does the Kansas Detention Assessment Instrument (KDAI) consistently predict the risk of new delinquent activity during the pre-adjudicatory period for various subgroups?

CJI used two approaches to test whether the KDAI performs consistently for all demographic groups. First, we compare both AUC-ROC scores and multivariate regression results across different racial and gender groups. Second, we test potential **interaction effects using multivariate logistic regression analyses**. The test of interaction effects examines whether a change in assessed risk by KDAI indicates the same level of actual risk across demographic groups.

Gender

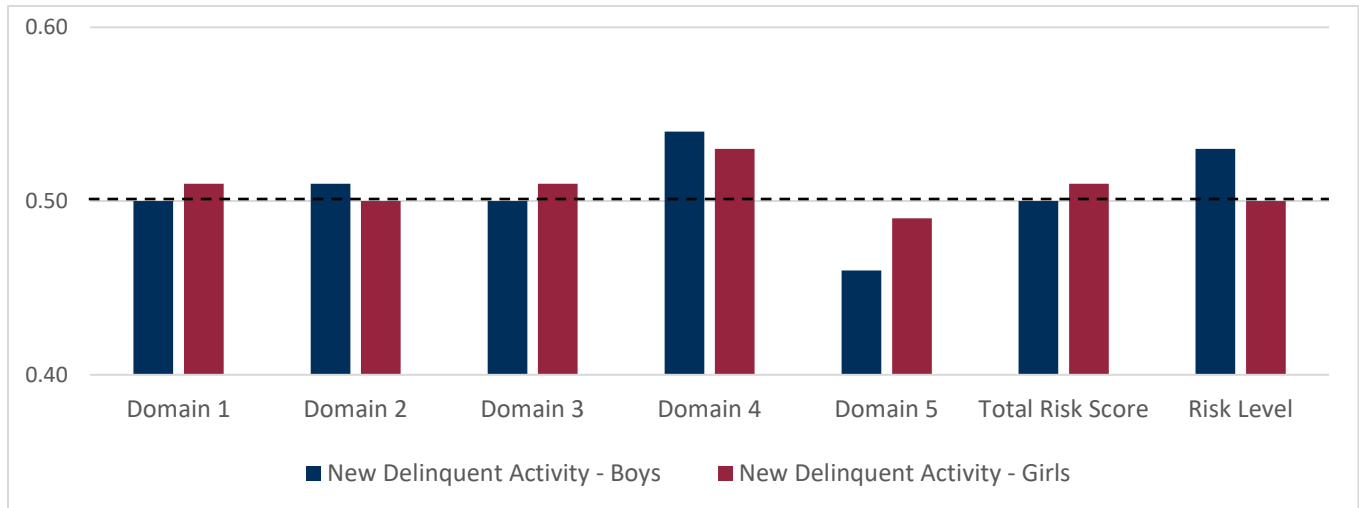
Consistent with the findings of the full population analyses, results show that Domain 4 is the only KDAI factor that predicts risk of new delinquent activity in the expected direction during the pre-adjudicatory release period for boys and girls. Notably, the relationship between certain domains and new delinquent activity are in the opposite direction as would be expected for a risk assessment. Specifically, as boys are scored higher in Domains 2, 3, and 5, they are *less likely* to offend during the pre-adjudicatory release period, and as girls are scored higher in Domains 1, 2, 5, or are assessed at higher levels of risk, they are *less likely* to offend during the pre-adjudicatory release period.

When it comes to inconsistencies in the performance of the assessment between boys and girls, results indicate that Domain 4 is a stronger predictor of new delinquent activity during pre-adjudicatory release for boys than girls, as shown in **Figure 4**. Multivariate regression analyses corroborate these results, as the coefficient for Domain 4 is of higher magnitude for boys than it is for girls.

¹⁵ Cut points are upper and lower bounds of a Total Risk Score corresponding with a Risk Level, where one level stops and another begins. For reference, the KDAI currently uses the following Total Risk Score cut points: 7 or below corresponding with Low Risk, 8 to 13 corresponding with Moderate Risk, and 14 or above corresponding with High Risk.

¹⁶ Considerations related to data collection and quality assurance are discussed further in the Limitations section.

Figure 4: AUC-ROC by Gender



Note: The dashed line indicates any predictive capacity, which is an AUC-ROC score of 0.50. For more information on AUC-ROC performance benchmarks, see end note ii

The AUC-ROC results also show pronounced gender differences for Domain 5 and Risk Level. Despite not reaching any predictive capacity, Domain 5 performs better for girls than boys. Risk level performs better for boys than girls, as the AUC-ROC score for girls just reaches any predictive capacity.

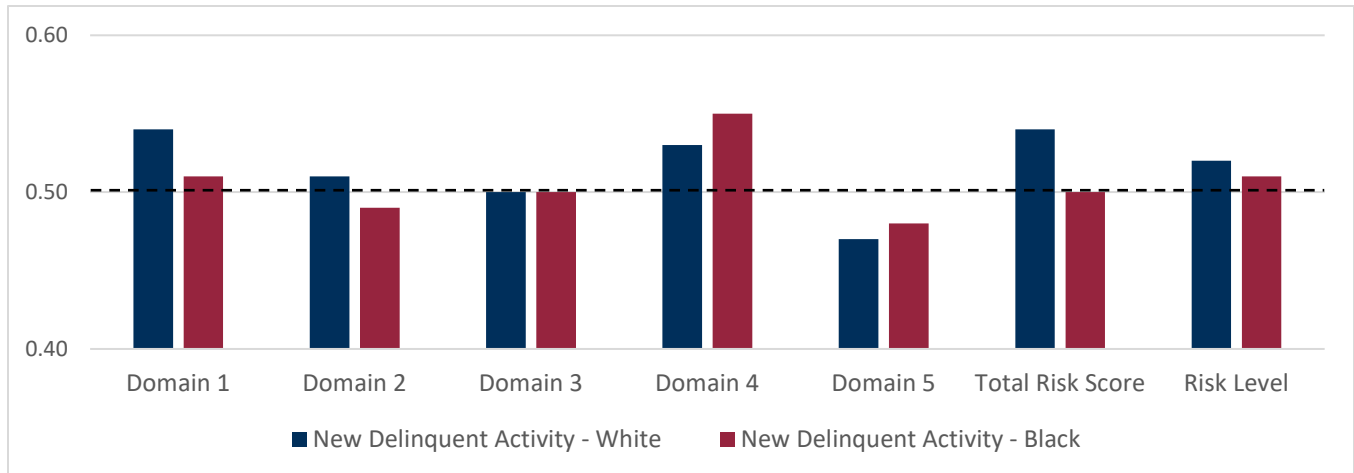
Race

The validation analysis compared two racial groups: white and Black.¹⁷ Consistent with previous findings, results show that Domain 4 is the only KDAI factor that predicts risk of new delinquent activity during the pre-adjudicatory release period for white and Black youth. Importantly, multivariate regression results show relationships between some KDAI factors and new delinquent activity risk for white and Black youth in the opposite direction as would be expected for a risk assessment. The results suggest that as white youth are scored higher in Domains 2, 3, and 5, they are *less likely* to offend during the pre-adjudicatory release period, and as Black youth are scored higher in Domains 2 and 5, they are *less likely* to offend during the pre-adjudicatory release period.

Pertaining to inconsistencies in the performance of the assessment across racial groups, results indicate that Domain 4 is a stronger predictor of new delinquent activity during pre-adjudicatory release for Black youth than white youth, as shown in **Figure 5**. Multivariate regression analyses corroborate these results, as the coefficient for Domain 4 is of higher magnitude for Black youth than it is for white youth.

¹⁷ While the data include information about ethnicity (Hispanic or Non-Hispanic), 63 percent of the sample did not have information documented for ethnicity.

Figure 5: AUC-ROC by Race



Note: The dashed line indicates any predictive capacity, which is an AUC-ROC score of 0.50. For more information on AUC-ROC performance benchmarks, see end note ii

Additionally, the AUC-ROC results also show pronounced race differences for Domain 1, Domain 2, Total Risk Score, and Risk Level. Each of these factors perform better for white youth than Black youth, with the most prominent differences in Domain 1 and Total Risk Score.

