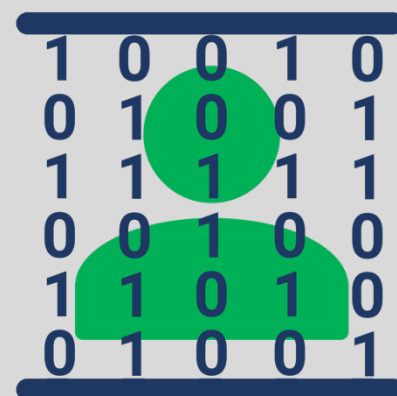


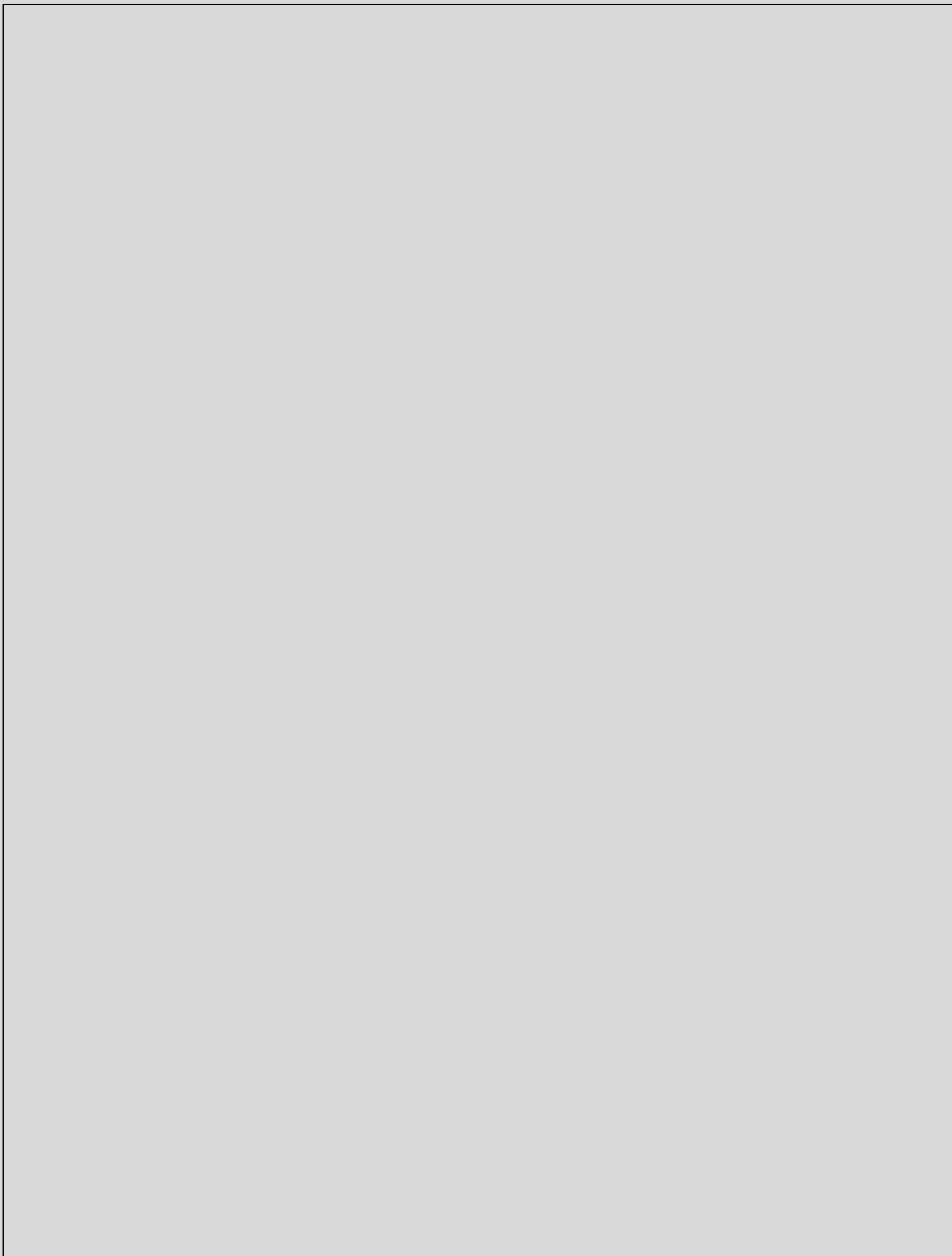
Liberty at Risk:

*Pre-trial Risk Assessment
Tools in the U.S.*



epic.org | ELECTRONIC PRIVACY
INFORMATION CENTER

UPDATED SEPTEMBER 2020



Executive Summary

Federal, state, and local governments use Risk Assessment Tools to make key decisions about defendants in criminal cases, depriving accused individuals of their liberty based on subjective assessments of the likelihood that they will flee or commit crimes in the future. Many of these tools are opaque and not subject to independent review. When used pre-trial, these assessments can make the difference between whether someone is released or detained, with or without excessive bail, and whether their sentence is short or lifelong. Experts evaluating Risk Assessment Tools have found them unreliable and biased, and critics argue that the use of these tools in the Criminal Justice System is unconstitutional.

In particular, assessments that rely on policing and arrest data can embed existing systemic biases. Racially disparate outcomes in the Criminal Justice System in the United States are well documented, and using data from that system to generate risk assessment scores exacerbates the biased outcomes. Racially imbalanced arrest data becomes racially imbalanced “offense” data. When the algorithms identify individuals who are more likely to be *stopped* by a policeman, rather than individuals who are more likely to *commit* a crime, the algorithms perpetuate systemic bias. The Department of Justice wrote in 2014 that “the length of a defendant’s prison term should not be adjusted simply because a statistical analysis has suggested that other offenders with similar demographic profiles” pose a greater risk.ⁱ Risk assessment tools do exactly this. Still, most algorithms remain opaque and their logic hidden behind trade secrets and other commercial protections.

Over the last five years, empirical research has shown that Risk Assessment Tools have significant, disparate impacts on outcomes in criminal cases based on the race, ethnicity, and age of the accused. Meanwhile use of these tools has become widespread. But, more recently, even the organizations that developed and promoted these tools have begun to caution against their use in the criminal justice context. The Pretrial Justice Institute has stated that Pretrial Risk Assessment tools “can no longer be a part of our solution for building equitable pretrial justice systems. Regardless of their science, brand, or age, these tools are derived from data reflecting structural racism and institutional inequity that impact our court and law enforcement policies and practices. Use of that data then deepens the inequity.” Advancing Pretrial Policy and Research, an organization funded by the creators of a widely used pre-trial risk assessment, also released a statement saying “assessment[s] alone cannot . . . result in the pretrial justice goals we seek to achieve.”ⁱⁱⁱ

This Report provides an overview of Risk Assessment Tools that practitioners and scholars can use to understand the nature of these systems, understand the broader context in which they are used, and help focus their evaluations of the fairness of these systems. This Report does not discuss in detail how every jurisdiction uses these tools because those decisions are made on a hyper-local basis and the advice and recommendations constantly change. The Report also does not list all benefits, criticisms, and challenges related to these tools. For more information on the topic, please consult the Resources section of the Report.

TABLE OF CONTENTS

Introduction to Risk Assessment Tools	1
Examples of Risk Assessment Tools	2
Survey of Current State Uses.....	5
Challenges and Concerns	9
Relevant Legislation and Frameworks	11
EPIC Recommendations	15
Conclusion.....	16
Resources (Books, Reports, Briefs, etc)	17
 Risk Assessment Examples:	
App. A: Public Safety Assessment (Laura and John Arnold Foundation)	20
App. B: Alaska’s Pretrial Tool	22
App. C: IDAHO LSI-R Annotated Scoresheet	24
App. D: COMPAS Questionnaire	25
App. E: DC Pretrial Services Detailing Changed Factors (Maxarth and DC PSA).....	33
App. F: E-Mails from Nebraska DOC regarding their STRONG-R Tool.....	35

This Report aims to inform the public about Risk Assessment Tools. These tools are controversial even though they have been widely deployed in the criminal justice system. Risk Assessment Tools generate scores that are used to make significant decisions impacting the liberty of criminal defendants. This Report first introduces risk assessment tools and key terms relevant to those tools. Specifically, the report describes Pretrial Risk Assessment (PTRA) tools and explains the purpose of these tools and how they are used. The Report then discusses five examples of PTRA tools to highlight some of the main differences between different implementations. The Report summarizes research and critiques of experts who have studied these tools and describes legislative and litigation efforts that have been used in response to these criticisms. The report concludes with a set of recommendations from EPIC advocating that transparency, oversight, and clearly defined goals are essential to the fair and just deployment of these tools.

INTRODUCTION TO RISK ASSESSMENT TOOLS

Pre-trial Risk Assessment tools purport to predict future behavior of defendants and incarcerated persons. The PTRA tools typically attempt to assess (1) the likelihood that the defendant will re-offend before trial and (2) the likelihood the defendant will fail to appear at trial (“flight risk”). The tools assign scores for these risks, which are used by courts and law enforcement agencies as the basis to make important pre-trial detention decisions, to set bail, to prioritize policing resources, to determine sentences, and contribute to determinations about guilt or innocence. Other Risk Assessment Tools are used in policing, parole, and inside detention facilities to determine risks and needs of offenders.

Proponents of these tools have sought to justify them as a more “efficient” way to identify innocent individuals and to avoid holding them in jail pending trial. An algorithmically-assigned score can appeal to courts because it appears to provide an “objective” quantification of risk. Many critics, however, point out that these tools are not truly objective. Critics have explained that use of PTRA tools perpetuate and entrench historical biases in the Criminal Justice System.

