THE MONTANA PRE-ADJUDICATORY DETENTION RISK ASSESSMENT INSTRUMENT

August 2014

Patrick McKay
Dusten Hollist
Jacob Coolidge
Wesley Delano
Ian Greenwood
Michael King
Tyson McLean
James Burfeind
Chuck Harris
Daniel Doyle

Criminology Research Group
Social Science Research Laboratory
The University of Montana, Missoula

ACKNOWLEDGEMENTS

The researchers would like to recognize and thank all who enabled the work that this report is built upon. This project was supported by awards from the Bureau of Justice Statistics, Office of Justice Programs (2012-BJ-CX-K041 and 2013-BJ-CX-K021). The opinions, findings, and conclusions or recommendations expressed in this publication are those of the author(s) and do not necessarily reflect the views of the Department of Justice. The work was informed by the Annie E. Casey Foundation funded Juvenile Detention Risk Assessment: A Guide to Juvenile Detention Reform by David Steinhart and prior research conducted in other States. The points of view in this document are those of the authors and do not necessarily represent the policies or position of any State or Federal Agency.

A debt of gratitude is extended to the Montana Board of Crime Control for locating the funding to conduct the project. We extend a special thanks to Jimmy Steyee and Cil Robinson at the Montana Board of Crime Control. Both offered helpful comments on earlier drafts of this report in addition to support and encouragement throughout the process. Thanks also to Tim Callahan (Cascade County), Kevin Buerkle (Hill County), Leslie Halligan (Missoula County), Tara Moore (Yellowstone County) and their staffs for the work that they did in gathering together the risk assessment data used in the quantitative analysis, making this data available to the research team, and providing us with a work space during the county visits. We are grateful to Bob Peake and Kelly Elder at the District and Youth Court Services Bureau in the Court Administrator's Office for access to the Juvenile Court Assessment and Tracking System (JCATS) and the many queries that were ran to identify the detention sample in the report. Special thanks to members of the local law enforcement, probation and parole, youth court services, and detention services in Cascade, Hill, Missoula, and Yellowstone Counties for taking time out of their busy schedules to share their professional experiences, perspectives, and ideas. Finally, the support of the University of Montana, in particular the Office of Research and Sponsored Programs, the College of Arts and Sciences, and the Department of Sociology is recognized and appreciated.

Criminology Research Group
Social Science Research Laboratory
The University of Montana, Missoula
Social Science Building, Room 259
Missoula, Montana 59812
(406) 243-5381 (Office)
(406) 243-5951 (Fax)

TABLE OF CONTENTS

EXECUTIVE SUMMARY: RAI VALIDATION STUDY

INTRODUCTION

The primary research objective in the current investigation is a performance assessment of the Montana Pre-Adjudicatory Risk Assessment Instrument (RAI). The RAI has been used on a pilot basis in Cascade, Hill, Missoula, and Yellowstone Counties since 2009 as part of the pre-dispositional detention decision-making process to determine whether or not juveniles pose a public safety risk if released. The analysis focuses on two dimensions associated with the RAI. The first of these pertains to racial and cultural sensitivity in assessing offender risk. The second pertains to public safety outcomes associated with the behavior of juveniles who are released from detention. Specifically, whether a new offense occurred resulting in a misdemeanor or felony citation during the 45-day period of risk and whether the juvenile failed to appear for an initial court appearance after release from detention. To achieve these objectives, the following three research questions were examined:

1. Is the RAI being administered impartially and in a manner that it assesses juvenile offender "risk" in a culturally and racially sensitive manner?
    - Are there differences in the patterns of overrides that are used to make detention decisions when comparing White and minority juveniles?
2. Did the juveniles reoffend while on release status during the period of risk?
    - Was there a new felony or misdemeanor citation within 45 days following release from detention?
3. Did the juveniles fail to appear for the initial court appearance following release from detention?
    - Did the juvenile fail to appear for the next court appearance or follow-up with the probation officer after their release from detention?

This report is the result of a contract between the Montana Board of Crime Control (MBCC), Youth and District Court Services, and The University of Montana (UM). UM via the Social Sciences Research Laboratory (SSRL) provided the services of Department of Sociology Associate Professor Dusten Hollist, Professors James Burfeind and Daniel Doyle, and SSRL Administrator Chuck Harris. The research also utilized the skills and talents of graduate assistants Jacob Coolidge, Wesley Delano, Michael King, Patrick McKay, Tyson Mclean, and undergraduate assistant Ian Greenwood.

METHODOLOGY

To gather the data for the investigation, members of the research team traveled to the county seats of the four counties. The objective of these visits was two-fold. The first involved collecting the scores for each of the seven components of the RAI, the total RAI score and the date when the RAI was administered. These dates were collected so that demographic information (e.g., age, race, and gender) and information pertaining to the prior and subsequent criminal history could be matched to the juvenile. Second, focus groups and face-to-face interviews were conducted with juvenile justice system practitioners. In the focus groups, issues pertaining to the RAI were discussed as part of a larger dialogue on disproportionate minority contact. Face-to-face interviews with

practitioners focused on gathering information to better understand the process surrounding the use of the RAI and perceptions of the tool.

Identification numbers for cases issued a citation that could result in detention in the counties between January 1, 2009 and December 31, 2010 produced the initial pool of juveniles to be included in the study (n=7286). This initial pool was constrained to focus only on those cases that were actually placed, at least temporarily, in detention as a result of these citations. The RAI was administered to 675 of the 1296 valid cases that spent time in detention during the two year period of interest. This represents 52.1% of all juveniles detained.

SUMMARY OF RESULTS

QUANTITATIVE FINDINGS

Override Analysis

- The most common outcome was agreement between the RAI indicated and actual decision. This was the outcome in 52.0% (323 of 621) of decisions.
    - Cases involving minority juveniles were more likely to result in agreement between the RAI indicated and actual decisions than those involving White juveniles.
- Overrides down (where the actual decision was less punitive than the RAI indicated decision) occurred in 27.7% (172 of 621) of the total outcomes.
    - Cases involving White (27.8%) and American Indian (29.7%) juveniles comprised 94.2% (162 of 172) of the overrides down.
- Overrides up (where the actual decision was more punitive than the RAI indicated decision) occurred in 15.0% (93 of 621) of the total outcomes.
    - Most of these (78 of 93; 83.8%) involved White juveniles.
        - These occurred in 18.3% of the total cases involving White juveniles, a rate that is higher than Hispanics (13.7%) and more than twice the rate for American Indian juveniles (6.9%).
    - Override decisions from a detention alternative to detention were most likely to occur in cases involving White juveniles (63 of 93 cases; 67.7%).

New Citations During the Period of Risk

- The RAI results indicate good performance for felony citations.
    - The overall felony failure rate in the validation sample was 1.5% (2 of 130).
    - The failure rate in the detention override sample was higher, but still low at 5.5% (7 of 127).
- The RAI results for misdemeanor citations are just over the Annie E. Casey Foundation passing grade standard.
    - The overall misdemeanor failure rate in the validation sample was 10.8% (14 of 130).
    - In the detention override sample the misdemeanor failure rate was 16.5% (21 of 127).
- Only the instances where the RAI indicated and actual decision was *release* resulted in a failure rate that was less than 10% (7.8%).

- The overall failure rate in the validation sample was 12.3% (16 of 130), just higher than the recommended threshold.
- The overall failure rate in the detention override sample was higher at 22.0% (28 of 127) of cases.

Failure to Appear in Court

- These findings suggest good performance on the RAI indicated decision as it pertains to predicting the likelihood of failures to appear.
  - The overall failure rate in the validation sample was 2.3% (3 of 130).
  - The overall failure rate in the detention override sample was 11.8% (15 of 127).
- All three of the failure to appear instances in the validation sample occurred where the RAI indicated and actual decisions were to release the juvenile from detention.
- The failure to appear findings must be interpreted with caution.
  - Most of the cases that were scored as "no" on failure to appear were simply those where no evidence existed to suggest that they had missed a court mandated appointment.

QUALITATIVE FINDINGS

The primary objectives of the qualitative investigation were to outline the process associated with the administration of the RAI and explore practitioner perspectives on the use of the instrument. The data that is outlined below was drawn from transcripts taken from focus groups and face-to-face interviews with the probation officers, attorneys, and judges who work with juveniles in the juvenile justice system and are involved in detention decisions.

Strengths/Advantages of the RAI

- Objectivity: The RAI score offers an objective assessment with which the course of action for a juvenile can be made.
- Relative Comparisons: The RAI score provides the ability to make relative comparisons between juveniles and to compare outcomes based on similar scores.
- Inter-rater Consistency: The score lends consistency in evaluating juveniles among the various practitioners who use the tool.
- Override: The override provides a key element of discretion allowing decision makers the ability to consider issues external to the items on the RAI.
- Basis for Dialogue with Juveniles and Parents: The RAI provides objective information that can be used with juveniles and parents to discuss the issues associated with the cases and the possible outcomes that may emerge from them.

Concerns/Limitations of the RAI

- Skepticism about Diversion Impact: There is an absence in the data that the RAI would actually add to the ability to make more correct decision regarding juvenile detention.
- Consistency and Timeliness: There were concerns raised about the consistency with which the completed RAI was provided to attorneys and judges in a timely manner so that it could be used to determine the appropriate course of action during the probable cause hearings.

- Harshness of the Scores: Many respondents believed that applying and interpreting the scores as indicated on the instrument would mean that many additional juveniles would end up in detention than would otherwise be there.
- Relevance of the Cut Point Determinates: Concerns about the degree to which differences in the scoring thresholds could be used to determine a suitable course of action (release, detention alternative, secure detention) are common in the data.
- Too Much Influence Attributed to the Score: Respondents expressed concern about what would happen if the RAI score became the primary (or only) determinant of the decision to continue to detain juveniles. They were worried that too much emphasis would be placed on the RAI score in determining outcome for juveniles at the expense of practitioner discretion.
- Inconsistencies in the Scoring: Inconsistencies in the manner in which the RAI was scored and worries regarding the comparability of scores across raters were also common in the data.

RECOMMENDATIONS

Scoring Recommendations

- Evaluate whether or not the weights of the values assigned are appropriate for determining public safety risk.
- Determine whether or not the thresholds for release, detention alternative, and detain are where they should be.
- Evaluate whether or not juveniles who are brought in on warrants and pick up orders are enough of a public safety threat to justify the 15 points that they receive.
- Develop a systematic set of override criteria.
- Avoid the risk of placing too much emphasis to the RAI indicted decision at the expense of practitioner discretion.

Process Recommendations

- Administer the RAI before the juvenile is placed in detention.
- Minimize variations in the way that raters score the RAI.
- Change the time of the probable cause (detention) hearings.
- Increase the number of detention alternatives that are available at the point of contact with the police.

Data Recommendations

- Incorporate the RAI scores into the Juvenile Court Assessment and Tracking System (JCATS).
- Expand the scope of who can access data in JCATS.
- Include specific information in JCATS that allows for verification of failure to appear in court.
- Automate the RAI scoring by incorporating it into JCATS.

Research Recommendations

- Conduct research that is tasked with developing a standard operating procedures manual and an associated curriculum module to deliver it.
- Study whether or not the existing dimensions for which scores are assigned on the RAI are the ones that are most closely associated with the public safety outcomes that the RAI is evaluated on.
- Continue to monitor the performance of the RAI and the effectiveness of any changes that are made.
- Investigate the factors that are used by practitioners to override the RAI indicated decision.
- Examine stakeholder attitudes toward detention reform and in particular whether or not they would be willing to incorporate and follow the RAI.
- Continue to develop and refine practices that ensure comprehensive and accurate data about the RAI and its performance are collected and archived.

CONCLUSION

It is important to keep in mind that this study has provides a baseline examination of the RAI. It is a means of comparison to which future examinations of the RAI and the results from future studies can be evaluated against. It provides a gauge where any changes and modifications that are made to the instrument, the process that it is used to administer it, and data collected after it is used can be measured. It is also important to recognize that the evaluation of the RAI is a process. Research must continue to be directed toward improving and assessing the tool. As the RAI is an essential piece of the detention reform movement, priority needs to be given to systematic evaluations and, if needed, modifications to the instrument.

The findings in this assessment provided answers to critical questions regarding the validity of the RAI. The results showed that the RAI is being administered impartially and in a manner that is culturally and racially sensitive. Minority juveniles are not treated differently or adversely affected by the RAI. In the analysis, minority juveniles were less likely to have an override up (where the actual outcome was harsher than the RAI indicated outcome) when compared to White juveniles. The results also show that the RAI is a suitable tool in regard to meeting established public safety outcomes. When compared to the detention override sample, the RAI validation sample yielded a lower failure rate of new misdemeanor and felony citations and failures to appear for the initial court mandated appearance.

Under the recommendation of the staff and Executive Director at the Montana Board of Crime Control, a workgroup to investigate the development of a DRAI prototype began. Comprised of practitioners from the JDAI counties in Montana who had been using the RAI, the first workgroup meeting was held on January 2, 2013. Professor Dusten Hollist accepted the task to lead the workgroup and with their guidance established a monthly meeting schedule to take place on the fourth Wednesday of each month. At the time of the writing of this report, the workgroup meetings had taken place each month from January through July of 2013.

The DRAI prototype was completed in March 2013. It was at this point where activities within the workgroup shifted to discussions of scoring issues,, critiquing, and testing early versions of the automated DRAI that were being developed by programmers at Noble Software LLC. At the completion of the writing of this report, the final version of the automated DRAI was in progress as was the work by Professor Dusten Hollist and research associate Patrick McKay on the training curriculum modules that are described in the next section of the report.

EXECUTIVE SUMMARY: DEVELOPMENT OF THE DETENTION RISK ASSESSMENT PROTOTYPE

INTRODUCTION

In this section, the stages of progress that were taken to develop the DRAI prototype and an associated training curriculum are presented. Information from Patrick McKay's research on the mathematical methods that could be used to re-score the item on the RAI are presented first. This is followed by a discussion of the process associated with developing the DRAI prototype. Then a discussion on the development of the training curriculum module for using and interpreting the DRAI and the URL for accessing the training modules is presented.

RESCORING THE RAI

Interest in rescoring the Montana RAI based off of several initial observations:

1. Scoring of risk factors and thresholds for release, detention alternative, and detain were borrowed verbatim from the Virginia Detention Risk Assessment Instrument.
2. Practitioners expressed concern over the RAI's ability to separate juveniles who pose greater risk than those juveniles who do not and practitioners felt that the tool was overly punitive.
3. Examination of the distribution of RAI risk scores and risk factor scores provided evidence that risk scores and thresholds should be analyzed.
    a. Juveniles who received an indicated decision of release or detention alternative had almost identical failure percentages compared to those juveniles with a RAI indicated decision of secure detention.
    b. Only two risk factors on the RAI were correlated at a statistically significant level to recidivism:
        i. Intensive or close supervision.
        ii. Prior admission of guilt for two or more misdemeanor or status offenses.
    c. The risk factor "Most Serious Offense Alleged in Current Referral" is negatively correlated to recidivism.
    d. Based on the Pearson correlation coefficients it is apparent that alternate means of creating a more accurate RAI must be explored.

DEVELOPING THE DRAI PROTOTYPE

Under the recommendation of the staff and Executive Director at the Montana Board of Crime Control, a workgroup to investigate the development of a DRAI prototype began. Comprised of practitioners from the JDAI counties in Montana who had been using the RAI, the first workgroup meeting was held on January 2, 2013.

Multiple considerations were included as a baseline for assisting the workgroup with the creation of the DRAI prototype:

1. DRAI prototype had to include components from the original RAI that had received support in the practitioner interviews.
2. Informed by the evidence take from the review of the literature on risk assessment performance.
3. Informed by results associated with the analysis that examined the correlations and predictive association between items on the original RAI and the risk for re-offense and failure to appear.
4. Needed to be founded upon the best practice model for development of risk assessment tools by David Steinhart (2006).
    a. Risk-screening instruments are used to classify arrested children and to determine their eligibility for secure detention or release.
    b. The criterion upon which detention decisions are based should be applied equally to all juveniles referred for a detention.
    c. The criterion must be in a written format and incorporated in to a screening process that is standardized for all referrals.
    d. The criterion should measure detention-related risks centered on the risk of reoffending prior to adjudication and the risk of failing to appear at a court hearing or follow-up with a probation officer.
    e. Detention decisions should be based on neutral and objective factors.
        i. These include nature and severity of the offense; number of prior referrals, and/or the juveniles' history of flight from custody.
    f. Local detention risk assessment instruments are not clones of one another. Each one is tailored to fit state and local laws, policies, and procedures.

DRAI prototype incorporated three major changes:

1. Risk factors were added, kept, or removed based on evidence from interviews conducted in the RAI validation study, information derived from the RAI workgroup, a literature on risk assessment instruments, and analysis of the data collected in the RAI validation study.
    a. The only risk factor completely removed from the RAI on the DRAI is the questions asking whether "the youth was taken into custody on a valid warrant or pickup order." This factor was added to the list of detention override decisions.
    b. The risk factor "most serious offense alleged in current referral" was changed from the RAI to the DRAI.
        i. Instead of only four categories to pick for this risk factor (felonies against persons, other felonies, misdemeanors against persons, and other misdemeanors) a score for every crime a youth can be cite for was created. Points were assigned to offenses based on a likelihood to reoffend severity index.
    c. Two risk factors were kept from the RAI and listed verbatim on the DRAI. These include: "prior admissions of guilt," and "referrals pending adjudication." The risk factor "warrant history" was also retained; however the responses to the question were compressed into a single category.
    d. The risk factor "failure to appear/runaway/escape history" was added to help measure for flight risk.

2. Risk factor scores were examined to determine if they seemed logically valid.
3. Aggravating factors were added: These add one point to the total risk score
    a. history of drug or alcohol problems.
    b. under current supervision status.
    c. juvenile's first offense was before the age of 13.
    d. multiple offenses alleged in the current referral.
    e. crime or behavior alleged was particularly severe or violent and or used a deadly weapon.
4. Mitigating factors were added: These subtract one point to the total risk score
    a. no arrest within the past 12 months .
    b. this offense is the first law violation in minor's history.
    c. minor demonstrates stability in school or employment.
    d. no history of failure to appear within the past 12 months.
    e. and involvement in current offense was remote, indirect, or otherwise mitigated.

The DRAI prototype was completed in March 2013. It was at this point where activities within the workgroup shifted to discussions of scoring issues, critiquing, and testing early versions of the automated DRAI that were being developed by programmers at Noble Software LLC. At the completion of the writing of this report, the final version of the automated DRAI was in progress as was the work by Professor Dusten Hollist and research associate Patrick McKay on the training curriculum modules that are described in the next section of the report.

THE DRAI TRAINING CURRICULUM MODULE

One of the principal voids that were uncovered in the initial RAI validation study was the absence of a systematic training curriculum for practitioners using the tool in the field. To address this void, a key component of the follow-up investigation was to produce a standardized training curriculum that could be used across Montana's juvenile justice system.

1. First component of the training provides background information on the purpose of detention risk assessment instruments
2. Second component of the training contains the demos of the automated DRAI.
    a. Demos for accessing the DRAI through both the JDDRS and JCATS.
    b. Demos on using the automated DRAI for juveniles already known to the system.
    c. Demos on using the automated DRAI for juvenile not none to the system.
    d. Demos on interpreting the DRAI score and overrides

The DRAI training curriculum modules are available on the Montana Board of Crime Control webpage at: http://www.mbcc.mt.gov/JuvenileJustice/JuvJustice.asp. Please contact Tyson McLean, Director, Statistical Analysis Center at the Montana Board of Crime Control in Helena for questions and technical assistance about the DRAI training curriculum modules.