Findings:

- Consistent with previous findings, Domain 4 is the only KDAI factor that predicts risk of new delinquent activity during the pre-adjudicatory release period among demographic subgroups. Therefore, the KDAI itself is not a valid instrument for predicting new delinquent activity risk among youth of **any demographic group** released during the pre-adjudicatory period.
- While KDAI Domain 4 predicts new delinquent activity risk, the predictive effect is stronger for boys and Black youth than girls and white youth, respectively. Gender and race disparities in offending and adjudication histories may partially account for these inconsistencies.^{ivv}

Considerations:

- KDOC and OJA should revisit best practices and relevant research concerning new delinquency risk during pre-adjudicatory release to determine specific needs for redesigning the KDAI. A potential redesign should refocus the assessment on factors that are predictive of new delinquency risk while on pre-adjudicatory release. Upon revising the KDAI and as well as implementing adequate data collection and quality assurance procedures for at least one year, KDOC and OJA should regularly monitor whether the redesigned tool performs consistently across demographic groups.
- KDOC and OJA should continue investigating why Domain 4 (prior adjudications/closed cases) performs inconsistently across gender and racial groups and revise relevant risk factors accordingly. Specifically, KDOC and OJA may explore if there are systemic differences in past adjudication records between gender and racial groups, if the past adjudication records are captured consistently and reliably across gender and racial groups, and if the risk factors capture past adjudication records from a reasonable timeframe.

LIMITATIONS

There are important limitations to note for this validation. First, this validation originally aimed to test whether the Kansas Detention Assessment Instrument (KDAI) is a valid instrument for predicting failure to appear (in addition to new delinquent activity) for youth released pre-adjudication. However, **neither the Kansas Department of Corrections (KDOC) nor the Office of Judicial Administration (OJA) were able to provide failure to appear data.** Among people released pre-adjudication, whether they show up to future court dates is an important indicator of success for a pre-adjudication release tool.^{vi} Because failure to appear data could not be supplied, CJI was unable to examine if the KDAI predicts whether youth released pre-adjudication show up for future court dates.

As previously mentioned, another limitation was that 39 percent of youth had **undocumented or missing final placements in the data** and were excluded from the primary validation analyses as a result.¹⁸ Final placement information is critical to determining the validation sample, as youth who are detained do not have an opportunity to engage in new delinquent activity in the community nor should they miss future court dates since they are under the supervision of detention staff. The lack of documented information about the post-KDAI outcomes for these youth significantly limited the validation sample size. Furthermore, data inconsistencies between KDAI results and documented final placements resulted in the exclusion of some youth with final placements of detention, despite corresponding KDAI results indicating that they should have been released.¹⁹

The final limitation is that the **data lacked a common unique identifier** for youth between the KDOC and OJA. In this context, a unique identifier is a code associated with a youth that distinguishes that youth from all others in a database. This code can also be used to associate youth who are present across multiple databases. While CJI was able to link the data sources for the validation analysis with alternatives to a common unique identifier, it would benefit future validations to identify youth using the same unique identifier across data sources for more efficient data merging.

Considerations:

The following considerations offer strategies to address the limitations described above:

- Implement quality assurance procedures such as supervisor review to ensure that all relevant information is captured and documented upon administration of the KDAI for every youth. The amount of undocumented information was a significant limitation of this validation.
- Conduct regular training sessions to practice scoring the KDAI to ensure that total risk scores accurately reflect the sum of all domain scores. In the KDOC data, some youths' total risk scores did not match manual addition of their individual domain scores. Ensuring accurate calculation of total risk scores is important so that youth are assessed at the appropriate risk level.
- KDOC should implement safeguards in the data management system to ensure that all KDAI factors accurately correspond with each other upon data entry. KDOC data demonstrated that some youth had documented final placements that did not correspond with other relevant factors, such as Total Risk Score, Risk Level, placement recommendation, and whether the KDAI was followed. Implementing error

¹⁸ This denotes 39 percent of 2,127 youth, which is the primary validation sample of 1,303 youth plus 824 youth with undocumented final placements. The description of supplementary analyses and all corresponding findings may be found in Appendix E.

¹⁹ For example, KDOC data show instances where youth had a documented final placement of detention, despite having a Total Risk Score and corresponding risk level of *low*, having a documented placement recommendation of *release without restrictions*, and having an indication in the data that the *KDAI placement recommendation was followed* (i.e., not overridden).

warnings to prevent inconsistent data entry could improve the accuracy of youths' records and KDAI intake data for future validations.

- Only after implementing the recommended improvements to KDAI administration, data collection, and data entry; and after collecting at least one year's worth of data utilizing such improvements, future validations should be conducted approximately every 3-5 years.

KANSAS DETENTION ASSESSMENT INSTRUMENT (KDAI) IMPLEMENTATION NEXT STEPS

As discussed previously (see Technical Assistance and Validation Overview, page 6), a validation plays a significant role in determining whether an assessment is predictive of the designated outcomes for the population being served; realignment and maintenance, informed by the validation results, are intended to support improvements to the assessment design and procedures. The validation findings section (page 12) included specific considerations, focused on improving various aspects of the KDAI – its design, data collection, and administration. The following provides suggested next steps for implementation of those considerations.

- **Reestablish the KDAI Steering Committee to oversee and guide next steps to improve and implement the KDAI.** The KDAI Steering Committee was initially established when the KDAI was developed and provided recommendations to specific stakeholders and work groups within the Steering Committee to implement activities related to the KDAI. Due to inactivity and staffing changes, new membership will be required to establish the Steering Committee. Membership should include representatives from Kansas Department of Corrections (KDOC) and Office of Judicial Administration (OJA), and if possible, include representatives from local jurisdictions that are able to provide perspectives from staff who are responsible for administering the KDAI. Steering committee members should review considerations provided in this report, identify a specific action plan for making improvements, collaborate with state agencies and local jurisdictions for implementing improvements, and plan for ongoing oversight of KDAI implementation and a future validation.
- **Design a strategy for making needed improvements.** After reviewing the considerations provided in this validation report, those overseeing the next steps in implementing the KDAI should come to consensus on which considerations should be adopted and develop a plan for moving forward. This plan should outline the necessary activities associated with each consideration, assign certain tasks to specific agencies responsible for making the improvements, and include target dates for completing the work. The strategies utilized to address needed improvements should focus on evidence-based practices and fidelity and should strive to increase consistency across practices statewide.
- **Disseminate information related to KDAI improvements to stakeholders and develop a statewide training protocol.** It will be important to communicate with stakeholders regarding any changes in the KDAI design or procedures. Communications should clearly convey to stakeholders a) what change is being made, b) why the change is necessary, c) how to correctly implement the change moving forward, and d) plans for retraining/training stakeholders. To sustain training efforts over time it will be beneficial to develop a training protocol which documents training requirements for new staff, a schedule for booster trainings, and any guidelines for providing coaching.
- **Develop an ongoing quality assurance process for continuous monitoring of the KDAI.** Finally, the next steps described above should not be treated as a one-time occurrence; to maintain fidelity in implementing the KDAI, ongoing monitoring is essential. A quality assurance process should include a

process for assessing inter-rater reliability; a schedule for reviewing data, evaluating practices and assessing administration of the tool; identifying goal dates for future validations; and determining a communications process to routinely address and troubleshoot challenges, and continue to ensure clarification is provided regarding how the KDAI is used, how to administer the KDAI, and the importance of using the KDAI results to inform detention recommendations.

CONCLUSION

The Kansas Department of Corrections' (KDOC) and Office of Judicial Administration's (OJA) decision to validate the Kansas Detention Assessment Instrument (KDAI) is an essential component in ensuring that justice-involved youth receive services and treatment that are evidence-based and that state agencies are making investments in evaluating the effectiveness of their practices. Based on the provided KDAI data, this validation generated findings which indicate that the KDAI is not operating as designed. In addition, this process has given insight into limitations that impact staff practices, data collection, and the overall function of the KDAI. Both KDOC and OJA demonstrate an awareness of limitations and demonstrate a commitment to improving the overall use of the KDAI moving forward. The findings presented in this report are intended to inform KDOC and OJA as they continue to identify areas of needed improvement in implementation of the KDAI and identify strategies to address needs. The considerations presented in this report as well as next steps for KDAI implementation are uniquely tailored to reflect the findings of the KDAI validation and are grounded in evidence-based practices that focus on reducing reoffending amongst justice-involved youth, increasing public safety, and ensuring fidelity in risk assessment practices.

**KANSAS DETENTION ASSESSMENT INSTRUMENT (KDAI)
SCORING GUIDE**

The KDAI must be administered on all youth who are 10 to 17 years old: that allegedly committed a juvenile or status offense; or were brought to Juvenile Intake and Assessment for technical reasons such as a warrant or violation of a valid court order.