Many of the algorithms in PTRA tools use personal characteristics like age, sex, geography, family background, and employment status to generate risk scores. Additionally, the algorithms often incorporate subjective data such as the criminal histories of a person’s social network and an individual’s attitude towards authority. As a result, two people accused of the same crime may receive sharply different bail or sentencing outcomes based on immutable characteristics or subjective criteria outside of their control; and they have no way of assessing or challenging the basis for these scores.

EXAMPLES OF RISK ASSESSMENT TOOLS

Most Risk Assessment Tools use distinct algorithms, scoring methodologies, and data sets. There are a wide range of designs and implementations of these tools based on the developer's statistical analysis of past arrest, conviction, and demographic data, as well as their risk evaluation approach. Several examples of PTRAs are described below. These tools were created by different *types* of developers (private vs. public vs. non-profit), have varying degrees of transparency, and use a variety of factors to generate risk scores. Some developers of these tools have conducted validation studies and others have not. This section includes some PTRAs whose developers have been proactively transparent, and other tools that we were only able to learn about through open government requests and media coverage.

Full scoresheets, lists of factors, and more are available for these highlighted PTRAs in Appendices A–E.

Key Terms:

Static factors are historical factors that generally do not require an interview by a trained professional. The data most commonly associated with this type of factor are past criminal convictions, arrest history, and more. **Dynamic factors** are factors that require interviews and consistently change. They can include factors such as employment, social network, drug use, residence, cell phone ownership, and mental health. A prominent group of criminal defense lawyers expressed that “in order to reduce unnecessary detention and help to eliminate racial and ethnic bias in the outcome of the tool.

Key Terms:

Validation: The process of examining whether a given instrument actually works as intended. For pre-trial risk assessment, it compares how the tools estimated risk for certain individuals with whether those individuals actually failed to appear at their trial or committed another crime.

Validation studies should use local data from the same jurisdiction in which the tools will be used. While localized validation will not address all systemic arrest and policing issues encoded in criminal justice data, it is still essential to adequately evaluate these tools.

<u>NAME</u>	<u>DEVELOPER</u>	<u>AIMS TO MEASURE</u>	<u>TRANSPARENCY OF FACTORS AND LOGIC</u>	<u>STATIC OR DYNAMIC</u>	<u>VALIDATION</u>
PUBLIC SAFETY ASSESSMENT (SEE APPENDIX A)	Arnold Ventures	-Flight risk -New Criminal Activity -New Violent Criminal Activity	Public	Static	Nationally, yes. Not always done on local basis.



Map of jurisdictions using Public Safety Assessment. Available at advancingpretrial.org.

ALASKA'S PRETRIAL TOOL (SEE APPENDIX B)	Alaska Dept. of Corrections & Crime and Justice Institute	-Flight risk -New criminal arrest	Public	Static	Yes, localized.
---	---	--------------------------------------	--------	--------	-----------------

Table 1. Risk Factors and Correlations

Not all potential risk factors had strong correlations with Failure to Appear (FTA), New Criminal Arrest (NCA), gender, or race.

Current age	Weak correlations for males or Alaska Natives
Current DUI	Weak correlations for FTA or NCA
Current drug	Weak correlations for FTA or NCA
Current public order	Weak correlations for NCA, females, whites, and Alaska Natives
Prior felony arrests	Weak correlation for Alaska Natives
Prior convictions	Weak correlation for FTA
Current probation charge	Weak correlation for FTA
Prior domestic violence arrests	Weak correlation for FTA

Source: Crime and Justice Institute, 2017

Factors used in Alaska's Pretrial Tool. More available [here](#).

IDAHO LEVEL OF SERVICE INVENTORY REVISED (LSI-R) (SEE APPENDIX C)	Created initially in 1995 by two Canadian researchers – When jurisdictions purchase, tailoring is done, although questions built off national data	-Recidivism risk -Needs within detention and parole system	Proprietary – however certain states variations of the LSI-R have been made partially public through FOIA requests and other means.	Dynamic – interviewers complete this 54 question survey within an hour.	Yes, but not locally or regularly (2002 and 2015).
---	--	---	---	---	--

for yes (risk).

COMPANIONS

32. _____ (YR) A social isolate
 33. _____ (YR) Some criminal acquaintances
 34. _____ (YR) Some criminal friends
 35. _____ (YR) Few anti-criminal acquaintances
 36. _____ (YR) Few anti-criminal friends
Subtotal Score _____ /5 =

ATTITUDE / ORIENTATION

51. _____ (C) Supportive of crime 0 1 2 3 + _____
 52. _____ (C) Unfavorable attitude toward convention 0 1 2 3 + _____
 53. _____ (C) Poor attitude toward sentence / conviction
 54. _____ (C) Poor attitude towards supervision
Subtotal Score _____ /4 = (%)

Factors included in Idaho LSI-R. Available fully [here](#).

COMPAS (SEE APPENDIX D)	Equivant (Formerly Northpointe)	-Flight Risk -Recidivism Risk	Proprietary – 2016 ProPublica Investigation uncovered and used an iteration of it (available in Appendix D)	Dynamic – interviews complete the 100+ question survey.	Depends on jurisdiction
-----------------------------------	------------------------------------	----------------------------------	---	---	-------------------------

DC Risk Assessment Instrument (RAI) (SEE APPENDIX E)	Urban Institute and the DC Pretrial Services Agency	-Flight Risk -Recidivism Risk	Partially public	Static	Yes, independent, localized and including a Predictive Bias Report. ⁱⁱⁱ
--	---	----------------------------------	------------------	--------	--

SURVEY OF CURRENT USES OF RISK ASSESSMENT TOOLS

The following table summarizes the results of a survey of state practices conducted by EPIC between September 2019 and July 2020. Some of these tools are used outside of the pre-trial context. This information was compiled through a combination of publicly available resources and documents obtained by EPIC's Freedom of Information requests. There is no official, public compendium of Pre-Trial Risk Assessments used by states. This lack of transparency is a chief issue for advocates of reforming Pre-Trial Risk Assessments

Risk Assessment Information (state-by-state)

As of September 2020. Visit [our website](#) for newest version.

LEGEND: COMPAS - Correctional Offender Management Profiling for Alternative Sanctions¹
PSA - Pretrial Safety Assessment¹
PTRA - Pretrial Risk Assessment Instrument
CPAT - Colorado Pretrial Assessment Tool
PRRS - Pretrial Release Risk Scale
DELPAT - Delaware Pretrial Assessment Tool
ODARA - Ontario Domestic Assault Risk Assessment Tool
MNPAT - Minnesota Pretrial Assessment Tool
ORAS - Ohio Risk Assessment System
LS/CMI - Level of Service/Case Management Inventory
PRAISTX - Pretrial Risk Assessment Information System
VPRAI - Virginia Pretrial Risk Assessment Instrument
IRAS - Indiana Risk Assessment System

STATE	TYPE/SCOPE OF USE	VALIDATION STUDY?
Alabama	VPRAI / Jefferson County	Yes
Alaska	State Created / Statewide	Yes
Arizona	PSA / Statewide VPRAI / 2 County Superior Courts	Unknown
Arkansas	State Created / Statewide	Yes
California (Sample risk assessment documents from San Francisco , and Napa County)	PSA / 3 counties PRRS II / 2 Counties	In Progress
Colorado (sample risk assessment documents)	CPAT / Statewide ODARA for DV / Statewide	In Progress
Connecticut	State created / Statewide	Yes
Delaware	State created (DELPAT) / Statewide	Yes
District of Columbia	Developed with Urban Institute and Maxarth	Yes
Florida	PSA / Volusia County COMPAS - Sentencing / Statewide State Created FPRAI Being piloted / 6 Counties	Yes

STATE	TYPE/SCOPE OF USE	VALIDATION STUDY?
Georgia	State created / Some counties	Unknown
Hawaii	PSA / Statewide ORAS-PAT / Statewide	Yes
Idaho (see FOI documents below)	State created / Statewide Ada County / Revised IPRAI	Yes
Illinois	PSA / 4 counties VPRAI/RVRA / Most Courts	Yes
Indiana (sample risk assessment documents)	Mandatory use of IRAS and IYAS / Statewide	Yes
Iowa	PSA / 4 Counties via Pilot Program IRR	Yes
Kansas	State created / Johnson County	Unknown
Kentucky	PSA / Statewide	Yes
Louisiana	PSA / New Orleans	Yes
Maine	ODARA (sex offenders) / Statewide 2019 Task Force for expansion	Yes
Maryland	State created / Most counties	Yes
Massachusetts	Currently under debate, however not used yet	N/A
Michigan	COMPAS for Sentencing / Statewide	Yes
Minnesota (see Pretrial Release Evaluation Form and Bench Card)	MNPAT / Statewide	In Progress
Mississippi	CRJ (Crime Justice Institute) / Statewide	HB 585 Requires Validation Every 3 Years – passed in 2017, no validation studies published yet.
Missouri	PSA / 1 County Statewide / State created Separate statewide system for Juvenile and Sex Offenders Use Oregon Public Safety Checklist for Sentencing	Yes -Missouri Sentencing Advisory Commission (MOSAC) Risk Score: Validation Study (published in 2009 MOSAC Biennial Report)