EXECUTIVE SUMMARY: RAI DRAI COMPARISON TEST

INTRODUCTION

In March of 2013, a request was made via the Statistical Analysis Center's funding mechanism to the Bureau of Justice Statistics at the National Institute of Justice to fund a nine-month comparison study for the RAI and the DRAI. The purpose of the RAI-DRAI comparison study is to investigate if changes made to the DRAI increase the accuracy at predicting juvenile public safety risk and decreased the use of secure detention when compared to the RAI. This analysis has five objectives to complete the RAI DRAI Comparison:

1) Investigate additions made to the DRAI
2) Compare override decisions
3) Compare detention decisions
4) Compare prediction accuracy
5) Investigate threshold outcomes

These five objectives will help determine if changes made to the DRAI have increased performance in the Montana Juvenile Justice System and will provide direction for future research.

METHODOLOGY

The initial data set was queried by Montana's Office of the Court Administrator for the Supreme Court for the Criminology Research Group (CRG). The initial data set provided current offense, recidivism, and demographic data on all juveniles who were cited with an offense during the period August 1, 2013 to April 31, 2014. All other variables were collected by the CRG through the Juvenile Court Assessment and Tracking System (JCATS). The initial data set was comprised of 4045 juveniles but was constrained down into two samples. The first constraint removed all juveniles who weren't in the sample long enough to have a 30 day risk period. Second, juvenile were removed from the sample if their most serious offense was a status or city ordinance offense. These constraints created Sample 1 that has 2689 juveniles and is used to examine override and detention decisions. The last constraint created Sample 2. All juvenile were removed from Sample 1 that were kept in secure confinement for more than 5 days. Sample 2 has 2550 juveniles and is used to investigate risk assessment instrument prediction accuracy.

FINDINGS

Objective 1: Investigate Additions Made to the DRAI

- Failure to Appear, Runaway/Escape History
  - Statistically significant correlation to "Any Recidivism" at the $p<.01$ level.
  - Statistically significant correlation to misdemeanor recidivism at the $p<.05$ level.
  - No correlation found to felony recidivism
- Most Serious Offense Alleged in Current Referral

    - Statistically significant negative correlation to "Any Recidivism" and misdemeanor recidivism at the p<.01 level.
        - This is an unwanted findings which indicates the more severe the offense the less likely the juvenile will commit a recidivating offense.
    - Statistically significant positive correlation to felony recidivism at the p<.01 level.
        - This is an important improvement found on the DRAI.
- Aggravating Factors
    - Statistically significant correlation for "any recidivism" for 3 of the 5 aggravating risk factors
        - History of drug or alcohol problems
        - Current supervision status
        - First offense was under the age of 13
    - Statistically significant correlation for misdemeanor recidivism for 1 of the 5 aggravating risk factors
        - First offense was under the age of 13
    - Statistically significant correlation for felony recidivism for 1 of the 5 aggravating risk factors
        - Current offense was particularly severe or violent and or used a deadly weapon.
- Mitigating Factors
    - Statistically significant negative correlations for "any recidivism," misdemeanor recidivism, and felony recidivism for 3 of the 5 mitigating factors
        - No arrest within the past 12 months
        - This offense is the first law violation in minor's history
        - Demonstrates stability in school

Objective 2: Override and Agreement Analysis

- DRAI
    - Agreement
        - DRAI agrees with actual detain and release decisions 81.6% of the time.
        - White juveniles have the highest agreement rate for both detain and release decisions.
        - African Americans have the least amount of agreement for release decisions with 74.5% of the time.
        - The Native American sample has the least amount of agreements for detain decisions with 1.3% of the time.
    - Override
        - The DRAI disagreed with the actual detain and release decisions 18.4% of the time.
        - The DRAI shows an override up rate of 14.8% which falls within the 15% override up limit recommended by JDAI (Steinhart p.22).
        - Override down only occurred in 3.7% of the cases.
        - White juveniles were least likely to receive and override down and mostly likely to receive an override up compared to Native Americans, African Americans and Hispanic/Latinos.

- RAI
  - Agreement
    - The RAI has similar agreement rates compared to the DRAI.
    - The RAI agrees with actual detain and release decisions 82% of the time.
    - White juveniles were more likely to show agreement to release and least likely to show agreement to detain than Native Americans, African Americans, and Hispanic/Latinos
  - Override
    - The RAI disagreed with the actual detain and release decision 18% of the time.
    - The RAI shows and override up rate of 12.7% which falls within the 15% override up limit recommended by JDAI
    - African Americans were most likely to have an override up(16%) and least likely to have an override down (3.8%) compared to White, Native American, and Hispanic/Latino juveniles.

Objective 3: Detention Decisions

- Actual Detain Decisions
  - 449 juveniles out of 2689 (16.7%) were placed into secure detention.
- RAI Detain Decisions
  - The RAI indicated decision placed 250 juveniles out of 2689 (9.3%) into secure detention. This represents a 44.3% decrease in the use of secure detention from the actual decision.
- DRAI Detain Decisions
  - The DRAI indicated decision placed 148 juveniles out of 2689 (5.5%) into secure detention. This represents a 67.04% decrease in the use of detention from the actual decision. The DRAI's indicated decisions would decrease the use of detention by 40.8% compared to the RAI's indicated decision.
- Who the RAI would detain that the DRAI would release
  - 145 juveniles that the DRAI would release that the RAI would detain.
  - 54.5% committed a misdemeanor offense or technical violation
  - 20% committed a felony against person offense.
  - 3.5% committed a felony drug offense.
  - .7% committed an other non-misdemeanor felony
  - .7% committed a felony sex offense
- Who the DRAI would detain that the RAI would release
  - 43 juveniles that the RAI would release that the DRAI would detain.
  - 41.9% committed a felony sex offense.
  - 30.2% committed a felony drug offense.
  - 25.6% committed a felony property offense.
  - 2.3% committed a misdemeanor property offense.

Objective 4: Compare Prediction Accuracy

- ROC Analysis: The Receiver Operating Characteristic (ROC) analysis will be one tool used to investigate instrument accuracy. ROC has been noted as "the preferred measure of predictive or diagnostic accuracy" (Rice and Harris 2005).

- Area Under the Curve (AUC): AUC is the statistic derived from ROC analysis that allows for interpretation of risk assessment accuracy. AUC ranges from .5 to 1. An AUC of .5 indicates the instrument did not predict the outcome any better than chance alone. An AUC of 1 indicates the instrument was perfect in its prediction accuracy.

- RAI: The RAI performed moderately well for the outcomes of any recidivism and misdemeanor recidivism. The prediction accuracy for any recidivism and felony recidivism is statistically different from chance alone at the p<.01 level. The prediction of felony recidivism was not found to be statistically different from chance alone. Below are the AUC results for each of the outcomes.
    - Any Recidivism: AUC = .593** N=247
    - Misdemeanor Recidivism: AUC = .591** N=153
    - Felony Recidivism: AUC = .641 N=11

- DRAI: The DRAI performed slightly better than the RAI on all outcomes. All prediction outcomes, including felony recidivism, was found to be statistically different from chance alone at the p<.01 level. Below are the AUC results for each of the outcomes.
    - Any Recidivism: AUC= .616** N=247
    - Misdemeanor Recidivism: AUC= .603** N=153
    - Felony Recidivism: AUC= .730** N=11

- The AUC difference between the RAI and DRAI was not found to be statistically significant for any of the outcomes. This means that the difference found between the prediction of the RAI and the DRAI is small and may not represent a difference between prediction accuracy in the population.

- RAI and DRAI performance on Race and Gender:
    - Similar to the findings above, the DRAI slightly outperformed the RAI on all samples. The RAI and DRAI show improved accuracy when predicting misdemeanor or felony recidivism for the minority sample compared to the White sample however the difference was not found to be statistically significant.

    - The RAI and the DRAI's accuracy was highest for the female sample compared to all other samples. The RAI's prediction accuracy for females was not statistically different from the RAI's prediction accuracy of males, however, the DRAI's prediction accuracy for females was statistically different from the DRAI's accuracy at predicting males.

Objective 5: Threshold Outcomes

- According to ROC analysis a decrease in accuracy has been discovered when the indicated decision score is used instead of the total score.
- Total Score vs. Indicated Decision
    - Total Score: The total score is the summation of risk factor points that each juvenile has earned on the risk assessment instrument

    - Indicated Decision score: The indicated decision is the category the juvenile is placed in based off of their total score: 1) Release, 2) Detention Alternative, or 3) Detain.
- ROC analysis is limited in the accuracy reading because it determines accuracy based on the true positive rate and does not analyze the true negative rate that JDAI is interested in.
    - True positive rate is when the RAI or DRAI accurately predicts a juvenile will commit a recidivating offense.
    - The true negative rate is when the RAI or DRAI accurately predicts a juvenile will not commit a recidivating offense.
    - DRAI:
        - True Positive: 4.3% (17)
        - True Negative: 95% (2266)
    - RAI:
        - True Positive: 11% (18)
        - True Negative: 92.2% (2201)
- Both the RAI and the DRAI are limited in their ability to predict recidivism, however, both instruments are performing very well at predicting those juveniles who will not commit a new offense.
- The DRAI slightly outperformed the RAI with 95% accuracy for true negatives compared to 92.2% accuracy for true negatives by the RAI a difference of 65 juveniles.

Strengths/Advantages of DRAI

- Unbiased Judgment: No evidence was found that the RAI or the DRAI discriminated against any one race/ethnicity or gender.
- Decrease the use of detentions: The DRAI's indicated decisions only recommended secure detention placement in 5.5% (148) of the juveniles in in the sample. This is a 67.04% decrease in the use of detention from what actually occurred and a 40.8% decrease in the use of detention from what the RAI recommends.
- Increased Accuracy: When the total scores are used to measure for accuracy, the DRAI outperformed the RAI on every outcome. When the indicated decisions are used the DRAI outperforms that RAI at predicting juveniles who will not commit a recidivating offense by 65 juveniles.
- (unexamined advantage) Automated instrument: Very little information is required by practitioners to fill out the instrument. This will decrease practitioner error and timeliness and increase consistency between practitioners.

DRAI Concerns/Limitations

- Retrospective sampling method: This method uses secondary data to analyze the use of the RAI and DRAI. With this method, some risk factors on the RAI and DRAI were not able to be collected accurately and some risk factors had to be omitted completely.
- Practitioner feedback: The inability to receive practitioner feedback also stems from the retrospective sampling method. How applicable the instrument is in the juvenile justice system must be investigated in future research.
- Threshold Accuracy: during the analysis it was discovered that prediction accuracy decreased by a large amount when the indicated decisions were used instead of the

total score. Accuracy can be gained by changing the thresholds, however, additional ways to increase prediction accuracy should be investigated.

RECOMMENDATIONS

Data Recommendations:

- Collect variables in the JCATS that will assist in future research on the DRAI, in particular:
    - Failure to Appear
    - Recidivism in 30 days
- Develop a way in JDDRS to monitor the validity of the DRAI:
    - Compare detention decisions made with the use of DRAI versus detention decisions made without the use of DRAI
    - Include a way to continuously monitor the DRAI's accuracy with ROC analysis
    - Provide an override statistic for each county to ensure that overrides are used normally.

Research Recommendations

- Conduct research on the DRAI using the prospective sampling method.
    - This is the most important research recommendation. Investigating the DRAI using a retrospective sampling method has several limitations that the prospective approach accounts for. Implementing the instrument into the juvenile justice system is the only way to truly determine the instruments validity.
- Conduct research investigating differences in gender and race on the DRAI
- Conduct research investigating override decisions (once DRAI is implemented into the system)
- Conduct research to increase recidivism prediction accuracy.
    - The DRAI is shown to perform poorly when predicting recidivism but perform well at predicting non-recidivism. More research is needed to determine whether additional risk factors, adjustments in the risk factor weights, and changes in the decision thresholds would increase recidivism prediction without decreasing the instruments ability to predict non-recidivism.

Montana Juvenile Justice System:

- Implement DRAI to JDAI counties.

This goes hand in hand with future research. To truly determine how well the DRAI performs in the juvenile justice system the DRAI must be implemented in the system.

CONCLUSIONS

This research has provided evidence that the DRAI is a valid instrument and is expected to perform up to JDAI standards when implemented in the Montana Juvenile Justice System. Similar to the RAI validation study, this investigation provides a baseline examination of the DRAI. The findings here will be particularly important for the future research that is conducted. The evidence presented above shows that use of the DRAI decreases the use of secure confinement as a recommendation, increases prediction accuracy of non-recidivism and provides an unbiased predictions for both race and gender. Of the 43 juveniles that the DRAI would detain that the RAI would release 42.9% were felony sex offenders. Of the 143 juveniles that the DRAI would release that the RAI would detain 54.5% committed a misdemeanor or technical violation. An additional improvement made to the DRAI that was unable to be investigated is the automation of the instrument. The automation is expected to decrease practitioner error and timeliness and increase consistency and usability. Risk assessment, in the field of juvenile justice, will never be perfect but the steps taken thus far from the RAI to the automated DRAI are evidence of the ability to continually improve risk assessment validity which will increase youth protection in the Montana Juvenile Justice System.

SECTION 1: RISK ASSESSMENT INSTRUMENT VALIDATION

INTRODUCTION

The use of risk assessment instruments to help inform judicial decisions regarding juvenile detention is part of a much broader trend in the last two decades across every stage of juvenile justice (Grinberg, Dawkins, Dawkings, and Fullilove 2005; Odgers, Moretti, and Reppucci 2005). These instruments were developed to better predict the likelihood of future outcomes (e.g., future victimization, recidivism, non-compliance with court mandates) and to provide courts with quantitative decision-making tools when recommending less restrictive alternatives to secure confinement.

Of particular interest to this investigation are the instruments that have been developed to inform pre-adjudicatory detention decisions (Kurlychek and Johnson 2010; Schmidt, Campbell and Houlding 2011; Schwalbe 2007; Schwalbe, Fraser, Day, and Cooley 2006; Sharkey, Furlong, Jimerson, and O'Brien 2003). These instruments have been developed to consider two primary factors: 1) the likelihood that a released juvenile will appear for a subsequent judicial preceding and 2) the likelihood that a juvenile will not commit a new offense during the period of risk between release from detention and adjudication.

The momentum behind this trend toward the increased use of risk assessment instruments emerged out of criticisms of subjective and arbitrary decisions regarding the processing of youth in the juvenile justice system (JJS). Risk assessment instruments provide an objective assessment that reflect a juvenile's criminal history as well as extra-legal and social history factors (e.g., family situation, school performance, mental/physical health considerations, etc.). Taken together, these variables have been shown to influence juvenile outcomes and thus provide JJS practitioners with a metric for making decisions.

The primary research objective in the current investigation is a performance assessment of the Montana Pre-Adjudicatory Risk Assessment Instrument (RAI). The analysis focuses on two dimensions associated with the RAI. The first of these pertains to racial and cultural sensitivity in assessing offender risk. The second pertains to public safety outcomes associated with the behavior of juveniles who are released from detention. Specifically, whether a new offense occurred resulting in a misdemeanor or felony citation occurred during the 45-day period of risk and whether the youth failed to appear for an initial court appearance after release from detention. To achieve these objectives, the following three research questions were examined:

1. Is the RAI being administered impartially and in a manner that it assesses juvenile offender "risk" in a culturally and racially sensitive manner?
    - Are there differences in the patterns of overrides that are used to make detention decisions when comparing White and minority juveniles?
2. Did the juveniles reoffend while on release status during the period of risk?
    - Was there a new felony or misdemeanor citation within 45 days following release from detention?
3. Did the juveniles fail to appear for the initial court appearance following release from detention?

- Did the juvenile fail to appear for the next court appearance or follow-up with the probation officer after the date of their release from detention?

This report is organized in four sections. The first section provides background on the use of risk assessment tools and the Juvenile Detention Alternatives Initiative. The second section offers a quantitative assessment of the RAI based on the research questions above. In section three, qualitative findings from focus groups and interviews with JJS practitioners regarding their use and perceptions of the Montana Risk Assessment Instrument are presented. The final section summarizes the findings in the form of conclusions and associated recommendations.

BACKGROUND

Researchers have been studying formal prediction methodologies for over 80 years. In 1928, E. W. Burgess created one of the first risk assessment instruments using what would later be called the Burgess Method. Since the creation of the Burgess Method, researchers have been examining ways to increase the predictability of risk behavior by finding both alternate models that predict risk and meaningful ways to weight risk predicting variables.

Validations of juvenile pre-trial release groups have produced positive results, with juvenile success rates exceeding those for similar programs for adults (See Steinhart 2006 for a review of these studies). Additionally, there is a growing body of literature that has found risk assessment instruments to be highly effective and supports their continued use (Grinberg et al. 2005; Odgers et al. 2005; Schidmt et al. 2011; Schwalbe 2007; Sharkey et al. 2003).

Of specific relevance to this investigation is the previous work done by Reiner, Miller and Gangal (2007). The researchers conducted a validation of Virginia's Detention Assessment Instrument (DAI). Their findings show that in terms of the Annie E. Casey Foundation's guidelines for acceptable performance, the DAI failure rate was acceptable regarding new offenses and good regarding failures to appear in court. The Virginia DAI is the foundation on which the Montana RAI is based and the findings from the Reiner et al. study provides a baseline for the current investigation.

THE JUVENILE DETENTION ALTERNATIVE INITIATIVE (JDAI)

Since its origins in 1992, the Juvenile Detention Alternatives Initiative (JDAI) has been a key part of the Annie E. Casey Foundation's mission toward detention reforms across the United States. According to data presented on the Casey Foundation webpage (www.aecf.org), at the time that this report was written there were 150 JDAI sites in 36 states and the District of Columbia. The initiative was designed to support the vision that all youth involved in the juvenile justice system have opportunities to develop into healthy, productive adults.

A major mission of JDAI is to work toward detention alternatives for juveniles. In addition to reducing the high financial costs of secure confinement, the JDAI perspective argues that juveniles are often unnecessarily or inappropriately detained, resulting in long-lasting, negative consequences for both public safety and youth development.

The JDAI approach involves eight core strategies designed to promote changes to policies, practices, and programs to reduce reliance on secure confinement, improve public safety, decrease racial

disparities and bias, and stimulate overall juvenile justice reforms. Among the primary objectives pertaining to detention are: 1) To reduce unnecessary or inappropriate secure confinement of juveniles; 2) To reduce crowding and to improve conditions for juveniles in secure detention facilities; 3) To encourage the development of non-secure alternatives to secure juvenile confinement; and 4) To discourage failures to appear in court and subsequent delinquent behavior (Steinhart 2006).

In Montana there are four pilot counties (Cascade, Hill, Missoula, and Yellowstone) that were initially involved in the movement toward alternatives to secure confinement of juveniles. In each of the JDAI counties, a coordinator is selected to work with local JJS stakeholders. Together, they identify resources and develop strategies to promote the use of alternatives to secure confinement and detention reform.

JDAI AND THE DEVELOPMENT OF THE RAI

Risk assessment instruments play an important role in detention reform. These instruments are a key piece in the process of evaluating juveniles who have been arrested for a detainable offense, in most cases one resulting in a misdemeanor or felony citation, to determine the need for secure confinement or their suitability for release back into the community. The instruments are expected to be based on objective criteria (e.g., criminal background) and uniformly applied to all juveniles who have committed a detention eligible offense.

In many states, risk screening is conducted either by law enforcement officers in the field or an intake officer at the detention facility where a juvenile is taken after arrest. In Montana, law enforcement officers are provided statutory discretion pertaining to both the decision to arrest and to initially detain a youth (MCA §41-5-322.2). This statute states that "Whenever the peace officer believes, on reasonable grounds that the youth must be detained, the peace officer shall notify the juvenile probation officer immediately and shall, as soon as practicable, provide the juvenile probation officer with a written report of the peace officer's reasons for holding the youth in detention." Then, a probable cause hearing "must be held within 24 hours, excluding weekends and holidays and legal holidays" to determine whether the "youth is a delinquent youth or a youth in need of intervention" (MCA §41-5-332.1).