DO NOT use this tool for youth who: are abuse and neglect Child in Need of Care (CINC) cases; report for a Notice/Agreement to Appear; or any walk-in intakes.

Name of Youth: The full name (first & last, middle name or initial when applicable) of the youth.

DOB: The date of birth (month/day/year) of the youth.

Gender: Indicate the self-identified gender of the youth.

Race(s): Indicate the self-identified race(s) of the youth. (American Indian/Alaskan Native, Asian, Black, Hawaiian/Pacific Islander, White or Other)

Ethnicity: Indicate the self-identified ethnicity of the youth (Hispanic or Non-Hispanic).

Alleged Offense(s): The charge(s) for which the youth was brought to the attention of Juvenile Intake and Assessment.

JIAS Worker: The name (first and last) of the Juvenile Intake and Assessment Worker completing the KDAI.

Date: The date the KDAI is being completed on the youth.

County: The County of the intake.

Judicial District: The Judicial District of the intake.

SPECIAL DETENTION CASES

This section is only for instances in which the youth has been brought in on one of the following reasons and requires detention: Mandatory Detention Warrant, Violation of a Valid Court Order, Interstate Compact Juvenile or a Person Felony by a documented gang member. Select the appropriate box as defined below and then proceed to Section 1 and score the rest of the instrument. Skip this section if none of these circumstances apply and begin with Section 1.

SPECIAL DETENTION CASES (Check one item only if applicable)

- | | |
|---------------------------------------------------------------------------------------------------------------------------------|--------|
| <input type="checkbox"/> a. Mandatory Detention Warrant | Detain |
| <input type="checkbox"/> Probation Violation <input type="checkbox"/> Probable Cause <input type="checkbox"/> Failure to Appear | |
| <input type="checkbox"/> Out of State <input type="checkbox"/> Unknown <input type="checkbox"/> Other: _____ | |
| <input type="checkbox"/> b. Violation of a Valid Court Order in a CINC case | Detain |
| <input type="checkbox"/> c. Interstate Compact Juvenile (out of state absconder or runaway) | Detain |
| <input type="checkbox"/> d. Person Felony by documented gang member K.S.A. 21-6316 | Detain |

- a. Check this box if the youth was brought in on a warrant signed by a judge that specifically states they must be detained. Then check the box corresponding to the reason the warrant was issued.
- Probation Violation: Check this box if the warrant was served for a probation violation.
 - Failure to Appear: Check this box if the warrant was served for failing to appear to a court hearing.
 - Probable Cause: Check this box if the warrant was served for probable cause.
 - Out of State: Check this box if the youth was arrested on a warrant from out of state. Per the terms of the Interstate Compact, this youth must be detained with no bond.
 - Unknown: Check this box if the reason for the warrant served is unknown.
 - Other: Check this box if the warrant was served for a reason other than those listed and indicate the reason on the line provided.

- b. Check this box if the youth was brought in for violation of a valid court order in a CINC case for which they must be detained pursuant to findings in K.S.A. 38-2260.
- c. Check this box if the youth is an out of state absconder or runaway and will be detained. Per the Juvenile Intake and Assessment Standard (JIAS-04-106) on Interstate Compact for Juveniles (ICJ); out-of-state absconders, as determined by law enforcement, must be detained; out-of-state runaways do not require automatic detention depending on the circumstances. Note: An override can be utilized if releasing the youth to a parent/guardian in the first 24 hours per JIAS-04-106.
- d. Check this box if the youth is a validated gang member that committed a person felony. Law enforcement must make specific reference pursuant to K.S.A. 21-6316 in the police report to detain. If this reference is not in the report, it cannot be considered a special detention case.

SECTION 1 – MOST SERIOUS CURRENT OFFENSE

This section is to be scored using the most serious alleged offense committed by the youth. Only one item shall be selected for this section. While youth may be referred for multiple offenses, this item is to be scored based on the offense with the highest point value. It is important to ensure the box checked corresponds to the most serious offense listed. Current refers to charges for which the youth is being presented to Juvenile Intake, and therefore prior offenses or prior adjudications are not counted in this section. The Subtotal for this section shall correspond to the score of the checked box. The Subtotal for this section shall not exceed sixteen (16). For assistance in determining the most serious offense classification, please reference the 2016 Felony/Misdemeanor Criminal Code Crime Listing found under the Kansas Criminal Codes section at: <https://sentencing.ks.gov/document-center/publications/lists/kansas-sentencing-guidelines-desk-reference-manuals/2016-desk-reference-manual>.

1. MOST SERIOUS CURRENT OFFENSE	SCORE
(Check one item only)	
<i>List the most serious current offense</i>	
<input type="checkbox"/> a. Off-Grid felony offense	16
<input type="checkbox"/> b. Levels 1-6 person felony offense	16
<input type="checkbox"/> c. Firearms offense (Use –in commission of the crime)	16
<input type="checkbox"/> d. Levels 1-4 felony drug offenses	12
<input type="checkbox"/> e. Levels 7-10 person felony offense	12
<input type="checkbox"/> f. Residential Burglary K.S.A. 21-5807(a)(1)	12
<input type="checkbox"/> g. Firearms offense (Possession)	8
<input type="checkbox"/> h. Other felony offense including drug offenses	6
<input type="checkbox"/> i. Misdemeanor offense (excluding MIP and MIC)	3
<input type="checkbox"/> j. Non-Mandatory Warrant	1
<input type="checkbox"/> k. Child In Need of Care (Non-Abuse/Neglect) or status offense	0
<input type="checkbox"/> l. Picked up on a Warrant (mandatory detention) or a VCO	0
Subtotal _____	

- 1a. Check this box if the current most serious alleged offense is an off-grid felony.
- 1b. Check this box if the current most serious alleged offense is a level one (1) through six (6) person felony.
- 1c. Check this box if the current most serious alleged offense was committed using a firearm.
- DO NOT** Check this item if:
 - the offense involved the possession of a firearm that was not used in commission of the offense
- 1d. Check this box if the current most serious alleged offense is a level one (1) through four (4) felony drug offense.
- 1e. Check this box if the current most serious alleged offense is a level seven (7) through ten (10) person felony.
- 1f. Check this box if the current most serious alleged offense is a residential burglary pursuant to K.S.A. 21-5807(a)(1) meaning the home was unoccupied at the time of the burglary.
- 1g. Check this box if the current most serious alleged offense involved the possession of a firearm.

- 1h. Check this box if the current most serious alleged offense is a felony not included in 1a through 1e. This would include alleged felony drug offenses that are not level one (1) through four (4).
- 1i. Check this box if current most serious alleged offense is a misdemeanor. For purposes of this tool, Minor in Possession (MIP) and Minor in Consumption (MIC) of alcohol should be considered status offenses and should not be counted here but in 1k.
- 1j. Check this box if the youth was brought in on a warrant that does not require detention.
- 1k. Check this box if the current most serious alleged offense is either a Child In Need of Care Non-Abuse/Neglect (CINC-NAN) issue or a status offense. Status offenses would include runaway, truancy, minor in possession (MIP) and minor in consumption (MIC). In the event a youth is kicked out of an alternative to detention but has no new alleged offense and is brought to juvenile intake, check this box as the most serious current offense.
- 1l. Check this box if the youth was picked up on a Warrant (mandatory detention) or a Violation of a Valid Court Order (VCO) from the Special Detention Cases section.

Information Sources for Scoring Sections 2 - 5

Sections 2 through 5 can be scored using several sources of information but do not assign points if you are unable to reliably make a determination regarding any item(s). Sources include: law enforcement, courts, juvenile justice departments and programs, any computer systems or official records of the listed entities. If these options are not available, the youth or their parents/guardians can be sources of information. If there is a conflict between the information from the youth or parent/guardian and official sources, use the information from the official sources.

SECTION 2 – SUPERVISION STATUS

This section is to be scored based on the youth’s current supervision status. Only one item shall be selected for this section. The status items are listed in descending order with the first listed having the highest point value. The Subtotal for this section shall correspond to the checked box. The Subtotal for this section shall not exceed seven (7).