		-Missouri Board of Probation and Parole Risk Assessment (validation studies, policies and procedures)
Montana	PSA / 2 Counties and 5 Pilot Counties	Yes
Nebraska	STRONG-R	Yes
Nevada	State created / Statewide Mar. 2019 by NV Supreme Court	Yes
New Hampshire	Yes	N/A
New Jersey	PSA / Statewide	Yes
New Mexico	PSA / 4 Counties ODARA for DV	Yes
New York	(NYC) City Created / Citywide State Created / State-wide for Parole	Yes
North Carolina	PSA / 1 County Developing another statewide one	Yes
Ohio	PSA / 3 Counties ORAS-PAT / Statewide	Yes
Oklahoma	ORAS for Pretrial Services Program + LSI/R / Statewide	Yes
Oregon (sample assessments)	Public Safety Checklist	Yes
Pennsylvania	PSA / Allegheny County State created / 1 County	Yes
Rhode Island	PSA / Statewide	Yes
South Carolina	State Created - Cash Bail Use	Unknown
South Dakota	PSA / 2 Counties	Yes
Tennessee	PSA / 2 Counties State Created / One Judicial District Test	In Progress
Texas (sample assessments)	PSA / Harris + Dallas County PRAISTX (derivative of ORAS) / Statewide Parole Board	Yes
Utah	PSA / Statewide	Yes
Vermont	ORAS	No

STATE	TYPE/SCOPE OF USE	VALIDATION STUDY?
Virginia	VPRAI revised by Luminosity / Statewide Use Oregon Public Safety Checklist for Sentencing	Yes - Re-Validation of the Nonviolent Offender Risk Assessment Instrument - 2012 Virginia Criminal Sentencing Commission Annual Report - 2001 Virginia Criminal Sentencing Commission Annual Report - Offender Risk Assessment in Virginia: A Three-Stage Evaluation - Assessing Risk Among Sex Offenders in Virginia
Washington	PSA / 3 Counties	Yes
West Virginia	LS/CMI	Yes
Wisconsin (See sample assessment documents)	PSA / 4 Counties COMPAS / Statewide	Yes
Wyoming	COMPAS for Prisoners / Statewide	Unknown
Federal	PTRA	Yes

CHALLENGES AND CONCERNS

Because many jurisdictions use Risk Assessment Tools, researchers have been exploring the propriety of these tools and defendants have been challenging the tools based on fairness and due process grounds. This section highlights the criticisms researchers have found and the legal challenges defendants have brought against use of these tools. A few illustrative examples of these types of cases follow. This is not a comprehensive review of cases nationwide (or in any particular state). Legal challenges are typically brought in state court under state law, and both the legal standards and availability of published legal decisions varies significantly from jurisdiction to jurisdiction. This summary is also necessarily incomplete because legislation regulating these tools and giving defendants right to examine the tools have only been proposed (and in some instances passed) in some states—the next section details the legislative reform efforts.

Main concerns regarding the use of Risk Assessment Tools include:

- Lack of transparency
- Lack of accountability
- Lack of informed consent
- Lack of explainability
- Perpetuating and encoding biased policing patterns
- Bias in the use of the tools based on race^{iv}, ethnicity^v, and age^{vi}
- Insufficient Validation
- Insufficient training
- Software and Coding Errors (See Nebraska E-mails between Nebraska Department of Corrections and Developer, Appendix F)

Legal challenges to the use of Risk Assessment Tools have been brought under:

- Equal Protection Clause
- Due Process Clause
- Confrontation Clause
- Product liability statutes

DUE PROCESS & TRANSPARENCY OF THE TOOLS

The most significant challenges brought against use of Risk Assessment Tools arise under the Due Process Clause. These challenges allege that individuals are deprived of liberty based on demographic data and estimates, not based on information specifically about them. The lack of transparency of the tools also contributes to the lack of process. The highest profile case involving a due process challenge is Loomis v. Wisconsin.

Loomis v. Wisconsin: Eric Loomis challenged the use of the COMPAS risk assessment algorithm as part of his criminal sentence. Loomis argued that the court's partial reliance on COMPAS, an opaque system that is protected from examination as a trade secret, to set his sentence of 6 years of imprisonment and 5 years of extended supervision violated his right to due process because it infringed on his right to an individualized

sentence and his right to be sentenced based on accurate information. The Wisconsin Supreme Court wrote that judges should proceed with caution using such risk assessments and conceded that these tools model a prediction based on aggregate, not individualized data. But, nevertheless, the court ruled that because the report was not the sole basis for the sentencing decision, there was a sufficiently individualized determination and the sentencing was consistent with due process.^{vii}

EQUAL PROTECTION

Because PTRAs tools often use factors such as age, race, income, and proxies for these and other protected classes, many defendants have challenged the tools on equal protection grounds. In Loomis, and the Henderson case discussed below, defendants challenged the use of PTRAs tools on equal protection grounds.

In *Loomis v. Wisconsin*, the defendant also argued that the use of gender as a factor was discriminatory and violated his right to substantive due process. The trial court denied that claim post-conviction, holding that there was not sufficient evidence that gender was used to make the sentencing decision.

Henderson v. Stensberg: In a 2020 case that has not yet been fully resolved, Wisconsin inmate Titus Henderson alleges that prison officials discriminated against him and other African American inmates by using a "racially biased actuarial tool," COMPAS in their sentencing. The defendants brought equal protection claims against Northpointe, as an organization and against two of the creators of COMPAS individually, and against Department of Corrections officials for using the system. The judge granted the State's motion for summary judgment but denied the Northpointe defendants' first motion to dismiss and denied their second under the summary judgment standard.^{viii}

PRODUCT LIABILITY

Although it has not been widely used to challenge Risk Assessment Tools, at least one challenge was brought on the legal theory that the tools are products used by the state which are defective or otherwise dangerous.

Rodgers v. Christie: After a woman's son was murdered by someone that was released pretrial, in part informed by the Public Safety Assessment, an individual in New Jersey brought suit against the state for the use of this tool under a product liability theory. The New Jersey Products liability statute does not clearly define "products," leading the Third Circuit to affirm a dismissal of the case in holding that the PSA is not a product (1) because it is not commercially distributed, and (2) "is not 'tangible personal property'".^{ix}

QUESTIONS A PRACTITIONER CAN ASK ABOUT A GIVEN TOOL

- What kind of factors are being included?
- How does the result of the tool factors into the ultimate decision (routinely referred to as a decision matrix)?
- Are any of the factors are proxies for protected classes?
- Is the tool is regularly validated with localized and representative data?
- How is the data collected and computed shared throughout the government and other contractors?

RELEVANT LEGISLATIVE PROPOSALS AND FRAMEWORKS

A number of legislative proposals have been introduced in an attempt to improve Risk Assessment Tools. These proposals include efforts to regulate technology used by the state generally or the criminal justice system specifically. Although federal legislation could affect the use of the tools through appropriations, the most meaningful change has happened at the state level. This Report identifies the kinds of laws that have passed or considered around the country in response to the concerns and challenges highlighted above. At the end of the section, two of the most prominent frameworks for AI regulation are provided as a point of comparison.

TRANSPARENCY FOR DEFENDANTS AT TRIAL:

In March 2019, Idaho enacted a law that requires "all documents, data, records, and information used by the builder to build or validate the pretrial risk assessment tool and ongoing documents, data, records, and written policies outlining the usage and validation of the pretrial risk assessment tool" to be publicly available; allowing a party in a criminal case to review the calculations and data underlying their risk score; and precluding trade secret or other intellectual property defenses in discovery requests regarding the development and testing of the tool. This is an exemplar for states committed to using algorithms in pre-trial sentencing while retaining the notions of fairness and due process.^x

VALIDATION STUDY REQUIREMENTS:

Mississippi enacted overarching Criminal Justice reform legislation in 2018 that includes that any risk and needs assessment must be validated on Mississippi Corrections Populations every three years. The validation requirements are not very detailed.^{xi}

Maryland enacted proposed separate legislation that would require every jurisdiction in the state that uses a pretrial risk assessment instrument to determine the eligibility of a defendant for pretrial release to have an independent validation study the instrument conducted at least once every 3 years.^{xii}

TRANSPARENCY IN HOW PROSECUTORS USE RISK ASSESSMENTS:

Proposed legislation in Hawaii would require each county prosecutor's office to collect and disclose the following data for each case prosecuted by the office and maintain a record of all information collected for at least ten years: 52 factors including whether a risk assessment or other algorithm-based or quantitative tool was used in determining whether pretrial detention was ordered and the amount of bail or bond.^{xiii}

PROCUREMENT REFORM TO REQUIRE STATEMENTS OF PURPOSES AND TRANSPARENCY FOR ALL STATE-USED AUTOMATED DECISION SYSTEMS:

Proposed legislation in Washington state would create a centralized inventory of all automated decision systems being used, developed, or procured by state agencies, and provide algorithmic inventory reports that "include clear and understandable statements of the following for each automated decision system": the name, vendor and version of the system; description of the system's general capabilities including "reasonably

foreseeable capabilities outside the scope of the agency's proposed use and whether the automated decision system is used or may be used to deploy or trigger any weapon"; types of data used; whether it's been tested by an independent third party, has a known bias, or is untested for bias; a description of the purpose and proposed use of the automated decision system; whether it makes any decisions affecting the constitutional or legal rights, duties, or privileges of any Washington resident; whether individuals impacted by it are given specific, meaningful.^{xiv}

AI TASK FORCES AND COMMISSIONS: The most common form of AI regulation in the United States have been bills that create AI task forces and commissions. These task forces vary in method and in effectiveness, but generally aim to catalogue the uses of Automated Decision Systems by the state and recommend how the state should use or regulate these systems moving forward. These have been largely ineffective due to a lack of access to the information required to carry out the statutory duty and other bureaucratic roadblocks. Still, AI task forces and commissions offer a road towards transparency and can force states to consider informed tech regulation.

New York City (2017): The New York City Council created a task force to study how it uses AI and to provide recommendations on specific prompts. In November 2019, the council released their report. In conjunction with this released report, Mayor De Blasio announced an Executive Order creating an "Algorithms Management and Policy Officer." An unofficial "shadow report" of the Task Force was also released.