The outcome of these statutes results in a somewhat different approach to the process associated with the administration of the RAI in Montana than is found in many other states. The RAI is administered between the placement of the juvenile in detention and the probable cause hearing in contrast to field administration or administration at intake. As a result, juveniles will spend at least some time (in most cases less than 24 hours; in some cases up to 5 days) in secure detention.

Since January 1, 2009, a risk assessment tool (RAI) modified from Virginia's Detention Assessment Instrument, has been administered in Montana's JDAI counties to help inform decisions pertaining to pre-adjudicatory detention decisions (A copy of the instrument is presented in Appendix A). The RAI is comprised of seven components. These account for key dimensions of a juvenile's prior, current, and pending involvements in the JJS. A score is assigned for each dimension and then summed to form a total score that is used to make one of three indicated decisions: 1) release; 2) detention alternative; or 3) secure detention.

A juvenile whose total summed score on the RAI is between 0-9 will be eligible for release according to the instruments indicated decision. Those with summed scores between 10 and 14

will be eligible for an alternative to detention (ATD). Alternatives to detention might include electronic monitoring, house arrest, release to shelter care, group home, or admission to residential treatment depending upon the needs of the individual and availability of the alternative. Any juvenile whose summed score is 15 or higher will be assigned secure detention as the indicated decision.

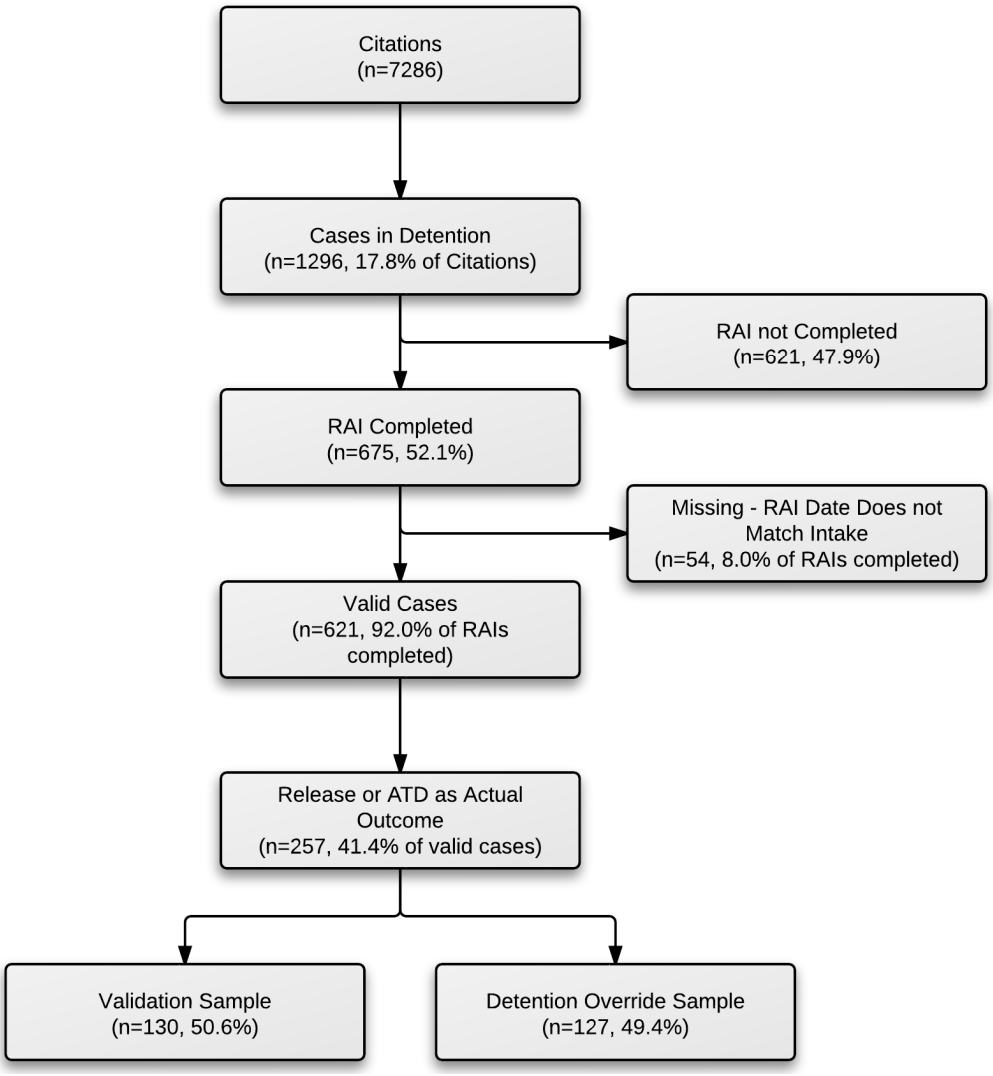
The indicated decision provides an objective measure that is expected to be predictive of the likelihood of a subsequent offense or failure to appear for court or a court mandated appointment (e.g., meeting with the probation officer). However, the RAI also allows for discretion in the form of an override where the probation officer can recommend the court detain a youth even when the RAI score indicates release (override up). The override also works in the opposite manner providing the means to recommend for a juvenile's release when the RAI score indicates secure detention (override down). These decisions are made based on individual, case-by-case discretion and are expected to be accompanied with a justification for recommending an actual decision different than the one indicated by the RAI.

The study was built from listings out of the Juvenile Court Assessment and Tracking System (JCATS). JCATS is a statewide reporting system that is used primarily by JJS practitioners and in particular probation officers. The system tracks current offense details including time, location, and type of offense. Furthermore, JCATS provides documentation of court proceedings, including information about referrals, petitions, and dispositional outcomes. In addition to tracking current offense details and proceedings, JCATS provides other information including: basic demographics about the juvenile, family characteristics, school performance, mental health, drug use history, and a chronological reference of previous offenses. The system also provides numerous methods for keeping notes about meetings with the probation officer, court appearances, probation officer contact with parents and teachers, and other relevant case notes.

THE PRESENT STUDY

Identification numbers for cases issued a citation that could result in detention in the JDAI counties between January 1, 2009 and December 31, 2010 produced the initial pool of juveniles to be included in the study (n=7286). This initial pool was constrained to focus only on those cases that were actually placed, at least temporarily, in detention as a result of these citations. The RAI was administered to 675 of the 1296 valid cases that spent time in detention during the two year period of interest. This represents 52.1% of all juveniles detained.

FIGURE 1.1 FLOW CHART OF JUVENILE CITATION, DETENTION, AND RAI OUTCOMES



As shown in Figure 1.1 above, of the 675 cases that were administered the RAI, 54 cases were eliminated. These cases were eliminated as the RAI administration date did not correspond with any intake dates that could be found in JCATS. The resulting sample of 621 cases was used for the information presented in Tables 1.1, 1.2, and 1.3 that follow.

In order to conduct the validation assessment, all juveniles remaining in detention after their probable cause hearing had been held (n=364) were removed from the dataset. Of the initial 675

cases identified as receiving the RAI, a total of 257 of these were actually released from detention, either on probation or some other alternative to secure detention (e.g., electronic monitoring, shelter care, or residential treatment). Therefore, the sample of 257 cases provides the basis for the validation assessment that is presented in Tables 1.4 and 1.5.

In 130 of these cases, the actual decision to *release* from detention was consistent with the RAI indicated *release* or *detention alternative* decisions. The remaining 127 cases represent instances when the RAI indicated decision to *detain* resulted in an override to *release* or a *detention alternative* based upon a probation officer recommendation. This division provides for comparisons between validation and detention override subsamples.

To gather the RAI scores, members of the research team traveled to the county seats of the four JDAI counties. The objective of these visits was two-fold. The first of these involved collecting the scores for each of the seven components on the RAI, the total RAI score and the date when the RAI was administered. These scores and dates were then matched via JCATS ID number so that demographic information (e.g., age, race, and gender) and information pertaining to the prior and subsequent criminal history could be matched to the juvenile. Second, focus groups and face-to-face interviews were conducted with JJS practitioners. In the focus groups, issues pertaining to the RAI were discussed as part of a larger dialogue on disproportionate minority contact. Face-to-face interviews with practitioners focused on gathering information to better understand the process surrounding the use of the RAI and perceptions of the tool.

The analysis that follows was conducted to provide a baseline for understanding the use and performance of the RAI in the first two years that it was administered. The researchers sought to incorporate the JJS practitioner perspective which is often absent from similar investigations. These perspectives are presented in addition to the analysis that addresses the previously stated research objectives examining:

- whether the patterns in the use of override decisions vary by race/ethnicity of the juvenile;
- whether decisions based on the RAI indicated scores are good predictors of the likelihood that a released juvenile will avoid behavior resulting in a new citation during the period or risk;
- whether decisions based on the RAI indicated scores are good predictors of the likelihood that a released juvenile will appear in court or the initial court mandated meeting with the probation officer.

DEFINING THE PERIOD OF RISK

In June of 2011, a meeting of key stakeholders was convened to discuss the length of the period of risk that would be used in the analysis. After debating the relative merits of a shorter and longer period of time, it was concluded that the period of risk would be the first 45 days after release from detention. In the analysis that follows, success or failure of the RAI is made based on whether or not a new offense, in the form of either a misdemeanor or felony citation was issued during the period of risk.

When considering the length of the period of risk after release from detention, the following are important to keep in mind. First, it is common for state statutes to place limitations on the amount of time that can pass between the initial placement of a juvenile in secure detention and the date of

an adjudicatory hearing. However, no such statute exists in the Montana Youth Court Act. Second, unlike recidivism risk assessment tools that are constructed to examine the probability that an offender who is released from secure confinement will violate the terms of release and return within the three years following release, the RAI was constructed to examine a much shorter interval. The 45 day period used in this assessment is 50% longer than the one used in the Reiner et al. (2007) examination, an issue that needs to be considered when interpreting the validation findings that follow.

ASSESSING THE MONTANA RISK ASSESSMENT INSTRUMENT

Following the process outlined in the juvenile detention risk assessment guide (Steinhart 2006), the validation assessment of the RAI involves tracking the success or failure of juveniles released from pre-adjudicatory detention in relation to two specific outcomes: the occurrence of new felony or misdemeanor citations or failure to appear for the subsequent court mandated visit (probation office visit or court hearing) after release from detention. This form of validation is often referred to as a public safety test.

Before assessment of the RAI can be performed, it is important to analyze the similarities and differences between the cases that were and were not administered the RAI after initial placement in secure detention. This information is presented in Table 1.1 below. The statistics provide a means to compare the two groups in terms of age, gender, race/ethnicity and previous offense history. The data show few differences between the groups. Members of the non-RAI detention sample were on average older and more likely to be male. The range of previous offenses was larger for the RAI sample and the two groups were nearly identical in terms of the distribution by race/ethnicity.

TABLE 1.1 DESCRIPTIVE STATISTICS FOR RAI VALIDATION AND NON-RAI DETENTION SAMPLES

	RAI Sample (n=675)						Non-RAI Detention Sample (n=621)					
Demographic Indicators	Min	Max	M	SD	F	%	Min	Max	M	SD	F	%
Age	10	18	14.9	1.47			7	18	15.83	1.45		
Gender												
Female					211	34.0%					179	29.4%
Male					410	66.0%					429	70.6%
Race/Ethnicity												
White					427	68.8%					424	69.7%
American Indian					145	23.3%					139	22.9%
Asian					3	0.5%					0	0.0%
African American					17	2.7%					16	2.6%
Hispanic/Latino					29	4.7%					28	4.6%
Other					0	0.0%					1	0.5%
Previous Offenses	0	57	10.34	9.02			0	48	9.97	8.11		
Felony Offenses	0	11	.59	1.13			0	9	0.66	1.28		
Misdemeanor Offenses	0	45	6.16	5.91			0	33	5.92	5.61		

OVERRIDE ANALYSIS OF DECISION OUTCOMES

The first objective in the analysis is to examine whether the patterns in the use of override decisions vary by race/ethnicity of the respondent. Specifically, attention will be given to the use of overrides where the actual decision is harsher than the indicated decision based on the administration of the RAI. Ensuring that confinement decisions are made without racial/ethnic bias is a key objective of detention reform (Steinhart 2006:18). Any disparities between racial categories may compromise this aim.

An examination of the RAI (See copy of the RAI in Appendix A) shows that it is exclusively based on issues pertaining to a juvenile's criminal history and current offense. The RAI, unlike instruments that are used in some other states, does not have a section that penalizes juveniles for no known community ties. This would be particularly problematic in Montana as a substantial proportion of American Indian juveniles are highly mobile. A section on the RAI that focuses on community ties would disproportionately sanction juveniles who may have been living with a non-biological caregiver in the regional hubs where the data were collected but whose hometown and biological family are elsewhere.

The data in Table 1.2 presented below organizes the cases based on a comparison of the outcome indicated by the total score from the RAI and the actual decision made regarding detention. The first group of these examines *overrides up* where the actual decision involves a harsher outcome than the one indicted by the RAI score. An examination of these across the categories by race/ethnicity shows that the vast majority of these decisions (78 of 93; 83.9%) involved cases pertaining to White juveniles, particularly overrides from a detention alternative to detention (63 of 93; 67.7%). Overrides up, represent 15.0% (93 of 621) of all the cases in which the RAI was administered.

TABLE 1.2 DECISION OUTCOMES BY RACE/ETHNICITY (N=621)

	White	American Indian	Asian	African American	Hispanic/ Latino	Totals
Decision Outcome						
Total Overrides Up	78 (18.3%)	10 (6.9%)	1 (33.3%)	0 (0.0%)	4 (13.7%)	93 (15.0%)
Release to ATD	4 (0.9%)	2 (1.4%)	0 (0.0%)	0 (0.0%)	1 (3.4%)	
Release to Detention	11 (2.6%)	0 (0.0%)	1 (33.3%)	0 (0.0%)	0 (0.0%)	
ATD to Detention	63 (14.8%)	8 (5.5%)	0 (0.0%)	0 (0.0%)	3 (10.3%)	
Total Overrides Down	119 (27.8%)	43 (29.7%)	0 (0.0%)	7 (41.2%)	3 (10.3%)	172 (27.7%)
Detention to ATD	42 (9.8%)	14 (9.7%)	0 (0.0%)	1 (5.9%)	1 (3.4%)	
Detention to Release	41 (9.6%)	20 (13.8%)	0 (0.0%)	6 (35.3%)	2 (6.9%)	
ATD to Release	36 (8.4%)	9 (6.2%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	
No Overrides	209 (48.9%)	85 (58.7%)	2 (66.7%)	9 (53.1%)	18 (62.0%)	323 (52.0%)
Release to Release	47 (11.0%)	14 (9.7%)	0 (0.0%)	2 (11.9%)	4 (13.8%)	
ATD to ATD	7 (1.6%)	3 (2.1%)	0 (0.0%)	1 (5.9%)	1 (3.4%)	
Detention to Detention	155 (36.3%)	68 (46.9%)	2 (66.7%)	6 (35.3%)	13 (44.8%)	
Bond Out	21 (4.9%)	7 (4.8%)	0 (0.0%)	1 (5.9%)	4 (13.7%)	33 (5.3%)
Release to Bond Out	2 (0.5%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (3.4%)	

ATD to Bond Out	7 (1.6%)	2 (1.4%)	0 (0.0%)	0 (0.0%)	1 (3.4%)	
Detention to Bond Out	12 (2.8%)	5 (3.4%)	0 (0.0%)	1 (5.9%)	2 (6.9%)	
Total Decisions	427 (100%)	145 (100%)	3 (100%)	17 (100%)	29 (100%)	621 (100%)

The second group involves an *override down* where the actual decision was less harsh than the decision indicated by the RAI score. This type of override was used in 27.7% (172 of 621) of the total decisions. Cases involving African American juveniles were the most likely to involve a less harsh actual outcome (41.2%). However, this represents only a small percentage (7 of 172; 5.5%) of total overrides *down*. The percentages associated with cases involving White (27.8%) and American Indian (29.7%) juveniles are very similar and constitute 94.2% (162 of 172) of the total overrides *down*.

The most common outcome is shown in the third group where the RAI indicated decision and the actual decision are the same. This was the result in 52.0% (323 of 621) of the total decisions. The percentage of cases vary somewhat by race/ethnicity, but the most common of these is the 75.5% (244 of 323) of the decisions where the RAI indicated decision to detain was also the actual decision. Cases involving minority juveniles were more likely than those involving Whites to result in agreement between the RAI indicated decision and actual decision.

The final group pertains to cases where the juveniles left detention as the result of posting bond. This is the smallest group of those examined (33 of 621; 5.3%). As the posting of bond is not one of the indicated decisions on the RAI and the amount associated with the bond and the situations in which bond is used varies, these cases will not be part of the validation study that follows. The data in Table 1.3 shows the same relationships broken down by the county in which the decisions were made.

TABLE 1.3 COUNTY LEVEL DECISION OUTCOMES BY RACE/ETHNICITY (N=621)

	Cascade	Hill	Missoula	Yellowstone	Total
Decision Outcome					
Total Overrides Up	11 (4.7%)	3 (5.6%)	58 (30.9%)	21 (14.3%)	93 (15.0%)
White	9 (6.3%)	1 (5.6%)	55 (32.7%)	13 (13.3%)	
American Indian	2 (2.8%)	0 (0.0%)	3 (18.8%)	5 (17.2%)	
Asian	0 (0.0%)	1 (50.0%)	0 (0.0%)	0 (0.0%)	
African American	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	
Hispanic/Latino	0 (0.0%)	1 (16.7%)	0 (0.0%)	3 (16.7%)	
Total Overrides Down	84 (36.2%)	18 (33.3%)	48 (25.5%)	27 (15.0%)	172 (27.7%)
White	55 (38.5%)	5 (27.8%)	42 (25.0%)	17 (17.3%)	
American Indian	25 (34.7%)	11 (39.3%)	3 (18.9%)	4 (13.8%)	
Asian	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	
African American	4 (33.3%)	0 (0.0%)	3 (75.0%)	0 (0.0%)	
Hispanic/Latino	0 (0.0%)	2 (33.3%)	0 (0.0%)	3 (16.7%)	
No Overrides	122 (52.6%)	33 (61.1%)	79 (42.0%)	89 (60.5%)	323 (52.0%)
White	72 (50.3%)	12 (66.7%)	68 (40.5%)	57 (58.2%)	
American Indian	39 (54.2%)	17 (60.7%)	10 (62.5%)	19 (65.5%)	
Asian	0 (0.0%)	1 (50.0%)	0 (0.0%)	1 (100.0%)	

African American	7 (58.3%)	0 (0.0%)	1 (25.0%)	1 (100.0%)	
Hispanic/Latino	4 (80.0%)	3 (50.0%)	0 (0.0%)	11 (61.1%)	
Bond Out	15 (6.5%)	0 (0.0%)	3 (1.6%)	15 (10.2%)	33 (5.3%)
White	7 (4.9%)	0 (0.0%)	3 (1.8%)	11 (11.2%)	
American Indian	6 (8.3%)	0 (0.0%)	0 (0.0%)	1 (3.4%)	
Asian	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	
African American	1 (8.3%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	
Hispanic/Latino	1 (20.0%)	0 (0.0%)	0 (0.0%)	3 (16.7%)	
Total Decisions	232 (100.0%)	54 (100.0%)	188 (100.0%)	147 (100.0%)	621 (100.0%)

NEW, FELONY, AND MISDEMEANOR CITATIONS

The second objective in the analysis is to evaluate the RAI in terms of new felony and misdemeanor citations. Specifically, the analysis examines whether or not decisions based on the RAI indicated scores are good predictors of the likelihood that a released juvenile or a juvenile placed in a detention alternative will be free from a new citation during the subsequent 45 days. Currently, there are no known instruments being used in Montana to which the failure rate on the RAI indicated decision can be compared; therefore, evaluation of the effectiveness will be based on the guidelines that have been adopted by the Annie E. Casey Foundation. In his guide for assessment of detention risk assessment instruments, Steinhart suggests that validation assessments where the "failure rate for either re-offense or failure to appear is less than 10 percent of the release cohort, the RAI should be given a passing grade for meeting public safety and court appearance objectives. Re-offense and failure to appear rates under 5 percent can be considered good performance" (2006:58).