2. SUPERVISION STATUS (Check the most serious one only)

- | | |
|----------------------------------------------------------------------------------------------------------------|---|
| <input type="checkbox"/> a. Currently on Conditional Release from a Juvenile Correctional Facility (JCF) | 7 |
| <input type="checkbox"/> b. Currently in DOC Custody | 5 |
| <input type="checkbox"/> c. Currently on Intensive Supervision probation (Community Corrections) | 4 |
| <input type="checkbox"/> d. Currently on Court Services probation | 4 |
| <input type="checkbox"/> e. Currently on bond (in lieu of detention) | 3 |
| <input type="checkbox"/> f. Currently on detention alternative ATD Name: _____ | 3 |
| <input type="checkbox"/> g. Currently on release with conditions | 3 |
| <input type="checkbox"/> h. Currently on diversion / immediate intervention program | 1 |
| <input type="checkbox"/> i. Not currently on supervision | 0 |
| <input type="checkbox"/> j. Unable to determine Explain why: _____ | 0 |
| Subtotal _____ | |

2a. Check this box if the youth is currently on Conditional Release. This only applies to youth who were incarcerated in a Juvenile Correctional Facility (JCF) and released to community supervision with the explicit supervision type of Conditional Release.

DO NOT Check this item if the youth was:

- incarcerated in a JCF and directly released with no further supervision
- detained in a Juvenile Detention Facility at any time for any reason

2b. Check this box if the youth is currently in DOC Custody.

2c. Check this box if the youth is currently on Intensive Supervision Probation (ISP) or probation with Community Corrections.

- 2d. Check this box if the youth is currently on probation with Court Services.
- 2e. Check this box if the youth is currently on a bond in lieu of being detained. In this case, the youth has not been adjudicated of the alleged offense(s) for which they received bond.
- 2f. Check this box if the youth is currently on a detention alternative and indicate the name of the Alternative to Detention (ATD). In this case, the youth has not been adjudicated of the alleged offense(s) for which they received said alternative(s). These could include: House Arrest (such as electronic monitoring or supervision), a community supervision program; reporting center (day, evening, or weekend); placement in an emergency shelter, or another Alternative to Detention.
- 2g. Check this box if the youth is currently on conditions from JIAS for previous charges. In this case, the youth has not been adjudicated of the alleged offense(s) for which they received said condition(s). Some examples of conditions include: curfew, counseling, mediation, or school attendance.
- 2h. Check this box if the youth is currently on supervised diversion or an Immediate Intervention Program.

DO NOT check this item if the youth:

- is on unsupervised diversion

- 2i. Check this box if none of the items, 2a through 2h, apply.
- 2j. Check this box if you are unable to determine the youth’s supervision status and explain why.

SECTION 3 – HISTORY OF FAILURE TO APPEAR/RUNNING AWAY

This section is to be scored on any failure to appear behavior on the part of the youth defined below within the past twelve (12) months. Check all items that apply. Once all applicable boxes have been checked, add all numbers of checked boxes together for the subtotal. The Subtotal for this section shall not exceed six (6).

3. HISTORY OF FAILURE TO APPEAR/RUNNING AWAY (within past 12 months) (Check all that apply)	
<input type="checkbox"/> a. Prior escape(s) from custody	3
<input type="checkbox"/> b. Two or more runaways from a court ordered placement	2
<input type="checkbox"/> c. Prior failure to appear to court hearing and a bench warrant was ordered Quantity: _____	1
<input type="checkbox"/> d. No history of failure to appear or running away	0
<input type="checkbox"/> e. Unable to determine Explain why: _____	0
Subtotal _____	

- 3a. Check this box if the youth has been adjudicated of escaping from custody in the past 12 months pursuant to K.S.A. 21-5911.
DO NOT check this item if the youth:
 - was only arrested and/or charged with escaping from custody
 - has run away or absconded from a DOC placement
- 3b. Check this box if the youth has previously run away, on more than one occasion, from a placement they were court ordered into (including DOC or DCF).
DO NOT check this item if the youth:
 - has run away from home and no court action was or has been taken
 - has run away from a court ordered placement one time only
- 3c. Check this box if the youth has failed to appear (FTA) for any court hearings and a bench warrant was ordered in the past 12 months. If checked, indicate the number of times FTA bench warrants were ordered next to quantity.
- 3d. Check this box if there is no evidence the youth has a history of failing to appear behavior or a pattern of running away.
- 3e. Check this box if information is not available to determine the youth’s history of failing to appear and explain why.

SECTION 4 – PRIOR ADJUDICATIONS / CLOSED CASES

This section is to be scored on the youth’s legal court history. Check all items that apply. Offenses for which the youth is currently on supervision do not count towards any items in this section. Once all applicable boxes have been checked, add all numbers of checked boxes together for the subtotal. The subtotal for this section shall not exceed six (6).

4. PRIOR ADJUDICATIONS / CLOSED CASES (Check all that apply)

(Do not include offense(s) the youth is currently on supervision for)

- a. Current adjudication pending disposition 3
 - b. Prior felony adjudications 2
 - c. Three or more prior misdemeanor adjudications 1
 - d. One or two prior misdemeanor adjudication(s) 0
 - e. No prior court history 0
 - f. Unable to determine Explain why: _____ 0
- Subtotal _____

4a. Check this box if the youth has a current adjudication for which disposition has not yet occurred/is still pending. This includes current felony and/or misdemeanor adjudications.

DO NOT check this item for offenses in which the youth:

- was only arrested and/or charged, but has not yet been adjudicated
- is currently on supervision
- has completed disposition hearing

4b. Check this box if the youth has any prior felony adjudications that are closed cases.

DO NOT check this item:

- on offenses the youth is currently on supervision for
- for felonies the youth was only arrested and/or charged with
- for misdemeanors

4c. Check this box if the youth has three or more prior misdemeanor adjudications. This is defined as three or more separately adjudicated misdemeanor offenses. Look at adjudication dates, not at the number of charges. Each adjudication date counts as one adjudication; you are looking for three or more points in time. This is referring to closed cases.

DO NOT check this item:

- on offenses the youth is currently on supervision for
- for misdemeanors the youth was only arrested and/or charged with
- for felonies

4d. Check this box if the youth has one or two prior misdemeanor adjudications. This is defined as one or two separately adjudicated misdemeanor offenses. Look at adjudication dates, not at the number of charges. Each adjudication date counts as one adjudication; you are looking for one or two points in time. This is referring to closed cases.

DO NOT check this item:

- for offenses in which the youth is currently on supervision
- for misdemeanors the youth was only arrested and/or charged with
- for felonies

4e. Check this box if there is no evidence the youth has a court history.

4f. Check this box if information is not available to determine their history and explain why.

SECTION 5 – MITIGATING FACTORS

This section is to be scored on the presence of certain factors that may indicate decreased risk. Check all items that apply. Once all applicable boxes have been checked, add all numbers of checked boxes together for the subtotal. The Subtotal for this section will never be a positive number and shall not exceed negative two (-2).

5. MITIGATING FACTORS (Check all that apply)

- a. Responsible adult to assure supervision and appearance in court -1
 - b. First adjudicated offense at 16 years of age or older -1
 - c. None of the above 0
 - d. Unable to determine Explain why: _____ 0
- Subtotal _____

- 5a. Check this box if a responsible adult is willing to assure supervision of the youth and appearance in court. Some factors to take into consideration are the adult's age, their relation to the youth and having appropriate supervision mechanisms. The mechanisms may include having curfews in place, knowing the youth's friends, knowing the youth's whereabouts, etc.
- 5b. Check this box if the youth's first adjudication occurred when the youth was sixteen (16) years of age or older.
- 5c. Check this box if none of the above conditions apply for the youth.
- 5d. Check this box if information is not available to determine the youth's circumstances and explain why.

TOTAL SCORE

To obtain the total score, add the Subtotals of the five sections together and record the total on the provided line. Note: Any points for section 5 are negative, therefore will need to be subtracted from the sum of the first four sections.

TOTAL SCORE _____

DATA SOURCES

The data sources section captures where data is being found and what data is being used. This provides needed information regarding data gaps, data availability and how the tool is being completed. If Self-report is the only source checked, an explanation must be provided.

DATA SOURCES:

What data sources were used to complete the KDAI **(Check all that apply)**

- LEO
- Probation/Supervision Officer
- CASIMS
- JJIAMS
- Full Court
- KBI
- NCIC
- III
- KASPER
- KCJIS
- DCF
- Local Database Name: _____
- Other: _____
- Self-Report Explain why if only source: _____

LEO: Law Enforcement Officer.

Probation/Supervision Officer: Person supervising a youth's case.

CASIMS: Community Agency Supervision Information Management System – KDOC supervision information system.

JJIAMS: Juvenile Justice Intake & Assessment System – KDOC juvenile intake information system.