Vermont (2018): The Vermont Legislature created an AI Task Force to explore areas of responsible growth of the state's technology markets, the use of AI by their government, and appropriate regulation in the field. The task force published an update report in February 2019.

Alabama (2019): Alabama created an AI Commission that has a broad mandate to study "all aspects" of AI and associated technologies and the associated challenges and opportunities.

New York State (2019): New York State created a commission to begin in 2020 that will study with a broad mandate the sufficiency of current law to deal with AI as well as the effects of AI on employment and public safety.

A model commission bill from EPIC provides a framework for states interested in passing a law that prioritizes transparency. This bill has two main components—first, it would require states to catalogue and publish how they use AI and, second, it would require states to recommend specific regulations governing their use of AI going forward.^{xv} EPIC testified on a proposed AI Commission that was being considered by the Massachusetts Legislature in October 2019.^{xvi}

Ban on Profiling or Face Surveillance

Proposed legislation in Washington state provides a cause of action for those aggrieved by the following restrictions: “(1) A person may not operate, install, or commission the operation or installation of equipment incorporating artificial intelligence-enabled profiling in any place of public resort, accommodation, assemblage, or amusement...(2) A person may not use artificial intelligence-enabled profiling to make decision that produce legal effects or similarly significant effects concerning consumer include, without limitation...criminal justice.”^{xvii}

FIRST STEP ACT: 18 U.S.C. § 3621

A federal risk and needs assessment has been developed in accordance with this wide-ranging Criminal Justice bill, passed in late 2018.

The Act directed the Attorney General to “implement and complete the initial intake risk and needs assessment for each prisoner (including for each prisoner who was a prisoner prior to the effective date of this subsection), regardless of the prisoner’s length of imposed term of imprisonment, and begin to assign prisoners to appropriate evidence-based recidivism reduction programs based on that determination and “begin to implement the other risk and needs assessment tools necessary to effectively implement the System over time, while prisoners are participating in and completing the effective evidence-based recidivism reduction programs and productive activities.”

The bill also calls for validation “of the risk and needs assessment tool to be used in the reassessments of risk of recidivism, while prisoners are participating in and completing evidence-based recidivism reduction programs and productive activities.”

AI frameworks

PTRA tools are often not AI in the traditional sense, but use basic algorithms and are supported by analysis similar to that used in AI tools. Principles expressed in the frameworks such as the Universal Guidelines for AI and the Organisation for Economic Co-operation and Development (OECD)’s AI Principles would help agencies ensure they’re deploying risk assessment software in more equitable ways.

The Universal Guidelines for Artificial Intelligence, a framework for AI governance based on the protection of human rights, were released at the 2018 Public Voice meeting in Brussels, Belgium. The Universal Guidelines have been endorsed by more than 250 experts and 60 organizations in 40 countries. The UGAI comprise twelve principles:^{xviii}

1. Right to Transparency.
2. Right to Human Determination.
3. Identification Obligation.
4. Fairness Obligation.
5. Assessment and Accountability Obligation.
6. Accuracy, Reliability, and Validity Obligations.
7. Data Quality Obligation.

8. Public Safety Obligation.
9. Cybersecurity Obligation.
10. Prohibition on Secret Profiling.
11. Prohibition on Unitary Scoring.
12. Termination Obligation.

The OECD AI Principles were adopted in 2019 and endorsed by 42 countries—including the United States and the G20 nations. The OECD AI Principles establish international standards for AI use:

1. Inclusive growth, sustainable development and well-being.
2. Human-centered values and fairness.
3. Transparency and explainability.
4. Robustness, security and safety.
5. Accountability.

EPIC'S RECOMMENDATIONS

EPIC believes that comprehensive regulation is necessary if PTRAs and other Risk Assessment Tools are going to be used in the Criminal Justice System. There is currently no evidence that these tools are superior to alternative methods for creating risk metrics and, in many cases, these tools are not adequately scrutinized due to a misleading appearance of objectivity. Even developers of these tools have recently called for more limitations on their use, and the trend of adoption could slow as more information about the fairness and accuracy of these tools comes available. In light of these circumstances, EPIC offers the following recommendations to ensure that human rights are protected, that government agencies are accountable for their decisions, and that the public has the resources necessary to educate themselves about this important issue.

- **Risk Assessment Tools should be transparent—including publication of who is developing the tool, the stated purpose of the tool, input data, logic, decision-making matrix, and data sharing and retention policies.**
For transparency to be meaningful, regulations must make clear that trade secret and state secret protections should not prevent transparency of the algorithms. In a law passed in Idaho after the *Loomis* case, highlighted above, defendants were given the right to examine, which overrides trade secret protections. EPIC believes similar laws should be passed nationwide, strengthened by proactive disclosure and a wider set of information available to an individual. This basic level of information is currently difficult and time consuming to discover. Transparency of these systems is critical to hold the government accountable, especially when fundamental rights of liberty are at stake.
- **Risk Assessment Tools should be narrowly tailored.**
The tools should be tailored and used based on the data within the jurisdiction, in light of the historical context of that data, as well as particular bail and criminal justice reform priorities. This requirement would help limit instances in which offenses are mislabeled for a given locality, and enable policymakers to think holistically about how the Risk Assessment Tool should be used in light of historical law enforcement trends in that jurisdiction.
- **Risk Assessment Tools should be independently evaluated on a regular basis.** The tools should be validated and revalidated regularly by independent entities that include public studies of efficacy and bias. These studies should also evaluate propriety in light of the statement of purpose, and require reauthorization to continue use if efficacy is limited or disparities are exacerbated.
- **Risk Assessment Tools should be secure and protect privacy.** The jurisdiction using a tool should develop minimum technological standards and principles for all automated decision systems used by their entities. This should

include uniform data minimization, deletion and disclosure policies all oriented to minimize unnecessary data exposure or improper use by another entity.

CONCLUSION

PTRA tools and other algorithmic risk assessment tools used in the Criminal Justice System are used widely and largely without adequate regulation. While these tools can automate certain parts of an overburdened bail system, they have been shown to have a significant discriminatory impact and a limited positive impact on outcomes. They rely heavily on historically biased law enforcement data and they stigmatize poverty as well as certain immutable characteristics. Developers of these tools do not address these societal problems—they simply encode them. And while use of these tools has proliferated, so have criticisms and legal challenges. Accordingly, EPIC recommends that transparency and accountability measures be put into place to ensure that these tools do not further embed systemic biases. EPIC will endeavor to update this report as we receive more responses to our pending open government requests. In the meantime, the resources and appendix below can provide significant further knowledge on the topic.

RESOURCES

Academic Material

Ben Green, [The False Promise of Risk Assessments: Epistemic Reform and the Limits of Fairness](#), Proceedings of the ACM Conference on Fairness, Accountability, and Transparency (FAT) (2020)

Elizabeth Joh, [Artificial Intelligence and Policing: Hints in the Carpenter Decision](#), Ohio St. J. Crim. L. _ (2019).

Melissa Hamilton, [The Biased Algorithm: Evidence of Disparate Impact on Hispanics](#), 56 AM. CRIM. L. REV. 1553 (2019)

Ari Ezra Waldman, [Power, Process, and Automated Decision-Making](#), 1 Fordham Law Review Vol. 88, 2019 (Oct. 2, 2019).

Megan T. Stevenson, [Assessing Risk Assessment in Action](#), 103 Minnesota Law Review 303 (2018)

Megan T. Stevenson, Christopher Slobogin, [Algorithmic Risk Assessments and the Double-Edged Sword of Youth](#), Washington University Law Review, Vol. 96, 2018

Kehl, Danielle, Priscilla Guo, and Samuel Kessler. 2017. [Algorithms in the Criminal Justice System: Assessing the Use of Risk Assessments in Sentencing](#). Responsive Communities Initiative, Berkman Klein Center for Internet & Society, Harvard Law School.

Nicholas Scurich & John Monahan, [Evidence-Based Sentencing: Public Openness and Opposition to Using Gender, Age, and Race as Risk Factors for Recidivism](#), 40 Law & Human Behavior 36 (2016)

Danielle Citron, [\(Un\)Fairness of Risk Scores in Criminal Sentencing](#), Forbes (July 13, 2016)

Solon Barocas & Andrew D. Selbst, [Big Data's Disparate Impact](#), 104 Calif. Law Review 671 (2016)

Gregory Cui, [Evidence-Based Sentencing and the Taint of Dangerousness](#), 125 Yale Law Journal Forum 315 (2016)

Sonja Starr, [Evidence-Based Sentencing and the Scientific Rationalization of Discrimination](#), 60 Stanford Law Review 803 (2014).

Bernard Harcourt, [Risk as a Proxy for Race: The Dangers of Risk Assessment](#), 27 Federal Sentencing Reporter 237 (2015)

Claire Botnick, [Evidence-Based Practice and Sentencing in State Courts: A Critique of the Missouri System](#), 49 Washington University Journal of Law & Policy 159, 160 (2015)

Jennifer Skeem & Christopher Lowenkamp, [Risk, Race, and Recidivism: Predictive Bias and Disparate Impact](#) (March 7, 2016)

Melissa Hamilton, [Adventures in Risk: Predicting Violent and Sexual Recidivism in Sentencing Law](#), 47 Arizona State Law Journal 1 (2015)

John Monahan and Jennifer L. Skeem, [Risk Assessment in Criminal Sentencing](#), Annual Rev. of Clinical Psychology (Sept. 17, 2015).