TABLE 1.4 CITATIONS DURING THE 45 DAY PERIOD OF RISK (N=257)

	# of Cases	New Felonies	New Misdemeanors	New Offenses	Felony %	Misdemeanor %	Total %
Validation Sample	130	2	14	16	1.5%	10.8%	12.3%
Release to Release	66	1	4	5	1.5%	6.1%	7.8%
Release to ATD	7	0	1	1	0.0%	14.3%	14.3%
ATD to Release	45	1	7	8	2.2%	15.5%	17.8%
ATD to ATD	12	0	2	2	0.0%	16.7%	16.7%
Detention Override Sample	127	7	21	28	5.5%	16.5%	22.0%
Detention to Release	69	5	8	13	7.2%	11.6%	18.8%
Detention to ATD	58	2	13	15	3.4%	22.4%	25.9%

Results for new felonies and misdemeanors during the period of risk for the 257 cases where the actual decision was *release* or *detention alternative* are presented in Table 1.4. The information is presented in the context of two groups. The first of these, the validation sample, is comprised of the 130 cases where the RAI indicated decision to release the juvenile from detention is also the actual decision. The second group, the detention override sample, is comprised of the 127 cases where

the RAI indicated decision was *detain* but the actual decision represented an override down to a *detention alternative* or *release*.

With regard to new felony citations, the results indicate *good* performance based on the Annie E. Casey Foundation's guidelines. The overall failure rate for new felonies in the validation sample is 1.5% (2 out of 130 cases). This is lower than the corresponding rate in the detention override sample of 5.5% (7 of 127 cases). The difference is even more pronounced when the comparison is made between the felony rate in the validation sample and the rate in the detention override sample 7.2% (5 of 69 cases) where the RAI decision was *detain* and the actual decision was *release*. It is important to note that the rate of new felonies for all cases that resulted in a non-detention outcome is low. Also important is the finding that only 22.0% of the cases involving juveniles whose RAI score indicated that they should remain in detention received a new citation during the period of risk.

The results pertaining to the rate of misdemeanor citations is higher than the rate for felonies described above. In the validation sample, the overall failure rate for new misdemeanors is just over the Casey Foundation recommended threshold at 10.5% (14 of 130 cases). The lowest percentage of failures (6.1%) is found in the 66 cases where both the RAI indicated and actual decisions are *release*. Failure rates are higher in the detention override sample. There were 21 misdemeanor citations that were associated with the 127 cases where the actual decision to *release* or *detention alternative* was an override from the RAI indicated decision to *detain*. The failure rate in the detention override sample (22.0%) is much larger than the rate in the validation sample (12.3%).

Of the total outcomes, only when both the RAI indicated and actual decision is *release* is the failure rate (7.8%) less than the 10% recommended failure threshold established by the Annie E. Casey Foundation for acceptable performance. The overall failure rate in the validation sample is 12.3% (16 of 130 cases). This is just higher than the recommended threshold. The total rate in the detention override sample is higher at 22.0% (28 out of 127 cases). The remaining rates for all subcategories of the validation sample are higher than would be expected from an instrument performing at the recommended level of performance.

FAILURE TO APPEAR

The third objective in the analysis pertains to failures to appear for court. The definition of failure to appear in the analysis is broad. It is based on a juvenile's failure to attend the first court mandated appearance after release from detention. This includes failure to appear at the next court proceeding but also includes instances when the next appearance is a meeting with a probation officer. The results regarding the performance of the RAI are presented in Table 1.5.

TABLE 1.5 FAILURE TO APPEAR (N=257)

	# of Cases	# FTA	% FTA
Validation Sample	130	3	2.3%
Release to Release	66	3	4.5%
Release to ATD	7	0	0.0%
ATD to Release	45	0	0.0%
ATD to ATD	12	0	0.0%

Detention Override Sample	127	15	11.8%
Detention to Release	69	7	10.1%
Detention to ATD	58	8	13.8%

Like the presentation of the findings for new citations, the cases are organized into a validation sample and a detention override sample. The most notable difference in the percentages representing the rate of failure to appear is the comparison between the overall rate in the validation sample of 2.3% (3 of 131 cases) and the overall rate in the detention override sample of 11.8% (15 of 127 cases). All three of the failure to appear instances in the validation sample occurred where the RAI indicated and actual decisions were to release the juvenile from detention. The failure rates for both the detention override subcategories are higher than the rates in any of the subcategories from the validation sample.

These findings suggest good performance on the RAI indicated decision as it pertains to predicting the likelihood of failures to appear. However, caution is warranted in the assessment of the findings pertaining to failure to appear outcomes. Unlike the new citations which were easily identifiable both in terms of the type of offense and the date that it occurred, determination of whether a juvenile missed a court date or in particular the next appointment with the probation officer proved to be much more problematic.

As there is no category in JCATS where these events are specifically recorded, the researchers had to track these via case notes from the probation officers. In many instances these provided a detailed description of the account, including whether or not the juvenile was issued a citation as a result. In most instances, however, the cases that were scored as "no" on failure to appear were simply those cases where no evidence existed to suggest that they had missed a court mandated appointment. In effect, these represent an absence of confirmation that failure to appear occurred rather than affirmation that it did.

PRACTITIONER PERSPECTIVES ON THE RISK ASSESSMENT INSTRUMENT

PURPOSE/OBJECTIVE

The primary objectives of the qualitative investigation were to outline the process associated with the administration of the RAI and explore practitioner perspectives on the use of the instrument. The data that is outlined below was drawn from transcripts taken from focus groups and face-to-face interviews with the probation officers, attorneys, and judges who work with juveniles in the JJS and are involved in detention decisions.

The data from the focus groups emerged out a larger discussion that identified mechanisms that contribute to minority overrepresentation in the JJS. Information pertaining to the RAI emerged in all four of these meetings. The face-to-face interviews were designed to focus only on the RAI. Participants were asked to talk about how they used the RAI in their work, to provide an assessment of the strengths and weaknesses of the RAI, and to talk about issues that need to be addressed either with the instrument itself or the way that it has been used.

THE QUALITATIVE SAMPLE

The data presented below in Table 1.6 address the descriptive information for interview and focus group participants. As shown, there were more female than male participants with an average age of 48.4 years old. All but two of the respondents were White and all but one had at least a four-year college degree. The professional occupations were most likely to be probation officers, who had spent an average of 31 years living in their current county and who had spent on average of 11.3 years in their current position. Most (90.5%) had held other positions whose job duties included working with youth. These statistics confirm that the data presented below was drawn from a highly education population of practitioners who live in the counties and have worked with the youth within those counties long enough to be classified as experts on the topics that were discussed.

There were initial concerns in the developmental phase of the project that the point of RAI administration in the decision making process may vary by county. This perspective was inconsistent with the evidence that was obtained in the focus groups and interviews. The data show a similar approach across the counties where the RAI is administered after an initial stay in detention as part of the decision making process that occurs leading up to the probable cause hearing.

TABLE 1.6 RAI PARTICIPANT DESCRIPTIVES

	Min	Max	M	SD	F	%
Sex						
Male					14	39.1
Female					23	60.9
Age	29	73	48.4	12.2		
Race						
White					20	90.9
African American					1	4.5
Hispanic/Latino					1	4.5
Education						
High School					1	4.5
4 Year Degree					7	31.8
Some Graduate Education					1	4.5
Master's Degree					8	36.4
Juris Doctorate					5	22.7
Length of Time in Current County	6	71	31.0	17.2		
Occupation						
Community Member					2	8.7
Probation Officer					14	60.9
Attorney					1	4.3
Judge					4	17.4
Detention Employee					2	8.7
Length of Time in Current Occupation	0.5	23	11.3	7.5		
Previous Occupations Working with Youth						
Yes					19	90.5
No					2	9.5

STRENGTHS/ADVANTAGES OF THE RAI

There were a number of issues that emerged when respondents were asked to comment on the strengths or positive aspects of the RAI. One of the most common of these was the sentiment that the RAI score offers an objective assessment to evaluate the appropriate course of action for a juvenile. As one probation officer stated:

> It puts a very subjective situation into black and white. If I am going to recommend a youth remain in detention or [be] released from detention, it is nice to have [the RAI] to back up my decision and it's not just because I'm mad at them or because I like them or whatever it is. There is actually some statistical basis for it. And the instrument itself does a good job of giving a numerical score based on the severity of the specific incidents as well as the history of the youth.

Similar to the sentiment above, another advantage of the RAI that emerged in the data was the view that the score provides the ability to make relative comparisons between juveniles. In addition to adding an objective element to the decision making process, respondents felt that the score lends

consistency in evaluating juveniles among the various practitioners who use the tool. This information can then be used to provide evidence for the recommended course of action that is presented to the county attorney and public defender. The passage below addresses this:

> Part of it… is just the ability to compare really different situations relatively simply with a number. I mean to be able to put a number based on some fairly simple little criteria and then to be able to compare kids to kids based on that number. There's something intriguing for me about the ability to do that—to maybe take some of the subjectivity out of the process.

One of the most common themes that emerged in discussions about the RAI, particularly with probation officers, was the importance of the ability to change the RAI indicated decision with an override. The override provides a key element of discretion that allows decision makers to consider issues that are not scored on the RAI but that still play a role in the process of determining the need for continued use of detention. This includes both mitigating circumstances that provide evidence to release the juvenile in contrast to a RAI indicated decision to detain (e.g., a responsible adult to release the juvenile to, specific needs for treatment, etc.) and aggravating circumstances that make detention a necessary part of the process even when the RAI indicated decision is for a less restrictive outcome (e.g., serious offenses against persons, including family members). The importance of the override ability is represented in the passage below:

> As far as the tool is concerned, I think [the override] is an important part of it. Just like an officer has discretion at the time of arrest, this is our point to have our discretion. I think without that feature… the RAI wouldn't be as effective. It would be effective, but not in the way we are hoping the tool to be effective. I think more kids would be detained [if we weren't] able to use those outside influences as part of the decision making process.

The RAI was also seen as providing an advantage to practitioners in their interactions with juveniles and parents. The RAI provides a tool that can be used with juveniles and parents to discuss the issues associated with the cases and the possible outcomes that may emerge from them. It also provides additional evidence upon which decision about the appropriate course of action can be made. This theme is addressed in the two quotes presented below:

> [The RAI] would give me those numbers, and I'd go through them with the kids, and I'd say 'hey, zero to 9 you can be released.' Most of the kids were 15 and up and I'd say 'these numbers don't lie'…. I'd use them in court, and say, 'this looks like what has to happen.' It was the type of thing we did informally before, but I think this is good because it's standardized.

> It's good for something for us to use as a guideline. You can sit with a parent and they can make their kid sound so bad, but when you actually see black and white, they're not so bad and you can show that to a parent and you have that for the judge regardless of what the parent is saying in court. The risk assessment tool is still saying release, then you have that to fall back on.

CONCERNS/LIMITATIONS OF THE RAI

There were also a number of themes that emerged as cautions, concerns, or limitations associated with the RAI. Perhaps the most noteworthy of these is the absence of any consistency in the data with regard to the sentiment that the RAI would actually add to the ability to make more correct decisions regarding juvenile detention. As pointed out above, this could be due to the process where juveniles are administered the RAI after they have already spent at least some time in detention. However, the absence of qualitative data may also suggest that interview participants do not perceive the RAI as adding to the ability to assess the public safety risk of juveniles when deciding who should stay and who should be released from detention.

Among the strongest concerns about the RAI was the view that the scoring system is overly punitive. Many respondents believe that applying and interpreting the scores as indicated on the instrument would mean that many additional juveniles would end up in detention than would otherwise be there. Part of the concern rests with how each of the items on the instrument was weighted. As one probation officer stated, "My main thing is [that] I think the numbers are off. I just think that these are too high, or these are too low. We would detain so many more kids if we actually followed the score."

Concerns about the harshness of the RAI scoring system were often discussed in close conjunction with the ability to override the RAI indicated decision. Respondents expressed concern about what would happen if the RAI score became the primary or only determinant of the decision to continue to detain youths. This concern is expressed in the quote below:

> If the instrument was validated, we probably would detain a lot more. We would detain a lot more kids, definitely. Because it's… a lot of time they score over the 15, so if they are on probation, more than likely they are going to be in that upper [detention] category… even if it's not on a pick-up order.

There were also concerns raised that too much emphasis would be placed on the RAI score in determining outcomes for juveniles. This is illustrated by the following quote taken from a discussion about the process of determining public safety risk where one respondent commented, "Overall… I think it's unfortunate that we just base risk on a score, flat out." Also common in the discussions was concerns over the degree to which differences in the scoring thresholds could be used to determine the suitability for continued use of secure detention.

> It's a tool. I don't have a problem using an override [or] making adjustments if there is a justification for that. If you're coming up with a numbers system, I think it's really hard to say, 'well this time it should be this.' I don't think you can make a numbers system, where you can take everything and lump it [together]. That doesn't necessarily say to me whether or not that child should still be in detention or go to a more restrictive environment. But unfortunately, if those points add up more we're going to do maybe what is not in the best interest of that child.

Inconsistencies in the manner in which the RAI was scored and worries regarding the comparability of scores across raters were also common. Even though the scoring as outlined on the instrument is straightforward, there are differences in the process of scoring the instrument across raters. This issue was connected to a recognized need for training to better provide systematic instructions on scoring the instrument. This is captured in the passage below:

Every person reads something, interprets it, [and] can interpret it differently…. Who knows who is right and who is wrong, because none of us were trained on it, we were just kind of handed the tool and told 'fill this out.' … [in] one case, there were two RAIs on the same thing, two different scores. And I looked at it trying to figure out which one was the right one, [and] I came up with a totally different score.

CONCLUSIONS AND RECOMMENDATIONS

The primary research objective in the current investigation was to conduct a performance assessment of the RAI. The analysis focused on two dimensions. The first of these pertained to racial and cultural sensitivity in assessing offender risk. The second pertained to public safety outcomes associated with the behavior of juveniles who are released from detention. Specifically, the analysis examined whether a new offense occurred resulting in a misdemeanor or felony citation during the 45-day period of risk and whether the juvenile failed to appear for an initial court appearance after release from detention.

SUMMARY OF FINDINGS

In order to evaluate that the RAI was being administered with racial and cultural sensitivity, an override analysis was performed. The most common outcome was agreement between the RAI indicated and actual decisions. Cases involving minority juveniles were more likely to result in agreement between the RAI indicated and actual decisions than those involving White juveniles. According to Annie E. Casey Foundation guidelines, override rates should be limited to between 15% and 20% of the total decisions. The override down rate (where the actual decision was less punitive than the RAI indicated decision) was higher at 27.7%. Cases involving American Indian juveniles were slightly more likely than those involving White juveniles to have a RAI indicated decision result in a less punitive actual outcome. Overrides up (where the actual decision was more punitive than the RAI indicated decision) occurred in 15.0% of the outcomes. These were more likely to occur in cases involving White juveniles. These trends are evidence against any systematic racial/cultural biases in the use of discretionary overrides.

In the examination of new citations during the period of risk, the results indicate good performance for felony citations. The findings for misdemeanor citations were just over the Annie E. Casey Foundation acceptable grade standard. Only the instances where both the RAI indicated and actual decision were release was the failure rate less than 10%. The findings suggest good performance on the RAI when predicting the likelihood of failures to appear. All three of the failure to appear instances in the validation sample occurred where the RAI indicated and actual decisions were to release the juvenile from detention.

The findings from the qualitative investigation suggested that there are a number of advantages associated with the use of the RAI. Among the most common of these was the sentiment that the RAI score offered an objective assessment to evaluate the appropriate course of action for a juvenile and the ability to make relative comparisons between juveniles. There was strong support in favor of the ability for probation officers to argue for an override against the RAI indicated decision. The advantage of having a score and associated system for recommended outcomes was also common in the data. Respondents commented that the RAI score offered a means to discuss what would likely happen in court. It also provided practitioners with objective information that could be shared with juveniles and their parents. The RAI score provided a means by which discussions of probable outcomes could be focused on the juvenile's current and prior behavior.

Along with the expressed advantages, there were also a number of concerns that emerged in the qualitative data. The majority of these concerns were associated with issues pertaining to the RAI scores. These included the magnitude of the values assigned to the score, the importance that would be given to them in the decision making process, and whether or not they provided the best

means to determine which juveniles should remain in detention and which should be released from detention. Respondents felt that the scoring system is overly punitive and, if strictly followed, would result in the detention of many more juveniles than necessary.

CAUTIONS AND LIMITATION

Before moving to the recommendations based on the findings, the following cautions and limitations must be addressed. First, as a result of the lack of a risk period defined by statute, the 45-day period of risk is based on negotiation and discussion. It is longer than the 30 day period of risk used in the Reiner et al. (2007) validation of the Virginia instrument. It stands to reason that as the length of the period of risk increases, so too will the likelihood for new citation failures. Failures in the analysis above were based on whether or not a juvenile received a new felony or misdemeanor citation in the 45 days after release. This approach did not capture the juveniles who committed status offenses and those who may have been dealt with informally. As mentioned above, there are cautions associated with the failure to appear analysis. In most instances, cases that were categorized as successes were simply those cases where there was no evidence to suggest that they had missed a court mandated appointment. A final concern that warrants mentioning is the analysis is based on a relatively small sample. This issue is even more pronounced when considering that the validation analysis includes only the 257 cases in which juveniles were actually released from detention. These cases were then split between the validation (n=130) and detention override (n=127) samples. As such, there may be issues associated with the degree to which the findings can be generalized to the larger population of juveniles in Montana and the counties from which they were drawn.

RECOMMENDATIONS

The recommendations below are grouped into four categories. The first of these pertain to scoring recommendations associated with the RAI. The second group of recommendations is directed at improvements to the process associated with the administration of the RAI. The third group offers recommendations for improving the data that are collected and used to assess the performance of the RAI. The final group of recommendations is directed toward research issues that will need to be addressed in future assessments of the RAI.

Scoring Recommendations

- Examine the weight of the values that are assigned to the scores.
    - The number of overrides down and consistency in the qualitative data of the harshness of the existing scoring system suggest the need to critically evaluate weights that are given to the scores across the seven sections of the RAI.
- Determine whether or not the thresholds for release, detention alternative, and detain are where they should be.
    - Attention needs to be given to whether or not there is a balance between the number of points that are possible to score and the RAI indicated thresholds.
    - The total possible points a juvenile can score on the RAI is 62. In contrast, the total possible points on the Virginia Detention Risk Assessment Instrument are 43. The point intervals used to determine the thresholds for indicated outcomes are the same on both instruments.