Full Court: Kansas court and court services information system.

KBI: Kansas Bureau of Investigation.

NCIC: National Crime Information Center – National law enforcement information system.

III: Interstate Identification Index (Triple I) – National law enforcement information system.

KASPER: Kansas Adult Supervised Population Electronic Repository – KDOC supervision information system.

KCJIS: Kansas Criminal Justice Information System – State information system.

DCF: Department for Children and Families.

Local Database: Any database or information system used locally. Indicate the name of the system.

Other: Any other source of information, person/agency or system, used to score various items on the instrument.

Self-Report: Information provided by the youth and/or family. Provide an explanation if this is the only source of information checked.

KANSAS DETENTION ASSESSMENT INSTRUMENT (KDAI) SUMMARY SHEET

Record the identifying information for the youth, alleged offense, worker and jurisdiction at the top of the summary sheet.

DETENTION DECISION

The detention decision marked in this section will be determined by the total score of the instrument. Enter the total score from the instrument on the line provided and check the box that corresponds to the range of the total score, except in special detention cases. A recommendation regarding the youth's placement is provided based on risk.

DETENTION DECISION

TOTAL SCORE _____

- Special Detention Case --- Mandatory Detention
- Score of 14 or higher ----- High Risk: Recommend detention
- Score of 8 to 13 ----- Moderate Risk: Recommend release with restrictions and/or seek alternative placement options
- Score of 7 or lower ----- Low Risk: Recommend release without restrictions

*It is best that youth 12 years and under not be placed in detention unless absolutely necessary for public safety. These youth should only be detained when all other options have been considered and exhausted.

Will the placement of the youth occur as recommended above? YES NO

** If no, the override section shall be completed.

Special Detention Case If one of the Special Detention Cases boxes were checked on the first page, put a check next to the Special Detention Case box under the Detention Decision. Regardless of the total score, this detention is a result of a mandatory policy hold, not based on risk.

High Risk Scores of fourteen (14) or higher indicate that based on the factors checked in the instrument, the youth currently is assessed as having a high likelihood of failing to appear for court; a high likelihood of reoffending pending adjudication or is considered a danger to the community. Detention is recommended to be the most appropriate placement until the youth can appear before the court.

Moderate Risk Scores of eight (8) to thirteen (13) indicate that the youth currently is assessed as having a moderate likelihood of failing to appear for court or reoffending pending adjudication. Therefore, secure detention is not required, however some type of supervision or structure is recommended with release. Various alternatives to detention would be most appropriate for this youth.

Low Risk Scores of seven (7) or lower indicate that based on the factors checked in this instrument, the youth currently is assessed as having a low likelihood of failing to appear or reoffending pending adjudication. Therefore, secure detention or release with restriction is not indicated. It is recommended the youth be released directly to their parent/guardian with no conditions or assigned supervision.

* It is best that youth 12 years and under not be placed in detention unless absolutely necessary for public safety. These youth should only be detained when all other options have been considered and exhausted.

Will the placement of the youth occur as recommended above? This question is asking if the indicated detention decision based upon the total score of this instrument is going to be followed. If it is, then check "yes" and the instrument is complete. If it is not, then check "no" and complete the Override Section.

OVERRIDE

The override section is only to be completed when the instrument's recommendation is **NOT** followed. This section is to capture the reason and/or circumstances which resulted in a different decision being made than was recommended by the instrument.

OVERRIDE

Indicate the final placement decision below if the instrument's recommendation was not followed:

- Detention
- Release with restrictions and/or seek alternative placement options
- Release without restrictions

Detention Check this box if the youth is going to detention despite the recommendation of the instrument being release or release with restrictions. Proceed to the override category to record the reason for the override.

Release with restrictions and/or seek alternative placement options Check this box if the youth is being released with restrictions even though the instrument recommended release or detention. Proceed to the override category to record the reason for the override.

Release without restrictions Check this box if the youth is being released outright without restrictions even though the instrument recommended release with restrictions or detention. Proceed to the override category to record the reason for the override.

OVERRIDE CATEGORY

The override category is for capturing the deciding factor that resulted in the instrument's recommendation being overridden. If an override occurred, check the one box that most appropriately describes the reason for the override. In instances where the reason for the override is not listed, select the 'Other' box and write/type in the reason for the override.

Override Category (Check only one)

- No appropriate alternative available Explain: _____
- Release – Out of state runaway (ICJ cleared)
- Hold – Immigration and Customs Enforcement (ICE)
- Parent refuses custody and alternative placement is determined Explain: _____
- Gang motivated/associated offense (current charges are validated by law enforcement to have been gang motivated or gang associated)
- No available parent, guardian or another appropriate adult
- Victim resides in the home
- Appropriate alternative available
 - House Arrest
 - Reporting Center
 - Responsible Adult
 - Shelter
 - Foster Care
 - Other: _____
- Juvenile has medical or psychiatric needs that would be better served with community or parental supervision
- Other: _____

No appropriate alternative available: Check this box if the youth scored to be released with restrictions but there are not any appropriate alternatives available and the youth is being released without restrictions. Provide an explanation on the line. *NOTE: This cannot be a reason for override into detention.*

Release – Out of state runaway (ICJ Cleared): Check this box if the youth is an out-of-state runaway, but was cleared by ICJ and will be released.

Hold – Immigration & Customs Enforcement (ICE): Check this box if the youth is an illegal immigrant and will be detained for Immigration & Customs Enforcement.

Parent refuses custody and alternative placement is determined: Check this box if the youth's parent or guardian refuses to take custody of the youth from intake resulting in an alternative placement than was recommended by the instrument. Provide an explanation on the line. *NOTE: This cannot be a reason for override into detention.*

Gang motivated/associated offense: Check this box if the current charges are validated by law enforcement to have been gang motivated or gang associated therefore, causing added concern for safety or reoffending.

No available parent, guardian or another appropriate adult: Check this box if you are unable to contact or get in contact with (reach) a parent, guardian or another appropriate adult to release the youth.

Victim resides in the home: Check this box if the alleged victim in the current charge resides in the same home as the youth and therefore, releasing the youth to return home would be contrary to the welfare of the alleged victim.

Appropriate alternative available: Check this box if the youth scored to be detained but an appropriate alternative is available resulting in the youth's release to an alternative. Check which alternative the youth was released to: House Arrest (this could be electronic monitoring or supervision), Reporting Center, Responsible Adult, Shelter, Foster Care, or Other. If checking Other due to the alternative not being one of the options listed, state what the alternative is on the line provided.

Juvenile has medical or psychiatric needs that would be better served with community or parental supervision: Check this box if the youth scored to be detained but due to medical and/or psychiatric needs, the youth would be better served with community or parental supervision.

Other: Check this box if the reason is not contained above and state the reason for override.

OVERRIDE NARRATIVE

Provide additional comments regarding the override decision here.

Override Narrative:

APPROVAL

The approvals are to capture who is making override decisions and that the decisions are reviewed and approved. This provides for accountability and consistency when override decisions are made.

Who made the override recommendation? _____
Name Title

Court approval of override decision _____
Name Title

Who made the override recommendation?: This will be the individual that, for whatever reason is listed, decided the youth's placement should be different than what the instrument recommended. Provide their name and their title. This will not necessarily be the same individual that has completed the instrument.

Court approval of override decision: Court approval must be obtained for all overrides. Each jurisdiction should have a judicial order that establishes the process for obtaining override approval. Indicate the judge, supervisor or designee that approved the override decision and their title.

*The summary sheet is the only part of the Kansas Detention Assessment Instrument that can be provided to the Court.

DEFINITIONS FOR STAFF

These definitions are for the use of the staff member completing the DRAI. For definitions suitable for explaining these terms to youth, see the section labeled DEFINITIONS FOR YOUTH.

1. **Conditional release:** When a youth has been released from a Juvenile Correctional Facility (JCF) and are on a period of aftercare. Duration of conditional release is set by the court per the provisions of K.S.A. 38-2369
2. **Conditions from JIAS/Release with Conditions:** When a youth has been arrested and then released home or to another appropriate adult with specific guidelines to follow until they appear for their court hearing. For example, a youth on Release with Conditions may have a curfew, be required not to have contact with a specific people, follow a safety plan, etc.
3. **Bond:** When a youth has made an assurance, that in lieu of being detained, they will appear in court to answer for their charges upon summons. Bond may be a monetary or verbal assurance, such as an OR – 'own recognizance' – bond where available.