Nathan James, [Risk and Needs Assessment in the Criminal Justice System](#), Congressional Research Service (Oct. 15, 2015)

Shaina D. Massie, [Orange Is the New Equal Protection Violation: How Evidence-Based Sentencing Harms Male Offenders](#), 24 William & Mary Bill of Rights Journal 521 (2015)

Dawinder S. Sidhu, [Moneyball Sentencing](#), 56 Boston College Law Review 671 (2015)

Melissa Hamilton, [Back to the Future: The Influence of Criminal History on Risk Assessments](#), 20 Berkeley Journal of Criminal Law 75, 76 (2015)

Claire Botnick, [Evidence-Based Practice and Sentencing in State Courts: A Critique of the Missouri System](#), 49 Washington University Journal of Law & Policy 159, 160 (2015)

Danielle Keats Citron & Frank Pasquale, *The Scored Society: Due Process for Automated Predictions*, 89 Wash. L. Rev. 1, 19 (2014).

John Monahan & Jennifer Skeem, [Risk Redux: The Resurgence of Risk Assessment in Criminal Sanctioning](#), 26 Federal Sentencing Reporter 158 (2014)

Reports

[Partnership on AI report](#) on Algorithmic Risk Assessment Tools in the Criminal Justice System

[Mapping Pretrial Injustice](#), Media Mobilizing Project and MediaJustice (Feb. 2020)

Sarah L. Desmaris, Evan M. Lowder, [Pretrial Risk Assessment Tools: A Primer for Judges, Prosecutors, and Defense Attorneys](#), Safety and Justice Challenge, 2019

Thomas H. Cohen, Christopher T. Lowenkamp, William E. Hicks, [Revalidating the Federal Pretrial Risk Assessment Instrument \(PTRA\): A Research Summary](#), Probation and Pretrial Services Office of the Administrative Office of the U.S. Courts.
[Stanford Pretrial Risk Assessment Tools Factsheet Project](#)

Books & Others

EPIC AI Policy Sourcebook 2020

Artificial Unintelligence by Meredith Broussard

Black Box Society by Frank Pasquale

Weapons of Math Destruction by Cathy O'Neil

Algorithms of Oppression by Safiya Noble

Automating Inequality by Virginia Eubanks

Technically Wrong: Sexist Apps, Biased Algorithms, and Other Threats of Toxic Tech by Sara Wachter-Boettcher

Pretrial Justice Institute (PJI) [No longer recommend Risk Assessment Tools](#), February 7, 2020.

The Leadership Conference on Civil & Human Rights, [Shared Statement of Civil Rights Concerns](#) (Jul. 30, 2018)

APPENDIX A^{xix}:

Risk Factor	Pretrial Outcome				
	FT	AN	CAN	V	CA
1. Age at current arrest					✓
2. Current violent offense					✓
2A. Current violent offense and 20 yrs. old or younger					✓
3. Pending charge at the time of the offense	✓	✓	✓		
4. Prior misdemeanor conviction					✓
5. Prior felony conviction					✓
5A. Prior conviction (misdemeanor or felony)	✓				✓
6. Prior violent conviction				✓	✓
7. Prior failure to appear in the past two years	✓	✓			
8. Prior failure to appear older than two years	✓				
9. Prior sentence to incarceration					✓

Failure to Appear (FTA)	
Risk Factor	Points
Pending charge at the time of offense	No = 0 Yes = 1
Prior conviction (misdemeanor or felony)	No = 0 Yes = 1
Prior failure to appear in past 2 years	0 = 0 1 = 2 2 or more = 4
Prior failure to appear older than 2 years	No = 0 Yes = 1

Total FTA Points		FTA Scaled Score
0	=	1
1	=	2
2	=	3
3	=	4
4	=	4
5	=	5
6	=	5
7	=	6

New Criminal Activity (NCA)	
Risk Factor	Points
Age at current arrest	23 or older = 0 22 or younger = 2
Pending charge at the time of offense	No = 0 Yes = 3
Prior misdemeanor conviction	No = 0 Yes = 1
Prior felony conviction	No = 0 Yes = 1
Prior violent conviction	0 = 0 1 = 1 2 = 1 3 or more = 2
Prior failure to appear in past 2 years	0 = 0 1 = 1 2 or more = 2
Prior sentence to incarceration	No = 0 Yes = 2

Total NCA Points		NCA Scaled Score
0	=	1
1	=	2
2	=	2
3	=	3
4	=	3
5	=	4
6	=	4
7	=	5
8	=	5
9	=	6
10	=	6
11	=	6
12	=	6
13	=	6

New Violent Criminal Activity (NVCA)	
Risk Factor	Points
Current violent offense	No = 0 Yes = 2
Current violent offense and 20 years old or younger	No = 0 Yes = 1
Pending charge at the time of the offense	No = 0 Yes = 1
Prior conviction (misdemeanor or felony)	No = 0 Yes = 1
Prior violent conviction	0 = 0 1 = 1 2 = 1 3 or more = 2

Total NVCA Points		NVCA Scaled Score
0	=	No
1	=	No
2	=	No
3	=	No
4	=	Yes
5	=	Yes
6	=	Yes
7	=	Yes

APPENDIX B^{xx}

Table 1. Risk Factors and Correlations

Not all potential risk factors had strong correlations with Failure to Appear (FTA), New Criminal Arrest (NCA), gender, or race.

Current age	Weak correlations for males or Alaska Natives
Current DUI	Weak correlations for FTA or NCA
Current drug	Weak correlations for FTA or NCA
Current public order	Weak correlations for NCA, females, whites, and Alaska Natives
Prior felony arrests	Weak correlation for Alaska Natives
Prior convictions	Weak correlation for FTA
Current probation charge	Weak correlation for FTA
Prior domestic violence arrests	Weak correlation for FTA

Source: Crime and Justice Institute, 2017

Table 2. Failure to Appear (FTA) Scale

Six risk factors	Weights
Age at first arrest	0 = 22 and older 1 = 21 and younger
Prior FTA warrants	0 = 0 prior FTA warrants ever 1 = 1 prior FTA warrant ever 2 = 2 or more prior FTA warrants ever
FTA warrants in last 3 years	0 = 0 prior FTA warrants in past 3 years 1 = 1 prior FTA warrant in past 3 years 2 = 2 or more prior FTA warrants in past 2 years
Current FTA	0 = No current FTA charge 1 = Yes current FTA charge
Currently property charge	0 = No property charge on current arrest/case 1 = Yes at least one property charge on current arrest/case
Currently motor vehicle charge (non-DUI)	0 = No motor vehicle charge on current arrest/case 1 = Yes at least one motor vehicle charge on current arrest/case
Total points possible	0 to 8 points possible

Source: Alaska Department of Corrections, Pretrial Enforcement Division

Table 3. New Criminal Arrest (NCA) Scale

Six risk factors	Weights
Age at first arrest	0 = 22 and older 1 = 21 and younger
Arrests in last 5 years	0 = 0 prior arrests in past 5 years 1 = 1 to 2 prior arrests in past 5 years 2 = 3 or more prior arrests in past 5 years
Convictions in last 3 years	0 = 0 prior convictions in past 3 years 1 = 1 prior conviction in past 3 years 2 = 2 or more prior convictions in past 3 years
Sentences that included probation	0 = 0 prior probation sentences 1 = 1 prior probation sentence 2 = 2 or more prior probation sentences
Sentences in past 5 years that included probation	0 = 0 prior probation sentences in past 5 years 1 = 1 prior probation sentence in past 5 years 2 = 2 or more prior probation sentences in past 5 years
Sentences that included incarceration not wholly suspended in past 3 years	0 = 0 prior incarcerations in past 3 years 1 = 1 or more prior incarcerations in past 3 years
Total points possible	0 to 10 points possible

Source: Alaska Department of Corrections, Pretrial Enforcement Division

Table 4. Score Matrix

Failure to Appear (FTA)		New Criminal Arrest (NCA)	
Total risk score	Risk level	Total risk score	Risk level
0-4	Low	0-5	Low
5-6	Moderate	6-9	Moderate
7-8	High	10	High

Source: Alaska Department of Corrections, Pretrial Enforcement Division

The Pretrial Enforcement Division will use the highest score of the two scales when considering recommendations for the Court, according to Geri Fox.

APPENDIX C^{xxi}

LEVEL OF SERVICE INVENTORY – REVISED (IDOC)

Client Name: _____
Staff Name: _____

IDOC#: _____
LSI Completion Date: _____ **Scoring Reminders for the Paper Scoresheet**

Enter scores for items 1-54 using 0 for no (no risk) and 1 for yes (risk).