- Evaluate whether or not juveniles who are brought in on warrants and pick up orders are enough of a public safety threat to justify the 15 points that they receive.
    - This event alone is enough to breach the detention threshold as the RAI indicated decision. The examination of the types of offenses for which pick up orders and warrants were issued for juveniles in the analysis showed a high degree of variability with regard to the severity of the offenses.
- Develop a systematic set of override criterion.
    - Currently there is simply a space at the bottom of the RAI where probation officers can list why the actual decision was different from the RAI indicated decision.
    - Although there was some variation across counties, in the majority of instances during the collection of the RAI scores there was nothing written to explain why the actual decision was different than the indicated decision.
    - Work is needed to develop a set of objective criterion that specify the circumstances when both overrides up and overrides down can occur and to ensure that these appear on the instrument in a manner in which they can be easily recorded (e.g. checkboxes).
    - There should be a space in which "other" criterion not listed on the RAI can be recorded as evidence for an override decision.
- Avoid the risk of deferring too much emphasis to the RAI indicted decision at the expense of practitioner discretion.
    - The RAI is only one piece of a multifaceted decision making process. There are many factors that influence likelihood of public safety threats for released juveniles. It is unlikely that any risk assessment instrument could account for all of these.
    - The evidence in Table 2.4 above showed that the practitioner override down for the RAI detention decision was the correct choice in 78% of the outcomes.
    - The RAI should be used in conjunction with, not in place of contextual and situational factors that can be used by practitioners but do not appear on the instrument.

Process Recommendations

- Ensure that all juveniles who are referred to detention are administered the RAI.
    - As shown in Figure 2.1 only 52.1% of juveniles who were placed in detention during 2009 and 2010 were administered the RAI.
- Administer the RAI before the juvenile is placed in detention.
    - In practice, the RAI is completed after the juvenile has already spent at least some time in detention. This is associated with the statutory laws outlined above, but results in a process that is inconsistent with the intent of risk assessment tools and the JDAI mission to keep juveniles out of secure detention.
    - Attention needs to be given to changes that would ensure that the RAI is a tool that is used to help keep juveniles out of detention, not determine whether or not they should continue to stay.
    - Develop community processing centers staffed with professionals who could administer the RAI. Probation officers, law enforcement officers, and intake staff at detention facilities were all mentioned in the investigation as professionals who could be trained to administer the RAI before placement of the juvenile in detention.
    - Conduct a costs/benefits analysis of the difference between what it costs to keep a 24/7 probation officer on call and/or develop community processing centers

against what it costs in lost time and productivity for police officers and civilian staff who are charged with caring for juveniles when other juvenile professionals are not available.

- Minimize variations in the way that raters score the RAI.
    - Variation in the approach and instances where raters opt not to assign points in one section of the instrument limit the degree to which comparisons between raters both within and between counties can be made.
    - There is a need for an operations/procedural manual that provides a concise and systematic approach to finding information to determine the scores and the values that are given to scores on the RAI.
    - Reduce the number of raters who assign the scores on the RAI to minimize the amount of variation. There needs to be attempts made to assign a single rater to fill out the forms whenever possible.
- Change the time of the probable cause (detention) hearings.
    - Probable cause hearings are often the first piece of court business in the morning. Evidence in the qualitative data show that early morning checks of the detention lists so that probation officers could complete the RAIs are a source of stress. This often results in hasty completion of the RAIs which are often not provided to other members of the courtroom workgroup before the hearings begin.
    - Some counties have moved these hearing to a time later in the day which allows for more time to properly score the RAI and provide the findings to attorneys and judges in advance of the hearings.
- Increase the number of detention alternatives that are available at the point of contact with the police.
    - Many juveniles end up spending time in detention due to the lack of community-based alternatives to detention. In these situations, juveniles whose home lives may prevent them from being released will end up being placed in detention due to an absence of or lack of space and resources in detention alternatives.

Data Recommendations

- Incorporate the RAI scores in to the JCATS system.
    - The RAI scores are not currently entered in to the JCATS system. To gather the RAI scores required visiting the counties and recording the scores from the paper versions of the instruments. Similar to the data that is available on the "Back on Track" instrument, the scores from the RAI need to be available on the JCATS system.
- Automate the RAI scoring system by incorporating it in to the JCATS system.
    - In addition to increasing the ability of the JCATS system to archive the scores that are assigned when the RAI is administered, attention needs to be given to explore whether or not the capacity could be built in to JCATS where a juveniles ID number could be entered and a computer generated RAI score could be obtained.
    - This would help minimize variations in the way that raters score the RAI and would increase the speed and overall accuracy of the scoring process.
    - Risk assessment automation has already been done in Virginia and in Pierce County, Washington. These could be used as models for changes to the JCATS system. In these systems, computer automation is used to calculate the score, but practitioners retain control over the administrative override criterion.

- Expand the scope of who can access data in the JCATS system.
    - There is a need to provide access to law enforcement and other juvenile service providers so that more thorough and comprehensive assessments and decisions about juveniles can be made.
- Include specific information in the JCATS system that allows for verification of failure to appear in court.
    - In order to find out if a juvenile failed to appear required manually looking through probation officer case notes for an extended period of time before and after the release from detention date. In addition to being very labor intensive, many of these searches were failed in that they did not recover any information pertaining to whether a youth attended the next court mandated appointment after release from detention.
    - The solution for this may be as simple as the incorporation of a push button in the JCATS system where probation officers can simply select yes or no and in instances where the answer is yes list the date of the missed appointment.

Research Recommendations

- Conduct research that is tasked with developing a standard operating procedures manual and an associated curriculum module to deliver it.
    - At present, new raters employ a trial and error system that informs the approach they take in scoring the RAI. This is largely the result of the lack of any sort of comprehensive training that could be used by supervisors to ensure consistency in the process and accuracy in the method by which the scores are assigned.
- Study whether or not the existing dimensions for which scores are assigned on the RAI are the ones that are most closely associated with the public safety outcomes.
    - An examination of the degree to which each of the dimensions that currently appear on the RAI is associated with the intended performance outcome was not investigated in the analysis. It will be important to not only consider a process that addresses issues that emerged pertaining to the weights assigned to scores and the RAI indicated outcomes, but also to investigate whether the appropriate dimensions are being measured and what may need to be added or eliminated in any future revisions.
- Continue to monitor the performance of the RAI and the effectiveness of any changes that are made.
    - The RAI is embedded within a process that requires change and continued assessment of the improvements of those changes. To ensure that the tool is working as intended and that it is being implemented with fidelity will require frequent assessment and evaluation.
- Investigate the factors that are used by practitioners to override the RAI indicated decision.
    - Overrides to the RAI detention decision were used in nearly half (49.4%; 127 of 257) of the cases where a juvenile received a score. The data show that in nearly four out of five cases (78%) the override down from a RAI indicated detention decision did not result in a new citation. As the override justification was missing on the vast majority of the completed RAIs, additional work is needed to better understand why the overrides were made.
- Examine stakeholder attitudes toward detention reform and in particular whether or not they would be willing to incorporate and follow the RAI.

    - This investigation will also need to include an assessment of the existing resources and needs that exist at the local levels for maintaining and developing alternatives to formal detention.
- Continue to develop and refine practices that ensure comprehensive and accurate data are collected and archived.
    - Without comprehensive and accurate sources of data upon which research investigations can be based, the findings and recommendations that emerge from them run the risk of being incomplete and incorrect.
    - This issue emerged most clearly in the current study in the 54 cases for which juveniles who were administered the RAI were eliminated from the analysis because of lack of agreement between the RAI administered date and the dates in the juveniles detention record.

CONCLUSION

It is important to keep in mind that this study has provided a baseline examination of the RAI. It is a means of comparison to which future examinations of the RAI can be compared and the results from future studies evaluated against. It provides a gauge where any changes and modifications that are made to the instrument, the process that is employed, and data collected from the RAI can be evaluated. It is also important to recognize that the evaluation of the RAI is a process. Research must continue to be directed toward improving and assessing the tool. As the RAI is an essential piece of the detention reform movement, priority needs to be given to systematic evaluations and, if needed, modifications to the instrument.

The findings in this assessment provided answers to critical questions regarding the validity of the RAI. The results showed that the RAI is being administered impartially and in a manner that is culturally and racially sensitive. Minority youth are not treated differently or adversely affected by the RAI. In the analysis, minority juveniles were less likely to have a harsher actual outcome than the RAI indicated outcome when compared to White juveniles. The results also show that the RAI is a suitable tool in regard to meeting established public safety outcomes. When compared to the detention override sample, the RAI validation sample yielded a lower failure rate of new misdemeanor and felony citations and failures to appear for the initial court mandated appearance.

SECTION TWO: DEVELOPMENT OF THE DETENTION RISK ASSESSMENT PROTOTYPE

BUILDING UPON KEY FINDINGS FROM THE RAI VALIDATION STUDY

There were many important findings that emerged from the validation study outlined above. Two of these concerns were seen as significant enough to merit immediate attention. The first of these was the need to address concerns associated with variability in the manner in which the RAI was scored across raters within and between districts. It became clear, in the interviews that were conducted in the fall of 2011 with probation officers, that there were differing approaches that were used in the paper-based scoring system associated with the RAI. This issue was closely associated to the second primary concern, the lack of a comprehensive training module that could be implemented to provide a systematic approach to using and interpreting the Detention Risk Assessment Instrument (DRAI) prototype.

As the interviews were wrapping up in the winter of 2012, Patrick McKay elected to take on the task of examining a series of statistical methods that could be used to re-estimate the scores on the RAI. By March 2012, the evidence from his study suggested the need for a more comprehensive overhaul to the RAI than could be accomplished by simply using different mathematical methods of scoring the existing items. This view was strengthened by the findings that practitioners using the RAI were concerned about the RAI's ability to predict risk associated with which juveniles would pose public safety risks if released from detention.

Work to build an automation system that could be used to address concerns over rater variability began in the winter of 2012 and carried over in to the spring and summer of 2013. Initially, this process focused on incorporating the DRAI prototype in to the JCATS system. Programmers from Noble Software LLC were contracted to complete the work of building the automation infrastructure. This project was imbedded within a larger effort to update the capacity of the JCATS system to more comprehensively manage detention data and to revamp the Juvenile Detention Reporting System (JDRS) and increase the compatibility between these two systems. The automated DRAI was ultimately built as a separate system that was constructed to work in conjunction with and extract information from the updated JCATS and Juvenile Detention Data Reporting System (JDDRS).

In the sections below, the stages of progress that were taken to develop the DRAI prototype and an associated training curriculum are presented. Information from Patrick McKay's research on the mathematical methods that could be used to re-score the item on the RAI are presented first. This is followed by a discussion of the process associated with developing the DRAI prototype. The third section discusses the development of the training curriculum module for using and interpreting the DRAI and the URL for accessing the training modules is presented. The final section provides a brief overview of the nine-month prospective test that is planned to take place in the fall and winter of 2013 and conclude in the spring and summer of 2014.

RESCORING THE RAI

Interest in rescoring the Montana RAI was based off of several initial observations. First, it was discovered that the Montana RAI was created from The Virginia Detention Assessment Instrument with only a few minor changes. The scoring for the risk factors and the thresholds for release or detain were identical between the two instruments. This finding gave rise to our first concern that a tool created and validated in a state so different from Montana may have validity issues when used here. Second, as mentioned above, many practitioners had concerns on the RAI's ability to separate juveniles that pose greater risk from those juveniles that do not. Practitioners felt that the tool was overly punitive at times and they did not see the RAI as a tool to keep juveniles out of detention. Finally, initial examination of the distribution of total RAI scores confirmed our concerns and gave greater evidence that an examination of the risk factors scores on the Montana RAI was necessary.

Figure 1 is the distribution of risk scores for juveniles who were administered the RAI in 2009 and 2010 in the four Montana JDAI counties. The blue bars in the distribution represent juveniles who 'succeeded' or did not receive a new citation for a misdemeanor or felony in the period of risk. The green bars in the distribution represent juveniles who 'failed' or did receive a new citation for a misdemeanor or felony in the period of risk. There are a total of 299 juveniles included in figure 1. Of the juveniles whose RAI indicated score was "Release" (risk scores between 0 and 9); 32 (40%) received a new citation in the period of risk. For juveniles whose RAI indicated decision was "Detention Alternative" (risk scores between 10 to 14); 45 (56.96%) received a new citation in the period of risk. Finally, of those juveniles that the RAI indicated decisions was "Detain"; 92 (65.70%) received a new citation in the period of risk.

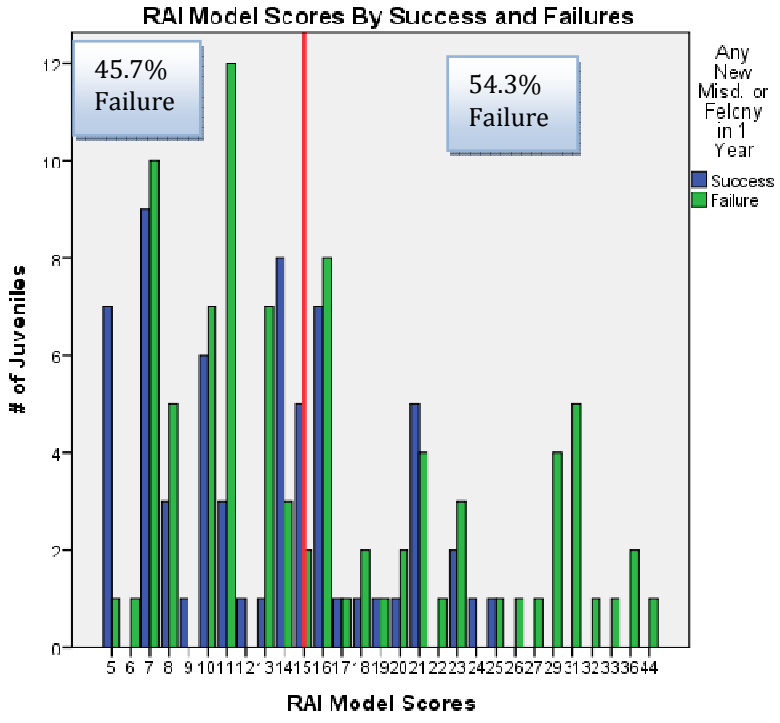


Figure 1.1:

The red line in Figure 1.1 is placed on the 15 point mark indicating the RAI secure detention threshold. According to RAI cut points, the juveniles to the right of the red line should have been detained and those to the left should have been released or received an alternative to detention. Of the 169 juveniles that received a new citation in the period of risk 54.3% (92) were above the 15 point secure detention threshold and 45.7% (77) were below the threshold.

If the risk factors were weighted correctly and were valid predictors for the outcome (receipt of a new citation in the period of risk) it would be expected that most of the failures (green bars) would be to the right of the red line, and most of the successes (blue bars) would be to the left of the red line. It is clear that the observed pattern diverges from what was expected. The table shows that juveniles who received an indicated decision of release or detention alternative had almost identical failure percentages compared to those juveniles with a RAI indicated decision of secure detention. While the RAI was found to have a 12.3% failure rate, which is close to meeting the Annie E. Casey Foundation's performance standards of a 10% failure rate (12.3% in the validation sample), it is clear based off of this distribution that there is room for improvement.

Research for the Anne E. Casey Foundation suggest using the "consensus design" over the more formal "prediction method" to create risk assessment instruments (Steinhart 2006). The consensus design relies on local stakeholders in the juvenile justice system to use their professional knowledge to select and add weight to risk factors. The consensus design is posited to be tailored to local policy, laws, and the youth population. Alternatively, the formal prediction method uses statistical tests on data collected from juveniles to find risk factors and associated weight. The formal prediction methodology is considered to be time consuming, expensive and inapplicable once created (Steinhart 2006). However, unlike the consensus method, the statistical method allows for the risk factors found on the RAI to have meaningful weight.

Literature based on the comparison of statistical methods use a variety of tests in an attempt to develop the most accurate risk assessment instrument. The most common statistical methods found in the literature are the Burgess method (Gottfredson and Gottfredson 1980; Silver, Smith, and Banks 2000; Gottfredson and Snyder 2005; Caulkins, Cohen, Gorr, and Wei 1996; Kirby 1954), methods involving multiple linear regression (Simon 1972; Gottfredson and Snyder 2005; Gottfredson and Gottfredson 1980; Aguinis and Gottfredson 2010), and methods involving logistic regression (Silver, Smith, and Banks 2000; Gottfredson and Snyder 2005; Thomas, Leese, Walsh, McCrone, Moran, Burns, Creed, Tyrer, and Fahy 2004). This research first intended to explore these statistical methods to see if it was possible to increase the predictive accuracy of the tool by re-weighting the RAI risk factors. However, Initial findings on the risk factor's correlation with the risk of receiving a new citation in the period of risk suggest that the formal prediction methodology may not be appropriate for this risk assessment instrument at this time.

The seven risk factor categories on the RAI are based on a juvenile's current offense and prior offense history. To analyze individual risk factor weights, each of the seven variables were broken down into 19 categorical variables. Table 2 shows the descriptive statistics for each risk factor based on the device construction sample. All risk factors are coded as dichotomies.

Pearson Correlation Coefficients were used to analyze each risk factor's association with the outcome (receiving a new citation in the one year risk period following release from detention). The scores range from -1 to 1. Scores close to 1 or -1 indicate a strong correlation and scores closest to 0 indicate a weak correlation. A risk factor with a negative score indicates that juveniles with these risk factors are less likely to score one on the outcome variable .

These risk factors were selected to be on the RAI based on prior knowledge of their association with whether or not the juvenile received a new citation in the period of risk. It was expected that each of these risk factors would be both strong and positively correlated to a juvenile receiving a new citation. However, Table 2 depicts a much different relationship between these risk factors and the outcome. Only two of the 19 risk factors were found to be positive and significantly correlated with a new citation. Surprisingly, seven of the 19 risk factors were actually negatively correlated with the outcome.

For the risk factor "Most Serious Offense Alleged in Current Referral" when the offense was a felony against person it is statistically significant but in the negative direction. This finding suggests that youth whose current offense was a felony against persons were significantly less likely to receive a new citation in the period of risk from youth whose current referral were less severe offenses. This is a finding in the opposite direction of what was expected. However, this finding was brought up in a discussion with probation officers who suggested that the negative association made sense when considering the consequences associated with failure to follow release conditions for juveniles who had committed more serious offenses.

TABLE 2.1

Descriptive Statistics and Correlations With Outcome Measures for Construction Sample (n=151)

Risk Factors	M	SD	Pearson Correlation
Warrant or Pickup Order	0.16	0.37	.153
Most serious offense alleged in current referral felonies against persons	0.05	0.22	-.216**
Most serious offense alleged in current referral other felony	0.08	0.28	-.119
Most Serious offense alleged in current referral Misd. against person	0.34	0.48	.017
Most serious offense alleged in current referral other Misd.	0.24	0.43	-.055
One or more additional current felony offenses	0.01	0.11	.099
One or more additional misd. or violation of prob or parole offenses	0.36	0.48	-.019
Prior admissions of guilt to two or more felony offenses	0.02	0.14	-.070
Prior admissions of guilt to one felony offense	0.10	0.30	-.003
Prior admissions of guilt for two or more misd. or status offenses	0.44	0.50	.280**
Prior admissions of guilt for two or more probation or parole violations	0.01	0.08	.070
Prior admission of guilt for any misd or status	0.16	0.36	-.067
One or more pending referrals for a felony offense	0.06	0.24	.159
Two or pending referrals for other offenses	0.11	0.32	.136
One pending referral for other offense/offenses	0.07	0.26	.137
intensive or close supervision	0.10	0.31	.240**
Formal release conditions /on probation/ on parole	0.38	0.49	.099
Warrant history: Two or more warrants	0.04	0.19	.106
Warrant history: One Warrant	0.04	0.19	.106

NOTE: ** coefficients are significant at $p < .01$

Statistical methods used to add meaningful weight to risk factors such as logistic methods or linear regression methods assume that the risk factors are both strong and positively correlated with the risk of receiving a new citation in the period of risk. Based on the Pearson Correlation Coefficients above it is apparent that these risk factors will not fulfill this requirement and alternate means of creating a more accurate RAI must be explored.