4. Detention alternative or Alternative to detention (and examples): When a youth has been arrested and determined to be eligible for detention, but were placed on a community-based alternative to detention instead. Some examples of detention alternatives are: House Arrest (such as electronic monitoring); a community supervision program; a reporting center; or placement in an emergency shelter.
5. DOC custody: When a youth is in the legal custody of the Department of Corrections (DOC) whether they are placed at home, in the community or a residential facility.
6. Intensive Supervision Probation (ISP): When a youth has been adjudicated of a crime and sentenced to probation with a Community Supervision Agency such as community corrections.
7. Diversion: See Immediate Intervention Program (IIP).
8. Immediate Intervention Program (IIP): All programs or practices developed by the county to hold juvenile offenders accountable while allowing such offenders to avoid adjudication.
9. Court Services Probation: When a youth has been adjudicated of a crime and sentenced to probation with a Court Services Agency.
10. Failure to Appear: When a youth had a scheduled court hearing and did not show up.
11. Court ordered placement: When a youth has been placed in the custody of the Secretary of DOC or DCF. The court ordered placement is wherever the agency with custody places the youth, which can include but is not limited to foster care or a youth residential center. The youth cannot leave their court ordered placement without the permission of the Secretary or their designee of the respective agency.
12. Adjudication: When a youth has gone through the court process and been found guilty of an alleged offense.
13. Disposition: After a youth has been adjudicated, the court must make a determination of what the consequences for committing the adjudicated offense will be. Disposition may include probation, custody or another action.
14. Override: A departure from the KDAI's recommended detention decision. An override is typically due to extenuating circumstances in the case that result in a higher or lower final detention decision.
15. Valid Court Order (VCO): An order from a court, in a CINC case, directing a child to stay in their court-ordered placement.
16. Special Detention Case: Cases in which a youth is required to be detained based on a policy reason or specific law, regardless of the KDAI score.

DEFINITIONS FOR YOUTH

These definitions are for explaining the terms used in the tool to youth.

1. Conditional release: When a youth has been released from a Juvenile Correctional Facility (JCF) and is on a period of aftercare and is still reporting to a community corrections officer.
2. Conditions from JIAS/Release with Conditions: When a youth has been arrested and then released home or to another adult with specific rules to follow until their court hearing.
3. Bond: When a youth has promised that they will appear in court when told to. Sometimes the youth or other family members have to put up money as part of their promise.
4. Detention alternative or Alternative to detention (and examples): When a youth has been arrested and was placed somewhere other than in detention. Some examples of detention alternatives are: House Arrest (like electronic monitoring); a community supervision program; a reporting center; or in an emergency shelter.
5. DOC custody: When a youth is in the legal custody of the Department of Corrections (DOC) whether they are placed at home, in the community or a residential facility.
6. Intensive Supervision Probation (ISP): When a youth has been found guilty and sentenced to probation with a Community Supervision Agency such as community corrections.
7. Diversion: Another way of saying Immediate Intervention Program.
8. Immediate Intervention Program (IIP): When a youth has been arrested and offered a program that keeps them from being found guilty.
9. Court Services Probation: When a youth has been found guilty and sentenced to probation with a Court Services Agency.
10. Failure to Appear: When a youth had a scheduled court hearing and did not show up.
11. Court ordered placement: When a youth has been placed in the custody of the Secretary of DOC or DCF. The youth cannot leave their court ordered placement without permission.
12. Adjudication: When a youth has gone through the court process and been found guilty.
13. Disposition: After a youth has been found guilty, the court must make a decision of what the consequences will be. Disposition may include probation, custody or another action.

APPENDIX B: STATISTICAL TESTS USED IN THE VALIDATION STUDY

Area Under the Curve – Receiver Operating Characteristic (AUC-ROC) analysis is used to indicate how well risk scales predict a binary outcome. Specifically, it measures how well the risk assessment tool distinguishes between likely failures (e.g., offending while released pre-adjudication) and likely successes (e.g., not offending while released pre-adjudication). The AUC-ROC score can vary from 0 to 1, with a score above 0.5 indicating some ability to distinguish between likely failures and successes. For example, an AUC-ROC value of 0.7 for failure to appear would indicate that the tool successfully distinguished between someone who failed to appear and someone who did not for 70% of the sample.

Bivariate Correlations measure the strength and direction of the relationship between two variables, where a change in one variable coincides with a change in another. The strength of the correlation (*r*-value) is reported as a number between -1 and 1, where *r*-values less than 0 indicate a negative relationship and *r*-values greater than 0 indicate a positive relationship. Furthermore, *r*-values closer to -1 or 1 indicate stronger relationships, while *r*-values closer to 0 indicate weaker relationships. The *r*-value for a risk assessment that works is at least 0.10 or -0.10, depending on the direction of the effect, indicating a fair correlation between the risk factor and outcomes. It should be noted that correlations only demonstrate that relationships exist among certain variables; they do not imply causation.

Multivariate Logistic Regression tests the likelihood of failure during pre-adjudicatory release, controlling for total risk score, demographic information, and charge severity. If the risk assessment is valid, the total risk score will be a strong predictor of the likelihood of failure during pre-adjudicatory release. The odds ratios from regression models offer insight into the likelihood of pre-adjudication outcomes with every one-point increase in the risk assessment score.

APPENDIX C: RESULTS FOR THE VALIDATION ANALYSIS STATISTICAL TESTS

Table 1: AUC-ROC Test Results for Entire Sample Population and Population Subgroups

KDAI Factor	AUC-ROC				
	Full Sample	Boys	Girls	White Youth	Black Youth
Domain 1: Most Serious Current Offense	0.51	0.50	0.51	0.54	0.51
Domain 2: Supervision Status	0.50	0.51	0.50	0.51	0.49
Domain 3: History of Failure to Appear/Running Away within past 12 months	0.51	0.50	0.51	0.50	0.50
Domain 4: Prior Adjudications/Closed Cases	0.53	0.54	0.53	0.53	0.55
Domain 5: Mitigating Factors	0.48	0.46	0.49	0.47	0.48
Total Risk Score	0.51	0.50	0.51	0.54	0.50
Risk Level	0.51	0.53	0.50	0.52	0.51

Table 2: New Delinquent Activity Multivariate Regression Models, Full Sample Population

	New delinquent activity at least once during the pre-adjudicatory release period		
Domain 1: Most Serious Current Offense	0.01 (0.03)		
Domain 2: Supervision Status	-0.04 (0.08)		
Domain 3: History of Failure to Appear/Running Away within past 12 months	0.08 (0.21)		
Domain 4: Prior Adjudications/Closed Cases	0.50*** (0.14)		
Domain 5: Mitigating Factors	-0.25 (0.16)		
Total Risk Score		0.02 (0.02)	
Risk Level			-0.02 (0.17)
Male	0.16 (0.20)	0.22 (0.20)	0.23 (0.20)
Age at Intake	-0.09 (0.05)	-0.07 (0.05)	-0.08 (0.05)
White	-0.04 (0.18)	-0.07 (0.18)	-0.07 (0.18)
Felony	0.03 (0.26)	0.04 (0.25)	0.11 (0.24)
Time from intake to case file	0.002** (0.001)	0.002** (0.001)	0.002** (0.001)
Constant	-1.14 (0.83)	-1.32 (0.82)	-1.15 (0.84)

Notes:

1. *p<0.05; **p<0.01; ***p<0.001
2. Standard errors in parentheses

Table 3: New Delinquent Activity Multivariate Regression Models, Boys Sample Population

	New delinquent activity at least once during the pre-adjudicatory release period		
Domain 1: Most Serious Current Offense	0.03 (0.05)		
Domain 2: Supervision Status	-0.19 (0.22)		
Domain 3: History of Failure to Appear/Running Away within past 12 months	-0.10 (0.41)		
Domain 4: Prior Adjudications/Closed Cases	0.97** (0.29)		
Domain 5: Mitigating Factors	-0.26 (0.31)		
Total Risk Score		0.05 (0.05)	
Risk Level			0.36 (0.32)
Age at Intake	-0.13 (0.10)	-0.11 (0.10)	-0.12 (0.10)
White	-0.41 (0.35)	-0.43 (0.34)	-0.44 (0.34)
Felony	0.16 (0.60)	0.06 (0.58)	0.07 (0.58)
Time from intake to case file	0.004* (0.002)	0.003* (0.002)	0.003 (0.002)
Constant	-0.57 (1.60)	-0.83 (1.58)	-0.85 (1.57)