CRIMINAL HISTORY

1. _____ (E) Any prior convictions, adult / number
2. _____ (E) Two or more prior convictions
3. _____ (E) Three or more prior convictions
4. _____ (C) Three or more present offenses / number
5. _____ (E) Arrested under age 16 / age 1st arrest
6. _____ (E) Ever incarcerated upon conviction
7. _____ (E) Escape history - institution
8. _____ (E) Ever punished for institutional misconduct / number
9. _____ (E) Charge laid or probation / parole suspended during prior community supervision
10. _____ (E) Record of assault / violence

Subtotal Score _____ /10 = (_____) %

EDUCATION / EMPLOYMENT

When in labor market:

11. _____ (C, IN2) Currently unemployed
12. _____ (YR, IN2) Frequently unemployed
13. _____ (E) Never employed for a full year
14. _____ (E) Ever fired

School or when in school:

15. _____ (E) Less than regular grade 10
16. _____ (E) Less than regular grade 12
17. _____ (E) Suspended or expelled at least once

Homemaker, Pensioner: 18 only

School, work, unemployed: 18, 19, 20

18. _____ (C) Participation / Performance +
19. _____ (C) Peer interactions +
20. _____ (C) Authority interactions +

Subtotal Score _____ /10 = (_____) %

FINANCIAL

21. _____ (YR) Problems +
22. _____ (YR) Reliance upon social assistance

Subtotal Score _____ /2 = (_____) %

FAMILY / MARITAL

23. _____ (YR) Dissatisfaction with marital or equivalent situation +
24. _____ (YR) Non rewarding, parental +
25. _____ (YR) Non rewarding, other +
26. _____ (E) Criminal family / spouse

Subtotal Score _____ /4 = (_____) %

ACCOMMODATION

27. _____ (C) Unsatisfactory +
28. _____ (YR, IN2) 3 or more address changes last year / number
29. _____ (C) High crime neighborhood

Subtotal Score _____ /3 = (_____) %

LEISURE / RECREATION

30. _____ (YR, IN2) No recent participation in organized activity
31. _____ (YR) Could make better use of time +

Subtotal Score _____ /2 = (_____) %

COMPANIONS

32. _____ (YR) A social isolate
33. _____ (YR) Some criminal acquaintances
34. _____ (YR) Some criminal friends
35. _____ (YR) Few anti-criminal acquaintances
36. _____ (YR) Few anti-criminal friends

Subtotal Score _____ /5 = (_____) %

ALCOHOL / DRUG PROBLEMS

37. _____ (E) Alcohol problem, ever
38. _____ (E) Drug problem, ever
39. _____ (YR, IN2) Alcohol problem, currently +
40. _____ (YR, IN2) Drug problem, currently +
- Specify drug: _____
41. _____ (YR) Law violation
42. _____ (YR) Marital / family
43. _____ (YR) School / work
44. _____ (YR) Medical
45. _____ (YR) Other Clinical indicators
- Specify: _____

Subtotal Score _____ /9 = (_____) %

EMOTIONAL / PERSONAL

46. _____ (YR) Moderate interference
47. _____ (YR) Severe interference
48. _____ (E) Mental health treatment, past
49. _____ (YR) Mental health treatment, current
50. _____ (YR) Psychological assessment indicated
- Area: _____

Subtotal Score _____ /5 = (_____) %

ATTITUDE / ORIENTATION

51. _____ (C) Supportive of crime +
52. _____ (C) Unfavorable attitude toward convention +
53. _____ (C) Poor attitude toward sentence / conviction
54. _____ (C) Poor attitude towards supervision

Subtotal Score _____ /4 = (_____) %

TOTAL RISK SCORE _____

TOTAL PROTECTIVE SCORE _____

HIGHEST CRIMINOGENIC NEED _____

STAGE OF CHANGE _____

Total Risk = Total of 1s and 0s.

Total Protective = Total of all Rater Boxes

High Crim Need = most potent domain in the wall.

Stage of Change = client's stage of change in the

high crim need you selected. You can use the

Readiness Scale (Hanna's Precursor Model) to

confirm.

	CH	E/E	Fin	Fam	Accm	Leis	Comp	A/D	Em/Pr	Att	
High	8-10	8-10	2	4	3	2	4-5	7-9	4-5	4	High
Mod/High	6-7	5-7	3	3	2	3	3	5-6	3	3	Mod/High
Moderate	3-5	3-4	1	2	1	2	2	3-4	2	2	Moderate
Low/Mod	1-2	2	0	1	0	1	1	1-2	1	1	Low/Mod
Low	0	0-1	0	0	0	0	0	0	0	0	Low

Results Interpretation Area

APPENDIX D^{xxii}

Risk Assessment

PERSON			
Name: [REDACTED]		Offender #: [REDACTED]	DOB: [REDACTED]
Gender: Male	Marital Status: Single	Agency: DAI	

ASSESSMENT INFORMATION			
Case Identifier: [REDACTED]	Scale Set: Wisconsin Core - Community Language	Screener: [REDACTED]	Screening Date: [REDACTED]

Current Charges

- | | | | |
|---|--|---|---|
| <input type="checkbox"/> Homicide | <input checked="" type="checkbox"/> Weapons | <input checked="" type="checkbox"/> Assault | <input type="checkbox"/> Arson |
| <input type="checkbox"/> Robbery | <input type="checkbox"/> Burglary | <input type="checkbox"/> Property/Larceny | <input type="checkbox"/> Fraud |
| <input type="checkbox"/> Drug Trafficking/Sales | <input type="checkbox"/> Drug Possession/Use | <input type="checkbox"/> DUI/OUIL | <input checked="" type="checkbox"/> Other |
| <input type="checkbox"/> Sex Offense with Force | <input type="checkbox"/> Sex Offense w/o Force | | |

- Do any current offenses involve family violence?
☒ No ☐ Yes
- Which offense category represents the most serious current offense?
☐ Misdemeanor ☐ Non-violent Felony ☒ Violent Felony
- Was this person on probation or parole at the time of the current offense?
☒ Probation ☐ Parole ☐ Both ☐ Neither
- Based on the screener's observations, is this person a suspected or admitted gang member?
☐ No ☒ Yes
- Number of pending charges or holds?
☒ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4+
- Is the current top charge felony property or fraud?
☒ No ☐ Yes

Criminal History

Exclude the current case for these questions.

- How many times has this person been arrested before as an adult or juvenile (criminal arrests only)?
5
- How many prior juvenile felony offense arrests?
☐ 0 ☐ 1 ☐ 2 ☐ 3 ☒ 4 ☐ 5+
- How many prior juvenile violent felony offense arrests?
☐ 0 ☐ 1 ☒ 2+
- How many prior commitments to a juvenile institution?
☐ 0 ☒ 1 ☐ 2+

Note to Screener: The following Criminal History Summary questions require you to add up the total number of specific types of offenses in the person's criminal history. Count an offense type if it was among the charges or counts within an arrest event. Exclude the current case for the following questions.

11. How many times has this person been arrested for a felony property offense that included an element of violence?
☐ 0 ☒ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5+
12. How many prior murder/voluntary manslaughter offense arrests as an adult?
☒ 0 ☐ 1 ☐ 2 ☐ 3+
13. How many prior felony assault offense arrests (not murder, sex, or domestic violence) as an adult?
☒ 0 ☐ 1 ☐ 2 ☐ 3+
14. How many prior misdemeanor assault offense arrests (not sex or domestic violence) as an adult?
☒ 0 ☐ 1 ☐ 2 ☐ 3+
15. How many prior family violence offense arrests as an adult?
☒ 0 ☐ 1 ☐ 2 ☐ 3+
16. How many prior sex offense arrests (with force) as an adult?
☒ 0 ☐ 1 ☐ 2 ☐ 3+
17. How many prior weapons offense arrests as an adult?
☒ 0 ☐ 1 ☐ 2 ☐ 3+
18. How many prior drug trafficking/sales offense arrests as an adult?
☒ 0 ☐ 1 ☐ 2 ☐ 3+
19. How many prior drug possession/use offense arrests as an adult?
☒ 0 ☐ 1 ☐ 2 ☐ 3+
20. How many times has this person been sentenced to jail for 30 days or more?
☐ 0 ☒ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5+
21. How many times has this person been sentenced (new commitment) to state or federal prison?
☐ 0 ☒ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5+
22. How many times has this person been sentenced to probation as an adult?
☒ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5+

Include the current case for the following question(s).

23. Has this person, while incarcerated in jail or prison, ever received serious or administrative disciplinary infractions for fighting/threatening other inmates or staff?
☒ No ☐ Yes
24. What was the age of this person when he or she was first arrested as an adult or juvenile (criminal arrests only)?
14

Non-Compliance

Include the current case for these questions.

25. How many times has this person violated his or her parole?
☒ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5+
26. How many times has this person been returned to custody while on parole?
☒ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5+
27. How many times has this person had a new charge/arrest while on probation?
☐ 0 ☐ 1 ☐ 2 ☐ 3 ☒ 4 ☐ 5+
28. How many times has this person's probation been violated or revoked?
☐ 0 ☐ 1 ☒ 2 ☐ 3 ☐ 4 ☐ 5+

29. How many times has this person failed to appear for a scheduled criminal court hearing?
☒ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5+
30. How many times has the person been arrested/charged w/new crime while on pretrial release (includes current)?
☐ 0 ☐ 1 ☐ 2 ☒ 3+

Family Criminality

The next few questions are about the family or caretakers that mainly raised you when growing up.

31. Which of the following best describes who principally raised you?
☐ Both Natural Parents
☐ Natural Mother Only
☐ Natural Father Only
☐ Relative(s)
☐ Adoptive Parent(s)
☐ Foster Parent(s)
☒ Other arrangement
32. If you lived with both parents and they later separated, how old were you at the time?
☒ Less than 5 ☐ 5 to 10 ☐ 11 to 14 ☐ 15 or older ☐ Does Not Apply
33. Was your father (or father figure who principally raised you) ever arrested, that you know of?
☒ No ☐ Yes
34. Was your mother (or mother figure who principally raised you) ever arrested, that you know of?
☒ No ☐ Yes
35. Were your brothers or sisters ever arrested, that you know of?
☐ No ☒ Yes
36. Was your wife/husband/partner ever arrested, that you know of?
☒ No ☐ Yes
37. Did a parent or parent figure who raised you ever have a drug or alcohol problem?
☒ No ☐ Yes
38. Was one of your parents (or parent figure who raised you) ever sent to jail or prison?
☒ No ☐ Yes

Peers

Please think of your friends and the people you hung out with in the past few (3-6) months.