DEVELOPING THE DRAI PROTOTYPE

Under the recommendation of the staff and Executive Director at the Montana Board of Crime Control, a workgroup to investigate the development of a DRAI prototype began. Comprised of practitioners from the JDAI counties in Montana who had been using the RAI, the first workgroup meeting was held on January 2, 2013. Professor Dusten Hollist accepted the task to lead the workgroup and with their guidance established a monthly meeting schedule to take place on the fourth Wednesday of each month. At the time of the writing of this report, the workgroup meetings had taken place each month from January through July of 2013.

The intent of the workgroup was to involve the practitioners who were using the RAI in the process of developing the DRAI prototype. As mentioned in the previous section, experts recommend building risk assessment tools through a consensus design that provides for and allows the persons who will be using the tool to be involved in the development and modification process. In an effort to capitalize on the available expertise and experience of practitioners, specific stakeholders were chosen to occupy the 7-10 positions that were initially envisioned for the workgroup.

There were multiple considerations that were included as a baseline for assisting the workgroup with the creation of the DRAI prototype. First, the DRAI prototype had to include components from the original RAI that had received support in the practitioner interviews conducted during the RAI Validation Study interviews. Second, it needed to be informed by the evidence taken from the review of the literature on risk assessment performance and include items from existing tools in other states that had been found to be important risk predictors. Third, it needed to be informed by the results associated with Patrick McKay's analysis that had examined the correlations and predictive association between items on the original RAI and the risk for re-offense and failure to appear.

Lastly, the DRAI prototype needed to be founded upon the best practices model for the development of risk assessment tools provided in the technical report "Juvenile Detention Risk Assessment: A Guide to Juvenile Detention Reform" by David Steinhart (2006). Six of the key tenants that pertain to risk screening of juveniles who are being considered for detention are included below:

1. Risk-screening instruments are used to classify arrested children and to determine their eligibility for secure detention or release.
2. The criterion upon which detention decisions are based should be applied equally to all juveniles referred for a detention.
3. The criterion must be in a written format and incorporated in to a screening process that is standardized for all referrals.
4. The criterion should measure detention-related risks centered on the risk of reoffending prior to adjudication and the risk of failing to appear at a court hearing or follow-up with a probation officer.
5. Detention decisions should be based on neutral and objective factors
    a. These include nature and severity of the offense; number of prior referrals, and/or the juveniles' history of flight from custody.
6. Local detention risk assessment instruments are not clones of one another. Each one is tailored to fit state and local laws, policies, and procedures.

Understanding that the purpose of the risk assessment instrument is to assess specific risks was a key consideration in the development of the DRAI prototype. An early objective for the workgroup was to gain consensus among the practitioners that there were two specific risks that were intended to be gauged by the DRAI score. These include assessing the risk to reoffend with a new misdemeanor or felony offense prior to adjudication and the risk of failing to appear in the juvenile's next scheduled court hearing or follow-up with the juvenile probation officer. This is a key point as the "risk to reoffend" score that is yielded is meant to apply to the thirty days following the administration of the DRAI. It is important to note that a key risk, the risk to self harm is not a consideration included in the DRAI risk to reoffend score.

The DRAI prototype incorporated three major changes. First, it includes a new list of risk factors. Risk factors were added, kept, or removed based on evidence from interviews conducted in the RAI Validation study, information derived from the RAI workgroup, a literature on risk assessment instruments, and analysis of the data collected in the RAI validation study. Second, risk factor's scores were examined to determine if they seemed logically valid. Finally, consistent with the best practices recommendations from the Annie E. Casey Foundation, a balanced set of aggravating factors and mitigating factors were added to the DRAI prototype.

The only risk factor that appeared on the RAI and does not appear on the DRAI is the question asking whether "the youth was taken into custody on a valid warrant or pickup order." This factor automatically gave the juvenile a score of 15 points which is over the indicated decision threshold needed for secure detention. Instead of including this factor in the list of risk factors on the DRAI, it was decided that it was more logical to relocate this question item as one of the options for a detention override.

The risk factor "most serious offense alleged in current referral" was retained on the DRAI but with several changes. Instead of having four categories to pick from (felonies against persons, other felonies, misdemeanors against persons, and other misdemeanors) a score for every crime that a youth can be cited for (felonies, misdemeanors, and status offenses) was created. Points were assigned to offenses based on a likelihood to reoffend severity index. Offenses that were found to be more closely related with the likelihood of a new offense or failure to appear in court received higher points than scores assigned to less closely related offenses.

Two risk factors were kept from the RAI and listed verbatim on the DRAI. These include: "prior admissions of guilt," and "referrals pending adjudication." The risk factor "warrant history" was also retained, however the responses to the question were compressed into a single category. The response on the DRAI reads "one or more warrants" in juvenile's history. Evidence from the data show that it was only important to know if the juvenile had a warrant in their history not how many they had.

The risk factor "failure to appear/runaway/escape history" was added to help measure for flight risk. This factor was borrowed from South Dakota's risk assessment instrument and similar factors are found in the literature.

To accomplish Steinhart's recommendation of "objective and balanced aggravation/mitigation criteria" (2006; 16) five aggravating factors and five mitigating factors were selected that would either add one point (aggravating) or subtract one point (mitigating) to the total risk score. These factors range from the juvenile's history of drug use to stability in school (See appendix B for the list of aggravating and mitigating factors).

On the original RAI the maximum amount of points a juvenile could receive as a risk score was 62 points. On the DRAI prototype the maximum total points are 44. This 18 point difference along with the mitigating factors should address concerns taken from interviews with practitioners regarding the ease of meeting the secure detention threshold on the RAI. The indicated decision threshold scores remained the same from the RAI to the DRAI. These will be monitored and asjuted as indicated by the evidence from the data gathered as assessments of the DRAI are performed.

The DRAI prototype was completed in March 2013. It was at this point where activities within the workgroup shifted to discussions of scoring issues, critiquing, and testing early versions of the automated DRAI that were being developed by programmers at Noble Software LLC. At the completion of the writing of this report, the final version of the automated DRAI was in progress as was the work by Professor Dusten Hollist and research associate Patrick McKay on the training curriculum modules that are described in the next section of the report.

THE DRAI TRAINING CURRICULUM MODULE

One of the principal voids that were uncovered in the initial RAI validation study was the absence of a systematic training curriculum for practitioners using the tool in the field. To address this void, a key component of the follow-up investigation was to produce a standardized training curriculum that could be used across Montana's juvenile justice system. The training curriculum was built so that it can be taught in a classroom setting, but also in a way that it could be accessed remotely for distance learning instruction as new staff members are hired in offices that currently use the DRAI and as future districts adopt and implement it. The geographic distance to conferences and training are large for many of the practitioners who will be using the DRAI. It was therefore imperative that the training curriculum that was built be available in a portable format.

The first component of the training provides background information on the purpose of detention risk assessment instruments. It is intended for new users and provides some information on how the DRAI fits in to the JDAI focus to eliminate or reduce the use of unnecessary secure detention of juveniles. The information presented also address the criterion upon which detention decisions should be made and recommendations from the Annie E. Casey foundation about acceptable levels of overrides to the DRAI indicated decision and performance monitoring of the tool.

The second component of the training contains the demos of the automated DRAI. It includes demos for accessing the DRAI through both the JDDRS and JCATS system. Additionally, the training demos address populating the automated DRAI for juveniles who are already in the system and those who are unknown to either the JDDRS or JCATS systems. The remaining demos address the issues of interpreting the DRAI score and overrides for instances where the DRAI indicated decision and the actual decision are not the same.

The DRAI training curriculum modules are available on the Montana Board of Crime Control webpage at: http://www.mbcc.mt.gov/JuvenileJustice/JuvJustice.asp. Please contact Tyson McLean, Director, Statistical Analysis Center at the Montana Board of Crime Control in Helena for questions and technical assistance about the DRAI training curriculum modules.

SECTION THREE: THE RAI DRAI COMPARATIVE TEST

INTRODUCTION/BACKGROUND

In March of 2013, a request was made via the Statistical Analysis Center's funding mechanism to the Bureau of Justice Statistics at the National Institute of Justice to fund a nine-month comparative study. The purpose of the comparative study is to gauge the effectiveness of the DRAI prototype when compared to the original RAI.

LOGIC OF THE ANALYSIS

The analysis that follows was conducted to continue the process outlined in the Juvenile Detention Risk Assessment Guide (Steinhart 2006) for implementing a new risk assessment instrument into the juvenile justice system. The purpose of the RAI DRAI Comparative Test is to investigate if improvements made to the DRAI (see pages 43-45) increased the accuracy at predicting juvenile public safety risk and decrease the recommended use of secure detention.

Steinhart (2006) describes two ways risk assessment instruments can be tested: 1) on a sample of past referrals known as retrospective sampling or 2) on a sample of new referrals known as prospective sampling. This analysis uses the retrospective sampling method which is beneficial because it allows the analysis of the RAI and DRAI without having to implement them statewide. Juveniles admitted in to the Montana Juvenile Justice Systems from August 1, 2013 through April 31, 2014 comprise the data outlined below. All data was collected from the Juvenile Court Assessment and Tracking System (JCATS).

There are five objectives to complete the DRAI RAI comparison: 1) investigate additions made to the DRAI, 2) compare override decisions, 3) compare detention decisions, 4) compare prediction accuracy, and 5) investigate threshold outcomes. These five objectives will help determine if changes made to the DRAI have increased performance in the Montana Juvenile Justice System and will provide direction for future research.

To compare the accuracy between the two instruments the success and failure of juveniles released from pre-adjudicatory detention will be investigated. Unlike the RAI Validation Study, the period of risk has been changed from 45 days to 30 days to be more consistent with other validations studies involved in JDAI (Steinhart 2006; Reiner, Miller and Gangal 2007). Success is defined as a juvenile who does not commit a new offense within 30 days after release from their initial intake. Failure is defined as a juvenile who does commit a new offense within 30 days after release from their initial intake. Three primary outcomes of recidivism are measured: any recidivism (which includes: misdemeanor, felony, status, technical and city ordinance), misdemeanor recidivism, and felony recidivism. Failure to appear for a subsequent court mandated after release from detention will not be an outcome investigated in this study based on the inability to collect this information accurately from the JCATS.

The Receiver Operating Characteristic (ROC) analysis will be one tool used to investigate instrument accuracy. ROC has been noted as "the preferred measure of predictive or diagnostic accuracy" (Rice and Harris 2005) and is used in several current reports to determine risk assessment accuracy in the justice system (Olver, Stockdale, and Wormith 2009; Baglivio 2009;

Schwalbe 2007). ROC analysis provides an area under the receiver operating characteristic curve (AUC) statistic. AUC is simple to interpret and allows for a relative comparison between risk instruments. The ROC curve is constructed by plotting the false positive probability and the true positive probability for every possible cut point or threshold for a risk assessment instrument on a graph. The AUC is the area under the created curve and it ranges from .5 to 1. An AUC of .5 describes a risk instrument that is no more accurate than chance alone (50% chance of the outcome being a true positive and 50% of the outcome being a false positive). An AUC of 1 describes a risk instrument that is perfectly accurate at predicting the outcome (100% chance of the outcome being a true positive and a 0% chance of the outcome being a false positive). ROC analysis also provides a test of significance to help determine if the AUC of a risk assessment instrument is statistically different from chance alone in the population. An additional test of statistical difference provided by Hanley, and McNeil (1982) determine if two risk assessment instruments are statistically different from each other in prediction accuracy.

THE PRESENT STUDY

The initial data set was queried by Montana's Office of the Court Administrator for the Supreme Court for the Criminology Research Group (CRG). This data served as the base data set for the investigation. The initial data set was comprised of the 4045 juveniles along with basic demographic variables (race, gender, age). Each juvenile is assigned a unique JCATS ID number and a unique intake date which allowed juveniles to be included in the data set multiple times if the juvenile committed more than one offense in the nine month period. Information about the juvenile's most serious current offense and recidivating offenses were also collected. All other variables were queried out of the JCATS by the CRG. Seven risk factors that make up the RAI and 15 risk factors that make up the DRAI were queried for each juvenile (see appendix A and B for risk factors). Each time a variable was queried, the variable would be merged into the base data set using the JCATS ID number and intake date (if necessary) to correctly add information to the juvenile's case. All data was kept and analyzed in SPSS (Statistical Package for the Social Sciences). Issues pertaining to data collection are addressed in the limitations section below.

Juveniles from all counties in Montana who were cited with an offense during the period August 1, 2013 to April 31, 2014 comprised the initial sample of 4045 juveniles (duplicates included). This initial sample was constrained down into two samples that are used for the analyses. First, to be eligible for the samples all juveniles must have at least 30 days in the sample time frame to determine if they were a "successful" case or a "failing" case. To account for this, juveniles were removed from the sample if they did not have the full 30 days from their release date to the end of the sample time frame (April 31, 2014) to commit a new offense. Second, because the RAI and DRAI are only used for detainable offenses, those juveniles whose most serious offense was a status or city ordinance offense were removed from the sample. This created Sample 1 which consists of 2689 juveniles. Sample 1 is used to investigate overrides and detention decisions. Table 3.1 provides the descriptive statistics for Sample 1.

Table 3.1: Descriptive Statistics for Sample 1 (n=2689)							
Demographic Indicator		Min	Max	M	SD	F	%
Age		4	18	14.86	1.932		
Gender							
	Female					871	32.40%
	Male					1818	67.60%
Race/Ethnicity							
	White					2087	77.60%
	American Indian					394	14.70%
	Asian					8	0.30%
	African American					106	3.90%
	Hispanic/Latino					88	3.30%
	Other					6	0.20%
Initial Offense Type							
	Technical					110	4.10%
	Misdemeanor					2305	85.70%
	Felony					274	10.20%
Detained							
	No					2240	83.30%
	Yes					449	16.70%

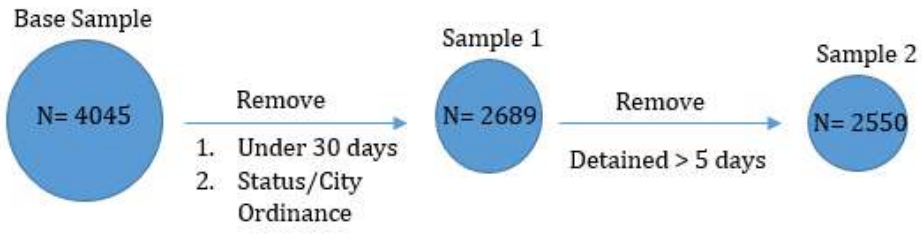
Descriptive statistics are consistent with the RAI validation study (see pages 22). Juveniles in the sample are on average 14.86 years old, the majority of the juveniles are males (67.6%), and White juveniles comprise 77.6% of the sample followed by American Indian with 14.7%. The most common juvenile offense was a misdemeanor (85.7%), followed by a felony offense (10.2%), and then a technical offense (4.1%). 83.3% of the juveniles were never officially detained.

To create Sample 2, juveniles were removed from Sample 1 if they were kept in pre-adjudicatory detention longer than 5 days. The logic here is that juveniles who were securely detained did not have the ability to commit a new offense before their preliminary hearing, thus, voiding their eligibility for the sample. The RAI and DRAI are attempting to predict juvenile recidivism and if the juvenile was not released then the accuracy of the RAI and DRAI's prediction could not be analyzed. Five days is the longest a juvenile could be in pre-adjudicatory detention and still be eligible for the sample. This restriction lowered the sample size to 2550 eligible juveniles who are included in Sample 2(duplicates included). Sample 2 will be used to investigate prediction accuracy between the RAI and the DRAI. Table 3.2 presents the descriptive information for Sample 2.

Table 3.2: Descriptive Statistics for Sample 2 (n=2550)							
Demographic Indicator		Min	Max	M	SD	F	%
Age		4	18	13.58	2.353		
Gender							
	Female					835	32.70%
	Male					1715	67.30%
Race/Ethnicity							
	White					1984	77.80%
	American Indian					370	14.50%
	Asian					6	0.20%
	African American					98	3.80%
	Hispanic/Latino					86	3.40%
	Other					6	0.20%
Initial Offense Type							
	Technical					74	2.90%
	Misdemeanor					2238	87.80%
	Felony					238	9.30%
Outcome 30 days							
	No New Offense					2303	90.30%
	Misdemeanor					153	6.00%
	Felony					11	0.40%
	Status/Technical/City Ordinance					83	3.30%

Sample 2 is almost identical in terms of descriptive information to Sample 1. The average age of the juvenile is slightly lower at 13.58 years old compared to 14.86 from Sample 1. The distributions of juveniles by race/ethnicity are similar in both samples. There are a lower percentage of juveniles in Sample 2 who committed a technical violation and a higher percent of juveniles who committed a misdemeanor and felony offense. Most of the juveniles in Sample 2 (90.3%) did not have a new offense in 30 day risk period. The most likely recidivating offense was for a new misdemeanor (6%), followed by new status, technical, or city ordinance offense (3.3%), then a new felony offense (.4%). Figure 1 demonstrates the constraints performed from the base sample.

Figure 3.1:



INVESTIGATING THE ADDITIONS TO THE DRAI

The first objective of the analysis is to determine if the risk factors that were added to the DRAI are correlated with recidivism in 30 days. Table 3.3 provides bivariate correlation coefficients for each of the risk factors found on the DRAI and the RAI for the three recidivism outcomes. Investigating correlation coefficients are an important first step in determining if risk factors are valid. Correlation coefficients range from -1 to +1. The closer to -1 or +1 the stronger the correlation, the closer to 0 the weaker the correlation. A negative correlation coefficient indicates a negative relationship between the risk factor and the outcome and a positive correlation coefficient indicates a positive relationship. A statistically significant correlation describes a correlation that is not likely to have occurred by chance alone and is represented with an " * " for less than 5% ($p<.05$) chance of error, and " ** " for less than 1% ($p<.01$) chance of error. All risk factor correlations were analyzed using Sample 2.

The first risk factor that was added to the DRAI is "Failure to Appear Runaway/Escape History." According to table 3.3 there is a statistically significant correlation found between this risk factor and any recidivism at the $p< .01$ level and misdemeanor recidivism at the $p< .05$ level. The correlation between this risk factor and felony recidivism is not statistically signficiant. These correlations provides evidence that the risk factor "Failure to Appear Runaway/Escape History" is valid when predicting less severe recidivating offenses.

An update was made to the DRAI in the manner in which the risk factor "Most Serious Offense Alleged in Current Referral" (MSOACR) is measured. MSOACR is a difficult risk factor to include in a risk assessment as it is negatively correlated with recidivism (see page 42). However, this risk factor is specifically described as a "core risk factor" in JDAI's juvenile detention risk assessment guide (Steinhart 2006 p. 33). On the RAI, scores are organized based on four response categories:1) was the offense a felony against a person, 2) was the offense another felony, 3) was the offense a misdemeanor against a person, and 4) was the offense an other misdemeanor, not a crime against person. Instead of having four options for the MSOACR, the DRAI provides an individual score for every possible offense a juvenile can commit in Montana based on a likelihood to reoffend severity scale (see pages 44-45).