Notes:

1. *p<0.05; **p<0.01; ***p<0.001
2. Standard errors in parentheses

Table 4: New Delinquent Activity Multivariate Regression Models, Girls Sample Population

	New delinquent activity at least once during the pre-adjudicatory release period		
Domain 1: Most Serious Current Offense	-0.00 (0.03)		
Domain 2: Supervision Status	-0.01 (0.10)		
Domain 3: History of Failure to Appear/Running Away within past 12 months	0.18 (0.25)		
Domain 4: Prior Adjudications/Closed Cases	0.37* (0.16)		
Domain 5: Mitigating Factors	-0.20 (0.19)		
Total Risk Score		0.01 (0.03)	
Risk Level			-0.13 (0.21)
Age at Intake	-0.07 (0.06)	-0.05 (0.06)	-0.05 (0.06)
White	0.11 (0.23)	0.08 (0.22)	0.08 (0.22)
Felony	0.02 (0.29)	0.05 (0.28)	0.13 (0.27)
Time from intake to case file	0.002* (0.001)	0.002* (0.001)	0.002* (0.001)
Constant	-1.41 (1.00)	-1.52 (0.98)	-1.19 (1.01)

Notes:

1. *p<0.05; **p<0.01; ***p<0.001
2. Standard errors in parentheses
3. The full coefficient for Domain 1 is -0.0003351

Table 5: New Delinquent Activity Multivariate Regression Models, White Youth Sample Population

	New delinquent activity at least once during the pre-adjudicatory release period		
Domain 1: Most Serious Current Offense	0.02 (0.03)		
Domain 2: Supervision Status	-0.01 (0.10)		
Domain 3: History of Failure to Appear/Running Away within past 12 months	-0.03 (0.29)		
Domain 4: Prior Adjudications/Closed Cases	0.43* (0.19)		
Domain 5: Mitigating Factors	-0.19 (0.21)		
Total Risk Score		0.03 (0.03)	
Risk Level			0.05 (0.21)
Male	0.40 (0.28)	0.45 (0.28)	0.47 (0.28)
Age at intake	-0.08 (0.07)	-0.06 (0.07)	-0.07 (0.07)
Felony	0.07 (0.31)	0.08 (0.30)	0.17 (0.29)
Time from intake to case file	0.002 (0.001)	0.002 (0.001)	0.002 (0.001)
Constant	-1.56 (1.10)	-1.82 (1.10)	-1.61 (1.11)

Notes:

1. *p<0.05; **p<0.01; ***p<0.001
2. Standard errors in parentheses

Table 6: New Delinquent Activity Multivariate Regression Models, Black Youth Sample Population

	New delinquent activity at least once during the pre-adjudicatory release period		
Domain 1: Most Serious Current Offense	0.03 (0.06)		
Domain 2: Supervision Status	-0.13 (0.19)		
Domain 3: History of Failure to Appear/Running Away within past 12 months	0.16 (0.41)		
Domain 4: Prior Adjudications/Closed Cases	0.65** (0.25)		
Domain 5: Mitigating Factors	-0.23 (0.29)		
Total Risk Score		0.03 (0.05)	
Risk Level			0.11 (0.35)
Male	0.03 (0.37)	0.13 (0.36)	0.16 (0.36)
Age at intake	0.004 (0.11)	0.02 (0.10)	0.01 (0.10)
Felony	0.37 (0.55)	0.41 (0.51)	0.47 (0.50)
Time from intake to case file	0.004* (0.001)	0.003* (0.001)	0.003* (0.001)
Constant	-2.88 (1.78)	-2.87 (1.70)	-2.80 (1.77)

Notes:

1. *p<0.05; **p<0.01; ***p<0.001
2. Standard errors in parentheses

APPENDIX D: BIVARIATE CORRELATION RESULTS FOR THE VALIDATION ANALYSIS

KDAI Factor	r-value
Domain 1: Most Serious Current Offense	0.01
Domain 2: Supervision Status	0.00
Domain 3: History of Failure to Appear/Running Away within past 12 months	0.02
Domain 4: Prior Adjudications/Closed Cases	0.10***
Domain 5: Mitigating Factors	-0.03
Total Risk Score	0.03
Risk Level	0.01

Notes:

1. *p<0.05; **p<0.01; ***p<0.001

APPENDIX E: OVERVIEW OF SUPPLEMENTARY ANALYSIS AND RESULTS FOR THE SUPPLEMENTARY ANALYSIS STATISTICAL TESTS

The primary validation sample included youth that met specific criteria, one criterion being that youth were released after intake during the pre-adjudication period. However, this criterion excluded a significant number of youth (824) who had undocumented final placements. Many of the 824 youth do meet the rest of the criteria. Since the validation analyses excluded all 824 youth with undocumented placements from the final sample (thus treating them as having a final placement of detention), CJI also investigated whether including those youth in validation analyses would result in any significant changes to the findings. Therefore, CJI conducted supplementary analyses including all 824 youth as if they had a final placement of release during the pre-adjudication period, for a sample of 2,127 youth. The following section reports results from these supplementary analyses.

Consistent with primary validation findings, Domain 4 is a significant predictor of new delinquent activity likelihood for the full population, as well as gender and race subgroups. Multivariate results suggest that as Domain 4 scores increase, risk of new delinquent activity while released pre-adjudication also increases.

Differing from the primary validation findings, multivariate results show that Domain 5 and Risk Level become significant predictors of new delinquent activity likelihood for the full population, but in the opposite (negative) direction of what would be expected for a risk assessment. These findings suggest that as youth are scored higher in Domain 5 or are assessed at higher levels of risk, they are *less likely* to offend during the pre-adjudicatory release period. The same findings persist for subgroups of girls and white youth. Additionally, Domain 1 also becomes a significant (yet negative) predictor of new delinquent activity likelihood only for girls. Table 1 displays multivariate results from the primary validation sample compared with the sample including the 824 youth with undocumented final placements.

Table 1: Relevant Multivariate Regression Results for Primary and Supplementary Samples

	New delinquent activity at least once during the pre-adjudicatory release period	
	Primary (N=1,303)	Sample Supplementary (N=2,127)
Domain 1: Most Serious Current Offense	0.01 (0.03)	-0.03 (0.02)
Domain 2: Supervision Status	-0.04 (0.08)	-0.06 (0.06)
Domain 3: History of Failure to Appear/Running Away within past 12 months	0.08 (0.21)	0.02 (0.14)
Domain 4: Prior Adjudications/Closed Cases	0.50*** (0.14)	0.36*** (0.09)
Domain 5: Mitigating Factors	-0.25 (0.16)	-0.31** (0.12)
Total Risk Score	0.02 (0.02)	-0.02 (0.02)
Risk Level	-0.02 (0.17)	-0.24** (0.07)

Notes:

1. *p<0.05; **p<0.01; ***p<0.001
2. Standard errors in parentheses
3. Results are presented this way for the sake of space. Full multivariate regression models in both primary and supplementary analyses may be found in [Appendices C and E](#)

It appears, therefore, that girls and white youth with undocumented final placements are driving results showing that Domain 1 (girls only), Domain 5, and Risk Level are significant yet negative predictors of new delinquent activity likelihood while released pre-adjudication.

Findings:

- Supplementary analyses show that youth with undocumented final placements in the data – particularly girls and white youth – are driving the results showing certain KDAI factors as significant yet negative predictors of new delinquent activity while released pre-adjudication. These gender and race differences manifest especially in a subsample of youth without documented final placement information in the data.
- Analyses demonstrate a need for training and ongoing coaching for staff to deliver the KDAI with fidelity, as well as a need for improved data collection and quality assurance in data entry. It is likely that limitations of the data utilized for this validation impacted the findings demonstrating the KDAI’s lack of predictive validity.