39. How many of your friends/acquaintances have ever been arrested?
☐ None ☐ Few ☒ Half ☐ Most
40. How many of your friends/acquaintances served time in jail or prison?
☐ None ☐ Few ☒ Half ☐ Most
41. How many of your friends/acquaintances are gang members?
☐ None ☒ Few ☐ Half ☐ Most
42. How many of your friends/acquaintances are taking illegal drugs regularly (more than a couple times a month)?
☒ None ☐ Few ☐ Half ☐ Most
43. Have you ever been a gang member?
☐ No ☒ Yes
44. Are you now a gang member?
☐ No ☒ Yes

Substance Abuse

What are your usual habits in using alcohol and drugs?

45. Do you think your current/past legal problems are partly because of alcohol or drugs?
☒ No ☐ Yes
46. Were you using alcohol or under the influence when arrested for your current offense?
☐ No ☒ Yes
47. Were you using drugs or under the influence when arrested for your current offense?
☒ No ☐ Yes
48. Are you currently in formal treatment for alcohol or drugs such as counseling, outpatient, inpatient, residential?
☒ No ☐ Yes
49. Have you ever been in formal treatment for alcohol such as counseling, outpatient, inpatient, residential?
☒ No ☐ Yes
50. Have you ever been in formal treatment for drugs such as counseling, outpatient, inpatient, residential?
☒ No ☐ Yes
51. Do you think you would benefit from getting treatment for alcohol?
☒ No ☐ Yes
52. Do you think you would benefit from getting treatment for drugs?
☒ No ☐ Yes
53. Did you use heroin, cocaine, crack or methamphetamines as a juvenile?
☐ No ☒ Yes

Residence/Stability

54. How often do you have contact with your family (may be in person, phone, mail)?
☐ No family ☐ Never ☐ Less than once/month ☐ Once per week ☒ Daily
55. How often have you moved in the last twelve months?
☐ Never ☒ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5+
56. Do you have a regular living situation (an address where you usually stay and can be reached)?
☐ No ☒ Yes
57. How long have you been living at your current address?
☒ 0-5 mo. ☐ 6-11 mo. ☐ 1-3 yrs. ☐ 4-5 yrs. ☐ 6+ yrs.
58. Is there a telephone at this residence (a cell phone is an appropriate alternative)?
☐ No ☒ Yes
59. Can you provide a verifiable residential address?
☐ No ☒ Yes
60. How long have you been living in that community or neighborhood?
☐ 0-2 mo. ☐ 3-5 mo. ☐ 6-11 mo. ☒ 1+ yrs.
61. Do you live with family—natural parents, primary person who raised you, blood relative, spouse, children, or boy/girl friend if living together for more than 1 year?
☐ No ☒ Yes
62. Do you live with friends?
☒ No ☐ Yes
63. Do you live alone?
☒ No ☐ Yes
64. Do you have an alias (do you sometimes call yourself by another name)?
☒ No ☐ Yes

Social Environment

Think of the neighborhood where you lived during the past few (3-6) months.

65. Is there much crime in your neighborhood?
☒ No ☐ Yes

66. Do some of your friends or family feel they must carry a weapon to protect themselves in your neighborhood?
☒ No ☐ Yes
67. In your neighborhood, have some of your friends or family been crime victims?
☐ No ☒ Yes
68. Do some of the people in your neighborhood feel they need to carry a weapon for protection?
☐ No ☒ Yes
69. Is it easy to get drugs in your neighborhood?
☒ No ☐ Yes
70. Are there gangs in your neighborhood?
☐ No ☒ Yes

Education

Think of your school experiences when you were growing up.

71. Did you complete your high school diploma or GED?
☒ No ☐ Yes
72. What was your final grade completed in school?
9
73. What were your usual grades in high school?
☐ A ☐ B ☒ C ☐ D ☐ E/F ☐ Did Not Attend
74. Were you ever suspended or expelled from school?
☐ No ☒ Yes
75. Did you fail or repeat a grade level?
☒ No ☐ Yes
76. How often did you have conflicts with teachers at school?
☐ Never ☒ Sometimes ☐ Often
77. How many times did you skip classes while in school?
☐ Never ☒ Sometimes ☐ Often
78. How strongly do you agree or disagree with the following: I always behaved myself in school?
☐ Strongly Disagree ☒ Disagree ☐ Not Sure ☐ Agree ☐ Strongly Agree
79. How often did you get in fights while at school?
☐ Never ☒ Sometimes ☐ Often

Vocation (Work)

Please think of your past work experiences, job experiences, and financial situation.

80. Do you have a job?
☒ No ☐ Yes
81. Do you currently have a skill, trade or profession at which you usually find work?
☒ No ☐ Yes
82. Can you verify your employer or school (if attending)?
☒ No ☐ Yes
83. How much have you worked or been enrolled in school in the last 12 months?
☐ 12 Months Full-time ☐ 12 Months Part-time ☐ 6+ Months Full-time ☒ 0 to 6 Months PT/FT
84. Have you ever been fired from a job?
☒ No ☐ Yes
85. About how many times have you been fired from a job?
0

86. Right now, do you feel you need more training in a new job or career skill?
☒ No ☐ Yes
87. Right now, if you were to get (or have) a good job how would you rate your chance of being successful?
☒ Good ☐ Fair ☐ Poor
88. How often do you have conflicts with friends/family over money?
☐ Often ☐ Sometimes ☒ Never
89. How hard is it for you to find a job ABOVE minimum wage compared to others?
☐ Easier ☒ Same ☐ Harder ☐ Much Harder
90. How often do you have barely enough money to get by?
☐ Often ☒ Sometimes ☐ Never
91. Has anyone accused you of not paying child support?
☒ No ☐ Yes
92. How often do you have trouble paying bills?
☐ Often ☐ Sometimes ☒ Never
93. Do you frequently get jobs that don't pay more than minimum wage?
☐ Often ☐ Sometimes ☒ Never
94. How often do you worry about financial survival?
☐ Often ☐ Sometimes ☒ Never

Leisure/Recreation

Thinking of your leisure time in the past few (3-6) months, how often did you have the following feelings?

95. How often did you feel bored?
☐ Never ☒ Several times/mo ☐ Several times/wk ☐ Daily
96. How often did you feel you have nothing to do in your spare time?
☐ Never ☒ Several times/mo ☐ Several times/wk ☐ Daily
97. How much do you agree or disagree with the following - You feel unhappy at times?
☐ Strongly Disagree ☒ Disagree ☐ Not Sure ☐ Agree ☐ Strongly Agree
98. Do you feel discouraged at times?
☐ Strongly Disagree ☒ Disagree ☐ Not Sure ☐ Agree ☐ Strongly Agree
99. How much do you agree or disagree with the following -You are often restless and bored?
☐ Strongly Disagree ☒ Disagree ☐ Not Sure ☐ Agree ☐ Strongly Agree
100. Do you often become bored with your usual activities?
☒ No ☐ Yes ☐ Unsure
101. Do you feel that the things you do are boring or dull?
☒ No ☐ Yes ☐ Unsure
102. Is it difficult for you to keep your mind on one thing for a long time?
☒ No ☐ Yes ☐ Unsure

Social Isolation

Think of your social situation with friends, family, and other people in the past few (3-6) months. Did you have many friends or were you more of a loner? How much do you agree or disagree with these statements?

103. "I have friends who help me when I have troubles."
☐ Strongly Disagree ☐ Disagree ☐ Not Sure ☐ Agree ☒ Strongly Agree
104. "I feel lonely."
☒ Strongly Disagree ☐ Disagree ☐ Not Sure ☐ Agree ☐ Strongly Agree

105. "I have friends who enjoy doing things with me."
☐ Strongly Disagree ☐ Disagree ☐ Not Sure ☐ Agree ☒ Strongly Agree
106. "No one really knows me very well."
☒ Strongly Disagree ☐ Disagree ☐ Not Sure ☐ Agree ☐ Strongly Agree
107. "I feel very close to some of my friends."
☐ Strongly Disagree ☐ Disagree ☐ Not Sure ☒ Agree ☐ Strongly Agree
108. "I often feel left out of things."
☐ Strongly Disagree ☒ Disagree ☐ Not Sure ☐ Agree ☐ Strongly Agree
109. "I can find companionship when I want."
☐ Strongly Disagree ☐ Disagree ☐ Not Sure ☒ Agree ☐ Strongly Agree
110. "I have a best friend I can talk with about everything."
☐ Strongly Disagree ☐ Disagree ☐ Not Sure ☐ Agree ☒ Strongly Agree
111. "I have never felt sad about things in my life."
☒ Strongly Disagree ☐ Disagree ☐ Not Sure ☐ Agree ☐ Strongly Agree

Criminal Personality

The next few statements are about what you are like as a person, what your thoughts are, and how other people see you. There are no 'right or wrong' answers. Just indicate how much you agree or disagree with each statement.