Table 3.3 Bivariate Correlation of DRAI and RAI Risk Factors (N=2550)			
DRAI Risk Factors	**Any Recidivism**	**Misdemeanor Recidivism**	**Felony Recidivism**
Most Serious Offense Alleged in Current Referral	-.059**	-.059**	.041*
Prior Admission of Guilt	.151**	.114**	.041*
Referrals Pending Adjudication	.130**	.127**	.018
Failure to Appear Runaway/Escape History	.082**	.047*	-.005
Warrant History	-.006	-.005	-.001
History of Drug or Alcohol Problems	.041*	.033	.014
Current Supervision Status	.058**	.022	.004
First Offense was Under the Age of 13	.081**	.089**	-.003
Multiple Offenses Alleged in Current Offense	.039	.020	.008
Current Offense was Particularly Severe or Violent and or Used a Deadly Weapon	-.030	-.027	.056**
No Arrests Within the Past 12 Months	-.177**	-.120**	-.043*
This Offense is the First Law Violation in Minor's History	-.162**	-.199**	-.046*
Demonstrates Stability in School	-.062**	-.056**	-.048*
No Failure to Appear in 12 Months	-	-	-
Current Offense was Mitigated	.000	.020	-.008
RAI Risk Factors			
The Youth was Taken into Custody on a Valid Warrant or Pickup Order	-.019	-.015	-.004
Most Serious Offense Alleged in Current Referral	-.065**	-.039*	.004
Additional Offenses Alleged in Current Referral	.001	-.003	.012
Prior Admission of Guilt	.151**	.114**	.041*
Referrals Pending Adjudication	.130**	.127**	.018
Supervision Status	.058**	.022	.004
Warrant History	-.006	-.005	-.001

Note. ** p < .01
*** p < .05**

The correlations of risk factors on the DRAI and RAI with recidivism outcomes is shown in Table 3.3. Similar to past findings, the RAI's MSOACR is negatively correlated with recidivating outcomes for any offense and misdemeanor offense beyond the p< .01 level. This finding indicates that the more severe the offense the less likely the juvenile will have a recidivating offense. Felony recidivism on the RAI shows a weak positive correlation that is not statistically significant. The DRAI's MSOACR also shows negative correlations that are statistically significant for the recidivating outcomes of any offense and misdemeanor offense. An improvement can be seen on the DRAI based on the correlation with felony recidivism. The correlation is positive and statistically significant at the p<.05 level. This improvement provides evidence for the validity of the DRAI's MSOACR when predicting felony offenses.

The most notable additions to the DRAI are the aggravating and mitigating factors. The aggravating factors include five items that add one point each to the final risk score. They are:

1) history of drug or alcohol problems
2) under current supervision status
3) juvenile's first offense was before the age of 13
4) multiple offenses alleged in the current referral
5) crime or behavior alleged was particularly severe or violent and or used a deadly weapon

The evidence in Table 3.3, shows that three of the five aggravating risk factors are statistically correlated with any recidivism: history of drug or alcohol problems, current supervision status, and first offense was under the age of 13. The only aggravating risk factor that has a statistically significant correlation with misdemeanor recidivism is "juvenile's first offense was under the age of 13". The only aggravating risk factor that shows a statistically significant correlation to felony recidivism is "the current offense was particularly severe or violent and or used a deadly weapon".

This is interesting because this risk factor is not correlated with the other two outcomes (any recidivism or misdemeanor recidivism).

Mitigating factors include five items when activated reduce the final DRAI indicated risk score by one point. These mitigating factors are expected to be negatively correlated with recidivism; the greater the numbers of mitigating factors the less likely a juvenile is to have a recidivating offense. The mitigating factors are:

1) no arrest within the past 12 months
2) this offense is the first law violation in minor's history
3) minor demonstrates stability in school or employment
4) no history of failure to appear within the past 12 months
5) and involvement in current offense was remote, indirect, or otherwise mitigated

Three of the five mitigating factors are negatively correlated and statistically significant to all outcomes: No arrest within the past 12 months, this offense is the first law violation in minor's history, and minor demonstrates stability in school. Based on the inability to collect information about failure to appear, all juveniles in the sample had the mitigating factor of no failure to appear in 12 months. Since all juveniles had this variable a correlation could not be calculated. The mitigating factor "current offense was mitigated" was not correlated to any of the outcomes and only occurred in 41 cases.

To begin examining how changes made to the DRAI impacts the final indicated decision Table 3.4 presents the RAI and DRAI's average risk score and standard deviations for three mutually exclusive juvenile samples: 1) juveniles who did not commit a new misdemeanor or felony offense, 2) juveniles who committed a new misdemeanor offense, and 3) juveniles who committed a new felony offense. Both the RAI and the DRAI produce average scores that are lowest for those juveniles that did not have a new offense, second lowest for the juveniles that had a new misdemeanor offense, and highest for the juveniles that had a new felony offense. This is evidence that the instruments are working correctly when predicting severity of recidivism. Interestingly, the DRAI's averages are spaced further apart than the RAI averages indicating that the DRAI is doing a better job at separating these distinct samples from each other. However, the DRAI's standard deviations indicate scores with higher variability for all samples. Higher variation in scores indicates less consistency (more variance) when predicting each of the outcomes.

Table 3.4 RAI and DRAI Average Scores on Failures and Successes (N=2550)

	No Misdemenor or Felony		Misdemeanor Offense		Felony Offense	
Instrument	**Mean**	**SD**	**Mean**	**SD**	**Mean**	**SD**
RAI	8.39	3.75	9.43	4.04	10.09	4.23
DRAI	3.94	5.14	5.37	4.91	8.64	6.19

OVERRIDES AND AGREEMENTS

The second objective in the analysis is to investigate patterns of override decisions. The analysis of override and agreement decisions is different from the RAI validation study presented in Section One (see page 23). In the RAI DRAI Comparison Test, practitioners did not see the RAI or DRAI scores before making release or detention decisions. Agreement and override analysis compares

what the instrument would have recommended versus what the practitioner actually decided to do with the juvenile.

Agreement is defined as the occurrence when the indicated decision on the instrument (RAI or DRAI) and the actual decision by the practitioner are the same to either detain or release a juvenile. An "override up" is defined as the instrument indicates a release, or detention alternative and the actual decision was to detain the juvenile. An "override down" occurs when the RAI or DRAI indicated decisions is to detain the juvenile and the actual decision is to release the juvenile. The data in Table 3.5 presents the agreements and override decisions from the DRAI organized by the race/ethnicity of the juvenile.

Table 3.5 DRAI Agreement and Override by Juvenile's Race N=2689

	Agreement		Override		
Sample	**Detain**	**Release**	**Up**	**Down**	**Total**
White	2.1% (44)	80.5% (1681)	13.7% (285)	3.7% (77)	100% (2087)
Native American	1.3% (5)	77.2% (304)	18% (71)	3.6% (14)	100% (394)
African American	1.9% (2)	74.5% (79)	20.8% (22)	2.8% (3)	100% (106)
Hispanic/Latino	0% (0)	78.4% (69)	19.3% (17)	2.3% (2)	100% (88)
Asian	0% (0)	62.5% (5)	25% (2)	12.5% (1)	100% (8)
Native Hawaiian or Other Pacific Islander	0% (0)	83.3% (5)	16.7% (1)	0% (0)	100% (6)
Full Sample	1.9% (51)	79.7% (2143)	14.8% (398)	3.6% (97)	100% (2689)
Total Agreement and Override	81.6% (2194)		18.4% (495)		100% (2689)

The DRAI indicted and actual decisions were the same in the majority 81.6% (2194) of instances. The DRAI is more likely to agree with release and detain decisions for White juveniles than any other race. Out of the four largest samples, the African American sample had the least amount of agreement for release decisions (74.5%) and the Native American sample had the least amount of agreement for detain decisions (1.3%).

The DRAI indicated and actual decisions were not the same 18.4% (495) of the time. The DRAI has an override up rate of 14.8% (596) which falls within the 15% override limit recommended by JDAI (Steinhart p.22). Alternatively, overrides down occurred in only 3.6% (97) of the decisions. White juveniles were least likely to have an override up (13.7%) and most likely to have an override down (3.7%) compared to Native Americans, African Americans and Hispanic/Latinos. Table 3.6 presents the override and agreement results for the RAI.

Table 3.6 RAI Agreement and Override by Juvenile's Race N=2689

	Agreement		Override		
Sample	**Detain**	**Release**	**Up**	**Down**	**Total**
White	3.6% (76)	79% (1648)	12.1% (253)	5.3% (110)	100% (2087)
Native American	5.3% (21)	75.1% (296)	14% (55)	5.6% (22)	100% (394)
African American	6.6% (7)	73.6% (78)	16% (17)	3.8% (4)	100% (106)
Hispanic/Latino	4.5% (4)	75% (66)	14.8% (13)	5.7% (5)	100% (88)
Asian	0% (0)	62.5% (5)	25% (2)	12.5% (1)	100% (8)
Native Hawaiian or Other Pacific Islander	0% (0)	83.3% (5)	16.7% (1)	0% (0)	100% (6)
Full Sample	4% (108)	78% (2098)	12.7% (341)	5.3% (142)	100% (2689)
Total Agreement and Override	82% (2206)		18% (483)		100% (2689)

According to table 3.6, the RAI and DRAI present similar patterns in terms of agreements and overrides. The RAI indicted decision and actual release and detention decisions are the same 82% (2206) of the time (compared to 81.6% of the time for the DRAI). Out of the four largest samples, White juveniles have the highest agreement rate on the RAI for release decisions at 79% (1648 out of 2087 decisions) followed by Native Americans, Hispanic Latinos, and then African American. African American juvenile are the most likely out of all samples to show agreement to detain with 6.6% (7) and White juveniles are the least likely to show agreement to detain with 3.6% (76).

The RAI's indicated decision and actual decision were different 18% of the time. The override up rate is slightly lower than the DRAI with 12.7% (341 out of 2689 decisions) again keeping within the JDAI recommended override up maximum of 15%. Among the four largest samples, African American juveniles are the most likely to have an override up with 16% (17) followed by Hispanic Latinos with 14.8% (13), Native Americans with 14% (55) and then White juveniles with only 12.1% (253).

Override and agreement analysis is an important tool that can help detect possible discrimination or biases that minimize the effectiveness of evidence-based decision making. The findings indicate that White juvenile do differ from minority races in agreement and override decisions, however, the differences are small enough that they are unlikely to represent systematic bias. It will be important, moving forward, to continuously monitor and analyze the override and agreement rate when the instrument is used in the juvenile justice system.

DETENTION DECISIONS

The third objective in the RAI DRAI Comparison Test is the analysis of detention decisions. One of JDAI's main goals is to reduce unnecessary detention in the juvenile justice system (see pages 17-18). JDAI espouses a properly functioning risk assessment instrument as a key piece of this process. To examine detention decisions the actual outcome of the juvenile (detain or release) will be compared to what the RAI and the DRAI's indicated decision would be (release and detention alternative or secure detention). To examine the change from the actual outcome to the RAI and the DRAI indicated outcome the following percentage change formula is used:

$$\text{Percentage Change} = \left(\frac{(y2-y1)}{y1}\right) 100$$

Table 3.7 Indicated Decision vs. Actual Decision N=2689

	Release Or Detention Alternative		Detain	
Decision	**f**	**%**	**f**	**%**
RAI Indicated	2439	90.70%	250	9.30%
DRAI Indicated	2541	94.50%	148	5.50%
Actual Outcome	2240	83.30%	449	16.70%

The data in Table 3.7 shows whether an instrument is used or not, the majority of juveniles (83.3% to 94.5%) are released back to their parents. The difference is more pronounced when the frequencies of detained youth are considered. Out of the 2689 Montana juveniles who were cited for an offense in the nine-month period included in the current examination, only 449 were actually placed in secure detention for any length of time. This represents 16.70% of all juveniles cited for an offense (greater than a status offense). In comparison, if the RAI's indicated decision was used

as the evidence to detain a juvenile there would be 199 (449-250) fewer juveniles placed into detention. This difference represents a 44.3% decrease in the use of detention when the RAI indicated decision is used versus practitioner discretion alone. Moreover, if the DRAI's indicated decision was used to determine if a juvenile should be detained there would be 301 (449-148) fewer juveniles detained than what actually occurred representing a 67.04% decrease in the use of detention when using evidence from the DRAI's indicated decision. Compared to the RAI indicted decision, following the DRAI indicted decision would result in the placement of 102 (250-148) fewer juveniles in detention. This is a reduction of 40.8% in the use of detention between the RAI and DRAI indicted decisions.

By using the RAI and DRAI indicated decisions, there is a decrease in the number of juveniles recommended for placement in secure detention. However, there is no way to determine how successful those juveniles that were detained would have been if they were released to their parents as the RAI and DRAI recommended. A prospective research design must take place to address this question.

There were 43 instances when the DRAI indicated decision was a detention outcome in contrast to a RAI indicated release decision. In contrast, there were 145 instances where the RAI indicated decision was a detention outcome and the DRAI indicated would have been release. Table 3.8 describes the difference between these two groups based on the juvenile's most serious offense alleged in current referral.

Table 3.8 Detention Recommendation Differences Between the RAI and DRAI

Offense	DRAI Detain/ RAI Release	RAI Detain/ DRAI Release
Technical	0% (0)	2.1% (3)
Misdemeanor Property	2.3% (1)	35.2% (51)
Misdemeanor Drug	0% (0)	7.6% (11)
Misdemeanor Against Public Administration	0% (0)	4.1% (6)
Misdemeanor Against Public Order	0% (0)	5.5% (8)
Felony Property	25.6% (11)	20.7% (30)
Felony Person	0% (0)	20% (29)
Felony Drug	30.2% (13)	3.4% (5)
Other non-Misdemeanor Felony	0% (0)	.7% (1)
Felony Sex Offense	41.9% (18)	.7% (1)
Total	43	145

Of the 43 juveniles that the DRAI would detain that the RAI would release, 2.3% (1) committed a misdemeanor property offense, 25.6% (11) committed a felony property offense, 30.2% (13) committed a felony drug offense, and 41.9% (18) committed a felony sex offense. Out of the 145 juveniles the RAI would detain that the DRAI would release, 54.5% (79) committed a misdemeanor offense or a technical violation, 20.7% (30) committed a felony property offense, 20% (29) committed a felony against person offense, 3.4% (5) a felony drug offense, .7% (1) committed an other non-misdemeanor felony, and .7% (1) a felony sex offense.

Table 3.8 presents the impact the DRAI has on detention decisions. The most severe crimes (i.e. sex offenses, felony drug offenses) give the most points on the DRAI and less severe offenses (i.e. misdemeanor property offenses) give the least amount of points. This is beneficial because it assists in detaining those juveniles that commit offenses, based on prior research in Montana, that

are likely to lead to recidivism, and at the same time assists in releasing those juveniles that commit the less severe offenses.

PREDICTION OF RE-OFFENSE

The fourth objective in the RAI DRAI Comparison Test is a comparison of prediction accuracy based on the RAI and DRAI total scores. The ability of the RAI and DRAI to predict recidivms is assessed by means of ROC analyses. Using the RAI and DRAI total risk score with ROC analysis will help determine if higher risk scores are associated with a higher probability of recidivism.

According to Table 3.9, the DRAI produced higher AUCs for predicting all three outcomes. This suggests a higher level of accuracy in favor of the DRAI over the RAI. The DRAI total score predicted any recidivism and misdemeanor recidivism with moderate accuracy (.616 and .603 respectivley) which is a common finding for risk assessment instruments in the justice system (Olver, Stockdale, and Wormith 2009; Schwalbe 2007). The differences found between the RAI and DRAI's AUCs were not statistically signficant for any outcome. However, a notable difference between the RAI and DRAI can be seen in the AUCs for felony recidivsm. The DRAI predicted felony recidivism with moderatley high accuracy (.730) which was statistically significant at the p< .01 level. In contrast, the RAI does not yield a statistically signicant ability to predict felony recidivism. It is important to note that only 11 of the 2,550 juveniles in the sample committed a new felony offense in the 30 day period of risk. The low amount of juveniles in this sample have caused inflated AUCs and lack of statistical significance in the RAI.

Table 3.9 AUC Values for the RAI and DRAI (N=2550)

Instrument	Any Recidivism N=247	Misdemeanor Recidivism N=153	Felony Recidivism N= 11
RAI	0.593**	0.591**	0.641
DRAI	0.616**	0.603**	0.730**
Difference	0.023	0.012	0.089

Note. ** p < .01.

While no statistical difference was found between the RAI and the DRAI, the data show that the DRAI outperforms the RAI on every outcome according to the AUCs and is evidence that the DRAI is headed in the right direction. Table 3.10 compares the RAI and DRAI's performance on race and gender when predicting the outcome of misdemeanor or felony recidivism in 30 days.

Table 3.10 RAI and DRAI AUC Performance on Race and Gender			
Sample	**RAI**	**DRAI**	**N**
Race			
White	0.59**	0.602**	1984
Minority	0.612*	0.647**	566
Difference	.022	.045	-
Gender			
Male	0.574**	0.588**	1715
Female	0.637**	0.665**	835
Difference	.063	.077*	-

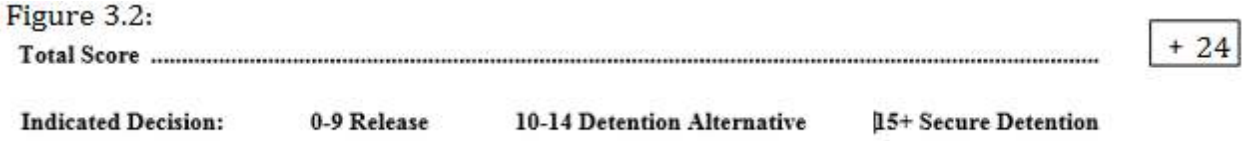
Note. ** p < .01
*** p < .05**

The RAI and DRAI performed moderately well on all samples when the investigation focuses on race and gender of the juvenile. Similar to the finding from Table 3.9, the DRAI slightly outperformed the RAI on all samples. The RAI and DRAI show an improvement in accuracy when predicting new misdemeanor or felony recidivating offenses in 30 days for the Minority sample compared to the White sample, however, the difference between the AUCs is not statistically significant. Interestingly, the RAI and DRAI's accuracy was highest for the female sample. The DRAI shows a statistical difference between predicting a new misdemeanor or felony offense for males and females at the p<.05 level. This findings suggests that the accuracy of predicting recidivism in females is so much larger than males that this finding is not likely to have occurred by chance alone. Having a gender specific risk instrument is a topic of debate in the JDAI community and is an area that must be investigated further in future research examining the use of risk assessment instruments in the Montana Juvenile Justice System.

INDICATED DECISION THRESHOLDS

Indicated decision thresholds are imperative in a risk assessment instrument because it gives the practitioner an easy interpretation of the total risk score once the instrument has been completed. The indicated decision thresholds on the RAI and DRAI were borrowed verbatim from the Virginia Detention Risk Assessment Instrument (see page 18). Figure 2 presents an example of the total score and the indicated decision thresholds found at the bottom of the risk assessment instruments (see appendix A and B). In the example, the juvenile scored a total of 24 points. The thresholds on the RAI and DRAI yield a "release" indicated decision when the juvenile's total risk score is between 0 to 9 points. A total risk score between 10 to 14 points results in a "Detention Alternative," outcome as the indicated decision. A total scores of 15 points or higher result in "Secure Detention" as the indicted decision. For the example below, the 24 total risk points would result in indicated decision for placement in secure detention.

Figure 3.2:



The last objective in the RAI DRAI Comparison test is the investigation of these thresholds. It is simple to determine if these thresholds are correct by using ROC analysis. Simply, compare the accuracy of the RAI and DRAI using the total risk score to the accuracy of the RAI and DRAI using the indicated thresholds. If the thresholds are correct, accuracy between the total score and the indicated decision thresholds will not change. The indicated decision thresholds are coded: 1=release, 2=detention alternative, and 3= secure detention. Table 3.11 compares the accuracy of the total risk score to the accuracy of the indicated decision.