Table 2: AUC-ROC Test Results for Supplementary Sample Population and Population Subgroups

KDAI Factor	AUC-ROC				
	Full Sample	Boys	Girls	White Youth	Black Youth
Domain 1: Most Serious Current Offense	0.46	0.49	0.45	0.49	0.46
Domain 2: Supervision Status	0.50	0.48	0.51	0.51	0.50
Domain 3: History of Failure to Appear/Running Away within past 12 months	0.50	0.48	0.52	0.51	0.50
Domain 4: Prior Adjudications/Closed Cases	0.52	0.51	0.53	0.52	0.55
Domain 5: Mitigating Factors	0.46	0.45	0.47	0.46	0.47
Total Risk Score	0.47	0.47	0.46	0.49	0.48
Risk Level	0.45	0.46	0.45	0.45	0.48

Table 3: New Delinquent Activity Multivariate Regression Models, Supplementary Analysis Full Population

	New delinquent activity at least once during the pre-adjudicatory release period		
Domain 1: Most Serious Current Offense	-0.03 (0.02)		
Domain 2: Supervision Status	-0.06 (0.06)		
Domain 3: History of Failure to Appear/Running Away within past 12 months	0.02 (0.14)		
Domain 4: Prior Adjudications/Closed Cases	0.36*** (0.09)		
Domain 5: Mitigating Factors	-0.31** (0.12)		
Total Risk Score		-0.02 (0.02)	
Risk Level			-0.24** (0.07)
Male	0.28 (0.16)	0.33* (0.15)	0.33* (0.15)
Age at Intake	-0.13*** (0.04)	-0.11** (0.04)	-0.10** (0.04)
White	0.18 (0.14)	0.16 (0.14)	0.16 (0.14)
Felony	-0.07 (0.19)	-0.05 (0.18)	-0.08 (0.16)
Time from intake to case file	0.002** (0.001)	0.002** (0.001)	0.002*** (0.001)
Constant	-0.43 (0.61)	-0.60 (0.60)	-0.59 (0.59)

Notes:

1. *p<0.05; **p<0.01; ***p<0.001
2. Standard errors in parentheses

Table 4: New Delinquent Activity Multivariate Regression Models, Supplementary Analysis Boys Sample Population

	New delinquent activity at least once during the pre-adjudicatory release period		
Domain 1: Most Serious Current Offense	0.01 (0.04)		
Domain 2: Supervision Status	-0.38 (0.22)		
Domain 3: History of Failure to Appear/Running Away within past 12 months	-0.25 (0.37)		
Domain 4: Prior Adjudications/Closed Cases	0.59* (0.24)		
Domain 5: Mitigating Factors	-0.28 (0.25)		
Total Risk Score		-0.001 (0.04)	
Risk Level			-0.31 (0.19)
Age at Intake	-0.22** (0.08)	-0.20** (0.07)	-0.19* (0.08)
White	-0.18 (0.27)	-0.18 (0.27)	-0.18 (0.27)
Felony	-0.71 (0.54)	-0.65 (0.52)	-0.48 (0.49)
Time from intake to case file	0.002 (0.001)	0.001 (0.001)	0.002 (0.001)
Constant	1.03 (1.21)	0.95 (1.18)	1.08 (1.17)

Notes:

1. *p<0.05; **p<0.01; ***p<0.001
2. Standard errors in parentheses

Table 5: New Delinquent Activity Multivariate Regression Models, Supplementary Analysis Girls Sample Population

	New delinquent activity at least once during the pre-adjudicatory release period		
Domain 1: Most Serious Current Offense	-0.04*	(0.02)	
Domain 2: Supervision Status	-0.02	(0.06)	
Domain 3: History of Failure to Appear/Running Away within past 12 months	0.12	(0.16)	
Domain 4: Prior Adjudications/Closed Cases	0.30**	(0.10)	
Domain 5: Mitigating Factors	-0.30*	(0.14)	
Total Risk Score		-0.03	(0.02)
Risk Level			-0.23** (0.08)
Age at Intake	-0.10*	(0.04)	-0.07 (0.04)
White	0.32	(0.17)	0.30 (0.17)
Felony	0.09	(0.21)	0.08 (0.20)
Time from intake to case file	0.002**	(0.001)	0.002** (0.001)
Constant	-0.77	(0.72)	-0.97 (0.70)
			-1.00 (0.69)

Notes:

1. *p<0.05; **p<0.01; ***p<0.001
2. Standard errors in parentheses

Table 6: New Delinquent Activity Multivariate Regression Models, Supplementary Analysis White Sample Population

	New delinquent activity at least once during the pre-adjudicatory release period		
Domain 1: Most Serious Current Offense	-0.01 (0.02)		
Domain 2: Supervision Status	-0.004 (0.07)		
Domain 3: History of Failure to Appear/Running Away within past 12 months	0.06 (0.17)		
Domain 4: Prior Adjudications/Closed Cases	0.24* (0.12)		
Domain 5: Mitigating Factors	-0.30* (0.15)		
Total Risk Score		-0.01 (0.02)	
Risk Level			-0.24** (0.09)
Male	0.47* (0.21)	0.51* (0.21)	0.51* (0.21)
Age at Intake	-0.08 (0.05)	-0.06 (0.05)	-0.05 (0.05)
Felony	-0.02 (0.23)	-0.001 (0.22)	0.04 (0.20)
Time from intake to case file	0.002* (0.001)	0.002* (0.001)	0.002** (0.001)
Constant	-1.25 (0.79)	-1.41 (0.78)	-1.33 (0.77)

Notes:

1. *p<0.05; **p<0.01; ***p<0.001
2. Standard errors in parentheses

Table 7: New Delinquent Activity Multivariate Regression Models, Supplementary Analysis Black Sample Population

	New delinquent activity at least once during the pre-adjudicatory release period		
Domain 1: Most Serious Current Offense	-0.03 (0.04)		
Domain 2: Supervision Status	-0.21 (0.15)		
Domain 3: History of Failure to Appear/Running Away within past 12 months	0.07 (0.32)		
Domain 4: Prior Adjudications/Closed Cases	0.56** (0.17)		
Domain 5: Mitigating Factors	-0.29 (0.25)		
Total Risk Score		-0.03 (0.04)	
Risk Level			-0.15 (0.15)
Male	0.12 (0.31)	0.23 (0.30)	0.21 (0.30)
Age at Intake	-0.15 (0.08)	-0.12 (0.08)	-0.11 (0.08)
Felony	0.23 (0.42)	0.39 (0.40)	0.28 (0.35)
Time from intake to case file	0.002 (0.001)	0.002* (0.001)	0.003* (0.001)
Constant	-0.11 (1.28)	-0.47 (1.22)	-0.51 (1.22)

Notes:

1. *p<0.05; **p<0.01; ***p<0.001
2. Standard errors in parentheses

END NOTES

ⁱ While AUC-ROC scores below 0.50 are technically possible, they are rare in this context and are generally not suitable for interpretation. For a fuller explanation see: Karimollah Hajian-Tilaki, "Receiver Operating Characteristic (ROC) Curve Analysis for Medical Diagnostic Test Evaluation," *Caspian Journal of Internal Medicine* 4, no. 2 (2013): 627–35.

ⁱⁱ The "fair," "good," and "excellent" performance benchmarks used for AUC-ROC analysis are explained in Sarah L. Desmarais and Jay P. Singh, "Risk Assessment Instruments Validated and Implemented in Correctional Settings in the United States" (Council of State Governments Justice Center, March 27, 2013), <https://csgjusticecenter.org/wp-content/uploads/2020/02/Risk-Assessment-Instruments-Validated-and-Implemented-in-Correctional-Settings-in-the-United-States.pdf>. A more detailed statistical exploration of the AUC-ROC benchmarks is found in: Henian Chen, Patricia Cohen, and Sophie Chen, "How Big Is a Big Odds Ratio? Interpreting the Magnitudes of Odds Ratios in Epidemiological Studies," *Communications in Statistics - Simulation and Computation* 39, no. 4 (March 31, 2010): 860–64, <https://doi.org/10.1080/03610911003650383>.

ⁱⁱⁱ Kristin Bechtel, Christopher T. Lowenkamp, and Alex Holsinger. "Identifying the Predictors of Pretrial Failure: A Meta-Analysis," *Federal Probation* 75, no. 2 (2011).

^{iv} Samantha Ehrmann, Nina Hyland, and Charles Puzanchera, "Girls in the Juvenile Justice System," (U.S. Department of Justice, Office of Juvenile Justice and Delinquency Prevention, April 2019), <https://ojjdp.ojp.gov/sites/g/files/xyckuh176/files/pubs/251486.pdf>.

^v For a review of research on race and juvenile court outcomes, see Michael J. Lieber, "Race, Prior Offending, and Juvenile Court Outcomes," *Journal of Crime and Justice*, 39, no. 1 (2016): 88-106.

^{vi} Marie VanNostrand and Christopher T. Lowenkamp. "Assessing Pre-adjudication Risk without a Defendant Interview," (The Arnold Foundation, 2013), https://static.prisonpolicy.org/scans/ljaf/LJAF_Report_no-interview_FNL.pdf.