Table 3.11 AUC Values on Total Risk Scores and Indicated Thresholds N=2550

	Any Recidivism N= 247		Misdemeanor Recidivism N=153		Felony Recidivism N= 11	
Instrument	**Total Score**	**Indicated Decision**	**Total Score**	**Indicated Decision**	**Total Score**	**Indicated Decision**
RAI	0.593**	.546*	0.591**	0.549*	0.641	0.548
DRAI	0.616**	0.533	0.603**	0.525	0.73**	0.66

Note. ** p < .01
*** p < .05**

According to the findings in Table 3.11 the RAI and DRAI show decreased AUCs and statistical significant when the indicated decision thresholds are used instead of the total risk score for every recidivating outcome. On the DRAI, the prediction of every outcome goes from statistically significant at the p<.01 level using the total risk score to failing to achieve statistical significance when using the indicated decisions. Moreover, by using the indicated decision instead of the total score, the DRAI's accuracy is no longer greater than the RAIs accuracy for predicting any recidivism, and misdemeanor recidivism.

This provides evidence that the thresholds are not set in a way that maximizes accuracy. However, after further investigation it was discovered that the thresholds may not be the most important issue when determining accuracy. Consider table 3.12, the information presents the probabilities of being correct versus the probability of committing an error when using the DRAI and RAI for predicting misdemeanor or felony recidivism using the thresholds as they currently stand.

Table 3.12 Outcomes for Predicting Misdemeanor or Felony Recidivism

Prediction Outcome	**DRAI AUC= .535**	**RAI AUC=.550***
False Positives	5% (120)	7.8% (185)
True Negatives	95% (2266)	92.2% (2201)
True Positives	4.3% (7)	11% (18)
False Negatives	95.7% (157)	89% (146)

ROC analysis constructs a curve based on the true positive and false positive probabilities (see pages 46-47). A true positive is when the instrument correctly predicts that the juvenile will commit a new offense. A false positive is when the instrument incorrectly predicts that a juvenile will commit a new offense. The problem with only focusing on these two probabilities is that the overwhelming majority of all juveniles will not commit a new offense. Only 164 juveniles out of 2550 (6.4%) had a new misdemeanor or felony offense in 30 days. Out of the 164 juveniles who had a misdemeanor or felony recidivating offense, the DRAI only predicted 4.3% (7) correctly.

Alternatively, the RAI correctly predicted 11% (18) of those juveniles. The RAI has a higher AUC when predicting misdemeanor or felony recidivism because it has a higher true positive probability rate. Neither the RAI nor the DRAI predict recidivism well but when investigating accuracy the true positive rate should not be the only outcome analyzed.

One of JDAIs main goals is to safely reduce the use of secure detention in the juvenile justice system. In other words, correctly predict those juveniles who will not commit a recidivating offense and release them to their parents. This is the definition of a true negative. According to table 3.12 the DRAI correctly predicted 95% (2266) of the juveniles who did not commit a new offense and the RAI correctly predicted 92.2% (2201) of the juveniles who did not commit a new offense. Since the true negative probability is the most important aspect when considering accuracy for the RAI and the DRAI in JDAI both instruments did a superior job. The DRAI outperformed the RAI by 2.8 percentage points or 65 juveniles. However, the low AUC scores found during ROC analysis should not be ignored, these are evidence of the need for continued research on new risk factors, risk factor's weight and indicated decision thresholds.

CONCLUTIONS AND RECCOMENDATIONS

The purpose of this research was to help determine if improvements made to the Montana RAI into the DRAI have increased prediction accuracy and reduce unnecessary detention in youth in the Montana Juvenile Justice System. Below a summary of the findings and evidence suggest that the transition into the DRAI is headed in the right direction.

SUMMARY OF FINDINGS

In order to evaluate that the RAI and the DRAI are free from discrimination and bias an override and agreement analysis was conducted. Only slight differences were found between the use of release and secure detention for White and minority juveniles. These differences were so small that they are unlikely due to any form of systematic bias. In the majority of instances, the RAI and DRAI indicted decisions where the same as the actual decisions (82% and 81.6% respectively). Both tools were under the override up maximum of 15% recommended by JDAI. The override analysis will be more informative when the analysis is based on an actual field test. In the field test, not only will practitioners be able to use the instrument to help justify their decision but in the event that their decision differs from the DRAI's recommended indicated decision they will be required to check an "override justification." Override analysis will be an important aspect of future research on the DRAI.

One of the most important discoveries during the comparison test was the decrease in the use of secure detention when using the DRAI. During this nine month time period 449 juveniles were securely detained. If the RAI's indicated decision was used there would be 250 juveniles detained, a 44.3% decrease in the use of detention. Using the DRAI's indicated decision only 148 juveniles would be detained, a 67.04% decrease in the use of secure detention from the actual decision and a 40.8% decrease in the use of secure detention from the RAI.

The accuracy of the instrument was measured using ROC analysis. When using the total risk score the DRAI outperformed the RAI on every recidivating outcome. This is confirming evidence that the organization of risk factors on the DRAI is an improvement of the RAI in accurately predicting recidivism. Additionally, the RAI and the DRAI performed well the comparison focused on

male/female and racial comparisons. The RAI and the DRAI were found to be the most accurate at predicting female recidivism and minority recidivism. Differences between gender and race should also be investigated in future research.

When the indicated thresholds were used instead of the total scores, prediction accuracy for every outcome decreased dramatically according to ROC analysis. This is troubling because this finding shows that the thresholds are not set in a way that maximizes accuracy. However, accuracy determined by ROC analysis is not completely aligned with accuracy according to JDAI. Risk assessment instruments in JDAI are meant to predict juvenile recidivism but equally as important predict those juveniles that will not commit a recidivating offense. Out of the 2550 juveniles in the sample, 2303 juveniles did not commit a misdemeanor or felony recidivating offense. The DRAI accurately predicted that 95% (2266) of these juveniles would not commit a new offense, 2.3% (65 juveniles) more than the RAI. Out of the 164 juveniles who committed a new misdemeanor or felony offense only 4.3% (7) were correctly predicted by the DRAI, 6.7% (4 juveniles) less than the RAI.

LIMITATIONS

Concerns and limitations in this research are focused on the retrospective sampling method. This is a well-known limitation in risk assessment research. David Steinhart (2006) describes the retrospective sampling method as an important method for those sites that have advanced data systems that will support the collection of data on risk factors and outcomes. He goes onto say that the prospective sampling method is preferable because it is "likely to produce more reliable results, simply because it is applied to a more contemporary referral population" (p. 52). The two main limitations that resulted from the retrospective sampling method in this research are the inability to collect all risk factors and outcomes correctly, and the inability to receive feedback from practitioners who filled out the instruments.

The inability to collect the variable "failure to appear" is among the largest omissions in this research. Similar to the RAI validation study this variable was found to be extremely difficult to collect correctly because there is no specific location in the JCATS where it can be found. The total risk score for the DRAI was impacted because "failure to appear" is associated with two risk factors found on the instruments. Additionally, it made it impossible to analyze the instrument's ability to predict failure to appear as an outcome.

The accuracy of two additional variables came into question while data collecting: "warrant history" and "supervision status." To collect warrant history the Montana Code Annotated "Issuance of Arrest Warrant" (V-46-9-505) was queried. Only one juvenile out of 2550 was found to have had a warrant in their history. This is an obvious data error that impacted total scores on the RAI and DRAI.

A risk factor that asks about the juvenile's supervision status at time of arrest is asked on both the RAI and the DRAI. On the DRAI this variable is an aggravating factor that simply asks whether there was ANY supervision status at time of arrest. This risk factor was simple to find in the JCATS. Alternatively, the RAI specifically asks what the juvenile's supervision status was at time of arrest. Determining the exact supervisions status that the juvenile was under at time of arrest was extremely difficult. As a result, a compromise was made so the risk factor could be partially collected on the RAI. On the RAI all supervision categories that the juvenile could be under give 5

points to the total risk score except for one category that gave 10. Instead of specifically locating the exact supervision the juvenile was under, any juvenile that was under a current supervision status was given 5 points. This accounted for the majority of the juveniles and the only data that is lost are those juveniles that should have received 10 points instead of 5.

The second primary limitation associated with the retrospective sampling method is the inability to receive feedback from practitioners who used the instruments. The DRAI is now a fully automated instrument and one of the main concerns is the instruments usability. Issues that arise while using the DRAI cannot be addressed until the DRAI is being used in the field. Also, it is now mandatory for practitioners filling out the instrument to check at least one override justification if the actual decision differs from the DRAI indicted decision. This override information will be helpful to determine common reasons for overriding the DRAI which can provide information to improve the instrument. These override justification could also provide some insight to the differences between race and gender in override decisions.

RECOMMENDATIONS

Data Recommendations:

- Collect variables in the JCATS that will assist in future research on the DRAI, in particular:
    - Failure to Appear
    - Recidivism in 30 days
- Develop a way in JDDRS to monitor the validity of the DRAI:
    - Compare detention decisions made with the use of DRAI versus detention decisions made without the use of DRAI
    - Include a way to continuously monitor the DRAI's accuracy with ROC analysis
    - Provide an override statistic for each county to ensure that overrides are used normally.

Research Recommendations

- Conduct research on the DRAI using the prospective sampling method.
    - This is the most important research recommendation. Investigating the DRAI using a retrospective sampling method has several limitations that the prospective approach accounts for. Implementing the instrument into the juvenile justice system is the only way to truly determine the instruments validity.
- Conduct research investigating differences in gender and race on the DRAI
- Conduct research investigating override decisions (once DRAI is implemented into the system)
- Conduct research to increase recidivism prediction accuracy.
    - The DRAI is shown to perform poorly when predicting recidivism but perform well at predicting non-recidivism. More research is needed to determine whether additional risk factors, adjustments in the risk factor weights, and

changes in the decision thresholds would increase recidivism prediction without decreasing the instruments ability to predict non-recidivism.

Montana Juvenile Justice System:

- Implement DRAI to JDAI counties.
    - This goes hand in hand with future research. To truly determine how well the DRAI performs in the juvenile justice system the DRAI must be implemented in the system.

CONCLUSION

This research has provided evidence that the DRAI is a valid instrument and is expected to perform up to JDAI standards when implemented in the Montana Juvenile Justice System. Similar to the RAI validation study, this investigation provides a baseline examination of the DRAI. The findings here will be particularly important for the future research that is conducted. The evidence presented above shows that use of the DRAI decreases the use of secure confinement as a recommendation, increases prediction accuracy of non-recidivism and provides an unbiased predictions for both race and gender. Of the 43 juveniles that the DRAI would detain that the RAI would release 42.9% were felony sex offenders. Of the 143 juveniles that the DRAI would release that the RAI would detain 54.5% committed a misdemeanor or technical violation. An additional improvement made to the DRAI that was unable to be investigated is the automation of the instrument. The automation is expected to decrease practitioner error and timeliness and increase consistency and usability. Risk assessment, in the field of juvenile justice, will never be perfect but the steps taken thus far from the RAI to the automated DRAI are evidence of the ability to continually improve risk assessment validity which will increase youth protection in the Montana Juvenile Justice System.

REFERENCES

Aguinis, Herman and Ryan K. Gottfredson. 2010. "Best-practice Recommendations for Estimating Interaction Effects Using Moderated Multiple Regression." Journal of Organized Behavior 31:776-786.

Andrews, D.A., James Bonta and J. Stephen Wormith. 2006. "The Recent Past and Near Future of Risk and/or Need Assessment." *Crime and Delinquency* 52:7-27.

Annie E. Casey Foundation. Retrieved from the World Wide Web. www.aecf.org. March 14th 2012.

Baglivio, Michael T. 2009. "The Assessment of Risk to Recidivate Among a Juvenile Offending Population." *Journal of Criminal Justice.* 37:596-607.

Burgess, Ernest W. 1928. Factors Determining Success or Failure on Parole. In A. A. Bruce, *The workings on the indeterminate sentence law and the parole system in Illinois.* Springfield: Illinois State Board of Parole.

Caulkins, Jonathan, Jacqueline Cohen, Wilpen Gorr and Jifa Wei. 1996. "Predicting Criminal Recidivism: A Comparison of Neural Network Models with Statistical Methods." *Journal of Criminal Justice* 24:227-240.

Grinberg, Ilyse. Marva Dawkings, Marvin P. Dawkins, and Conatance Fullilove. 2005. "Adolescents at Risk for Violence: An Initial Validation of the Life Challenges Questionnaire and Risk Assessment Index." *Adolescence.* 40:573-599

Gottfredson, Stephen D. and Laura J. Moriaty. 2006. "Statistical Risk Assessments: Old Problems and New Applications." *Crime and Delinquency* 52:178-200.

Gottfredson, Don M. and Howard N. Snyder. 2005. "The Mathematics of Risk Classification: Changing Data into Valid Instruments for Juvenile Courts." Washington D.C.: U.S. Department of Justice, Office of Justice Programs, Office of Juvenile Justice and Delinquency Prevention.

Gottfredson, Stephen D. and Don M. Gottfredson. 1980. "Screening for Risk: A comparison of Methods." *Criminal Justice and Behavior* 7:315-330.

Hanley, James A., Barbar J. McNeil. 1982) "The Meaning and Use of the Area under a Receiver Operating Characteristic (ROC) Curve." *Radiological Society of North America.* 143:29-36.

Kirby Bernard C. 1954. "Parole Prediction Using Multiple Correlation." American Journal of Sociology 59:539-550.

Odgers, Candice L., Marlene M. Moretti and N. Dickon Reppucci. 2005. "Examining the Science and Practice of Violence Risk Assessment with Female Adolescents." *Law and Human Behavior.* 29:7-28

Olver, Mark E., Keira C. Stockdale, and J. Stephen Wormith. 2009. "Risk Assessment with Young Offenders: a Meta-Analysis of Three Assessment Measures." *Criminal Justice And Behavior* 36:329.

Kang, Hyung-Ah and John Poertner. 2006. "Inter-Rater Reliability of the Illinois Structured Decision Protocol". *Child Abuse and Neglect* 30:679-689.

Kurlychek, Megan C. and Brian D. Johnson. 2010. "Juvenility and Punishment: Sentencing Juveniles in Adult Criminal Court." *Criminology.* 48:725-758.

Reiner, Scott, Jared Miller, and Tripti Gangal. 2007. *Public Safety Outcomes of Virginia's Detention Assessment Instrument*. Technical Report Submitted to the Virginia Department of Justice.

Schmidt, Fred, Mary Ann Campbell and Carolyn Houlding. 2011. "Comparative Analyses of the YLS/CMI, SAVRY, and PCL:YV in Adolescent Offenders: A 10-year Follow-Up Into Adulthood." *Youth Violence and Juvenile Justice*. 9:23-42

Schwalbe, Craig S. 2007. "Risk Assessment for Juvenile Justice: A Meta-Analysis." *Law and Human Behavior.* 31:449-462

Schwalbe, Craig S., Mark W. Fraser, Steven H. Day, and Valerie Cooley. 2006. "Classifying Juvenile Offenders According to Risk of Recidivism: Predictive Validity, Race/Ethnicity, and Gender." *Criminal Justice and Behavior.* 30: 305-324

Sharkey, Jill D., Michael J. Furlong, Shane R. Jimerson, and Kathryn M. O'Brien. 2003. "Evaluating the Utility of a Risk Assessment to Predict Recidivism among Male and Female Adolescents." *Education and the Treatment of Children.* 26:467-494.

Silver, Eric, William R. Smith and Steven Banks. 2000. "Constructing Actuarial Devices for Predicting Recidivism: A Comparison of Methods." Criminal Justice and Behavior 27:733-764.

Simon, Frances H. 1972. "Statistical Methods of Making Prediction Instruments." Journal of Research in Crime and Delinquency 9:46-53.

Steinhart, David. 2006. "Juvenile Detention Risk Assessment: A Guide to Juvenile Detention Reform." Baltimore, MD: The Annie E. Casey Foundation, Juvenile Detention Alternatives.

Thomas, Stuart, Morven Leese, Elizabeth Walsh, Paul McCrone, Paul Moran, Tom Burns, Francis Creed, Peter Tyrer, Thomas Fahy. 2004. "A Comparison of Statistical Models in Predicting Violence in Psychotic Illness." Department of Forensic Mental Health Science.

APPENDIX A: MONTANA RISK ASSESSMENT INSTRUMENT

DETENTION RISK ASSESSMENT INSTRUMENT – JPO

Youth's Name: _____ **DOB:** _____/_____/_____ **Date:** _____/_____/_____

Officer Completing Assessment: _____ **Race:** _____ **Gender:** **M / F**

Does youth meet statutory criteria for detention? _____ **No** _____ **Yes**

If the youth does not fall into the numbered category please respond with a -0- for the categories point totals.

1. The youth was taken into custody on a valid warrant or pick up order..... 15 +

2. Most Serious Offense Alleged in Current Referral
Felonies against Persons. 15
Other Felonies. 10
Misdemeanors against Persons. 7
Other Misdemeanors. ..... 5 +

3. Additional Offenses Alleged in Current Referral
One or More Additional Current Felony Offenses 5
One or More Additional Misdemeanor or Violation of Probation/Parole Offenses ..... 3 +

4. Prior Admissions of Guilt
Two or more prior admissions of guilt for felony offenses 6
One prior admission of guilt for a felony offense 4
Two or more prior admissions of guilt for misdemeanor or status offenses 3
Two or more prior admissions of guilt for probation/parole violations. 2
1 prior admission of guilt for any misdemeanor or status ..... 1 +

5. Referrals Pending Adjudication
One or more pending referrals for a felony offense 8
Two or more pending referrals for other offenses 5
One pending referral for other offense/offenses ..... 2 +

6. Supervision Status
Intensive or Close Supervision (Drug/Treatment Court, House Arrest, Group Home, Etc) 10
Formal Release Conditions 5
On Probation 5
On Parole ..... 5 +

7. Warrant History
Two or More Warrants 3
One Warrant ..... 1 +

Total Score .....

Indicated Decision: _____ **0-9 Release** _____ **10-14 Detention Alternative** _____ **15+ Secure Detention**

Final Decision: **Detain** **Release** **Release with conditions**

Override Justification:

_____

_____

_____

_____

Override Approved: _____ Date: _____

Probation Officer: _____ **Date:** _____ **Time:** _____

Officer Completing Assessment: _____ **Race:**_____**Gender: M/ F**

Does youth meet statutory criteria for detention? _____ **No**_____**Yes**

1. Most Serious Offense Alleged in Current Referral +

2. Prior Admissions of Guilt

Two or more prior admissions of guilt for felony offenses	6
One prior admission of guilt for a felony offense	4
Two or more prior admissions of guilt for misdemeanor or status offenses	3
Two or more prior admissions of guilt for probation/parole violations	2
1 prior admission of guilt for any misdemeanor or status	1
No prior admission of guilt	0

+

3. Referrals Pending Adjudication

One or more pending referrals for a felony offense	8
Two or more pending referrals for other offenses	5
One pending referral for other offense/offenses	2
No pending referrals	0

+

4. Failure to Appear/Runaway/Escape History

One or more escape from secure custody	5
One or more instances of absconding from a non-secure placement (group home, residential facility, treatment facility, or non-secure detention	3
One or more reported runaways from home	2
One or more failures to appear	1
No escapes, absconding from secure placement, runaways, or failures to appear	0

+

5. Warrant History

One or more warrants	2
No warrant history	0

+

6. Aggravating Factors

History of drug or alcohol problems	1
Under current supervision status	1
Juvenile's first offense was before the age of 13	1
Multiple offenses alleged in the current referral	1
Crime or behavior alleged was particularly severe or violent and or used a deadly weapon	1

+

7. Mitigating Factors

No Arrests within the past 12 months	1
This offense is the first law violation in minor's history	1
Minor demonstrates stability in school or employment	1
No history of failure to appear within the past 12 months	1
Involvement in current offense was remote, indirect or otherwise mitigated	1

-

Total Score +

Indicated Decision: **0-9 Release** **10-14 Detention Alternative** **15+ Secure Detention**

ACTUAL DECISION/RECOMMENDATION: ☐ Release ☐ Alternative ☐ Secure Detention