112. "I am seen by others as cold and unfeeling."
☒ Strongly Disagree ☐ Disagree ☐ Not Sure ☐ Agree ☐ Strongly Agree
113. "I always practice what I preach."
☐ Strongly Disagree ☐ Disagree ☐ Not Sure ☒ Agree ☐ Strongly Agree
114. "The trouble with getting close to people is that they start making demands on you."
☒ Strongly Disagree ☐ Disagree ☐ Not Sure ☐ Agree ☐ Strongly Agree
115. "I have the ability to 'sweet talk' people to get what I want."
☒ Strongly Disagree ☐ Disagree ☐ Not Sure ☐ Agree ☐ Strongly Agree
116. "I have played sick to get out of something."
☐ Strongly Disagree ☒ Disagree ☐ Not Sure ☐ Agree ☐ Strongly Agree
117. "I'm really good at talking my way out of problems."
☒ Strongly Disagree ☐ Disagree ☐ Not Sure ☐ Agree ☐ Strongly Agree
118. "I have gotten involved in things I later wished I could have gotten out of."
☐ Strongly Disagree ☐ Disagree ☐ Not Sure ☒ Agree ☐ Strongly Agree
119. "I feel bad if I break a promise I have made to someone."
☐ Strongly Disagree ☐ Disagree ☐ Not Sure ☒ Agree ☐ Strongly Agree
120. "To get ahead in life you must always put yourself first."
☐ Strongly Disagree ☒ Disagree ☐ Not Sure ☐ Agree ☐ Strongly Agree

Anger

121. "Some people see me as a violent person."
☐ Strongly Disagree ☐ Disagree ☒ Not Sure ☐ Agree ☐ Strongly Agree
122. "I get into trouble because I do things without thinking."
☐ Strongly Disagree ☐ Disagree ☒ Not Sure ☐ Agree ☐ Strongly Agree
123. "I almost never lose my temper."
☐ Strongly Disagree ☐ Disagree ☐ Not Sure ☒ Agree ☐ Strongly Agree
124. "If people make me angry or lose my temper, I can be dangerous."
☐ Strongly Disagree ☒ Disagree ☐ Not Sure ☐ Agree ☐ Strongly Agree

125. "I have never intensely disliked anyone."
☐ Strongly Disagree ☒ Disagree ☐ Not Sure ☐ Agree ☐ Strongly Agree
126. "I have a short temper and can get angry quickly."
☐ Strongly Disagree ☒ Disagree ☐ Not Sure ☐ Agree ☐ Strongly Agree

Criminal Attitudes

The next statements are about your feelings and beliefs about various things. Again, there are no 'right or wrong' answers. Just indicate how much you agree or disagree with each statement.

127. "A hungry person has a right to steal."
☒ Strongly Disagree ☐ Disagree ☐ Not Sure ☐ Agree ☐ Strongly Agree
128. "When people get into trouble with the law it's because they have no chance to get a decent job."
☐ Strongly Disagree ☒ Disagree ☐ Not Sure ☐ Agree ☐ Strongly Agree
129. "When people do minor offenses or use drugs they don't hurt anyone except themselves."
☒ Strongly Disagree ☐ Disagree ☐ Not Sure ☐ Agree ☐ Strongly Agree
130. "If someone insults my friends, family or group they are asking for trouble."
☐ Strongly Disagree ☐ Disagree ☒ Not Sure ☐ Agree ☐ Strongly Agree
131. "When things are stolen from rich people they won't miss the stuff because insurance will cover the loss."
☒ Strongly Disagree ☐ Disagree ☐ Not Sure ☐ Agree ☐ Strongly Agree
132. "I have felt very angry at someone or at something."
☐ Strongly Disagree ☐ Disagree ☐ Not Sure ☒ Agree ☐ Strongly Agree
133. "Some people must be treated roughly or beaten up just to send them a clear message."
☒ Strongly Disagree ☐ Disagree ☐ Not Sure ☐ Agree ☐ Strongly Agree
134. "I won't hesitate to hit or threaten people if they have done something to hurt my friends or family."
☐ Strongly Disagree ☐ Disagree ☒ Not Sure ☐ Agree ☐ Strongly Agree
135. "The law doesn't help average people."
☒ Strongly Disagree ☐ Disagree ☐ Not Sure ☐ Agree ☐ Strongly Agree
136. "Many people get into trouble or use drugs because society has given them no education, jobs or future."
☒ Strongly Disagree ☐ Disagree ☐ Not Sure ☐ Agree ☐ Strongly Agree
137. "Some people just don't deserve any respect and should be treated like animals."
☒ Strongly Disagree ☐ Disagree ☐ Not Sure ☐ Agree ☐ Strongly Agree

APPENDIX E^{xxiii}

Risk Domains and Factors

Table 1 provides a comparison of the risk factors from the previous version of the RAI that was validated in 2015 versus the risk factors identified in the revalidated RAI from FY 2019.

Table 1					
Comparison of Risk Factors from 2015 RAI (previous) and 2019 Revalidated RAI (current)					
Criminal History (11 Current Factors)					
Risk Factor	Current RAI	Previous RAI	Risk Factor	Current RAI	Previous RAI
# of Misdemeanor charges for which convicted (Internal) within last 10 years	X		# of Person Domestic Violence charges for which ever arrested		X
# of Felony charges for which convicted (Internal) within last 10 years	X		# of Criminal Contempt charges for which ever arrested		X
# of Misdemeanor charges for which convicted (Internal) more than 10 years ago	X		# of Bail Reform Act charges for which ever arrested		X
# of Violent charges for which ever arrested		X	# of Person Domestic Violence charges for which ever convicted		X
# of Sex Crimes charges for which ever arrested		X	# of Criminal Contempt charges for which ever convicted		X
# of Sexual Solicitation charges for which ever arrested		X	# of Bail Reform Act charges for which ever convicted		X
# of Drug Distribution charges for which ever arrested		X	# of Felony charges for which ever convicted		X
# of Drug Possession charges for which ever arrested		X	# of Felony charges for which ever convicted		X
# of Non-person Domestic Violence charges for which ever arrested		X	# of Juvenile convictions		X
# of Felony charges for which ever arrested		X	# of Person Domestic Violence charges for which ever arrested		X

# of Felony charges for which convicted (Internal) more than 10 years ago	X		# of Escape charges for which ever arrested		X
# of charges for which convicted (External) within last 10 years	X		# of Serious Traffic charges for which ever arrested		X
# of charges for which convicted (External) more than 10 years ago	X		# of Felony charges for which ever convicted		X
Lambda Internal (# of Internal arrest charges / Current Age)	X		# of Misdemeanor charges for which ever convicted		X
Lambda External (# of External arrest charges / Current Age)	X		# of Person charges for which ever convicted		X
Lambda (# of total arrest charges / Current Age)		X	# of Property charges for which ever convicted		X
# Prior Bench Warrants	X	X	# of Weapons charges for which ever convicted		X
# Juvenile Arrests	X	X	# of Dangerous charges for which ever convicted		X
# of Felony charges for which ever arrested	X	X	# of Violent charges for which ever convicted		X
# of Misdemeanor charges for which ever arrested		X	# of Sex Crimes charges for which ever convicted		X
# of Person charges for which ever arrested		X	# of Sexual Solicitation charges for which ever convicted		X
# of Property charges for which ever arrested		X	# of Drug Distribution charges for which ever convicted		X
# of Weapons charges for which ever arrested		X	# of Drug Possession charges for which ever convicted		X
# of Dangerous charges for which ever arrested		X	# of Non-person Domestic Violence charges for which ever convicted		X

APPENDIX F^{xxiv}:

From: Doug Koebernick [mailto:dkoebernick@leg.ne.gov]
Sent: Thursday, July 13, 2017 8:10 AM

To: Wooten, Jeff
Subject: Re: STRONG-R

Thank you but I didn't get the attachment.

Doug

On Thu, Jul 13, 2017 at 7:31 AM, Wooten, Jeff <Jeff.Wooten@nebraska.gov> wrote:

Doug,

Please see below. We had a very good meeting yesterday with Dr. Hamilton, Sean (CEO Vantage, NDCS and Parole personnel. We will be meeting for a work conference 2-5 August and resolve the remaining issues.

- Have any concerns been raised regarding the validity of the STRONG-R assessments being completed at the current time by staff or outside parties (such as Dr. Hamilton or Vantage)?
 - A number of concerns about the validity and reliability of the STRONG-R assessment results have been raised by NDCS staff members. Unresolved issues that I have personal involvement with surround the validity of the tool, itself:
 - There are errors in how the “Severity Index” of specific crimes is coded in the Vant4ge software. These errors affect the final risk and needs score calculations produced by the assessment.
 - Some offenses are not mapped to the appropriate questions. For example, a prior criminal conviction for “Arson 1st Degree” scores on a question that relates to prior assault convictions, not prior arson convictions. Some offenses are mapped to the appropriate questions, but do not have the appropriate index score/weight assigned. **(Legal/Legislative)**
 - These issues can only be fixed by a comprehensive review of all state statutes to determine whether (a) the substantive language of the law matches the crime description associated with each severity index score and (b) the offenses are mapped to the appropriate question in the STRONG-R. **(Legal/Legislative)**
 - The Criminal Conviction Record (CCR) software includes only state statutes and does not allow staff to select any city ordinance violations. Because of this, staff have either

not entered these convictions or have used a state statute that they deem to be the best proxy.

- In a number of cases, staff have entered “Official Misconduct” in the CCR because “Disorderly Conduct” is not an available option. However, “Official Misconduct” is qualitatively different from the convicted offense because it refers to malfeasance by a public official within his or her job capacity. **However, according to Dr. Hamilton, this does not change the risk associated to the offender.**

- I am aware of 12 frequently encountered ordinances that staff are either not entering or using proxy codes for.

- Both the missing offense codes and the substitution of proxy offense codes have an unknown effect on the calculated risk and needs scores produced by the tool.

- **There has not been consistency in how the STRONG-R training is delivered, either among NDCS trainers or between NDCS and Vant4ge trainers. However, we are resolving this issue by revising new user training for all users across NDCS and Parole.**

- Is there a new contract with Vantage that has been signed by the Department? If so, what is the cost of the new contract and why was the contract entered into by the Department? *Allvest changed their name to Vantage. We did an addendum to the contract which increased the pricing by \$42,000 and reallocated other funds (which was included in the attached).*
- How much has Vantage billed the Department since they signed their original contract? *Please see attached*
- Are there any other outside parties that have received funding from the Department to be involved in the STRONG-R project?
 - To the best of my knowledge, no other outside parties have received funding from NDCS to be involved in the STRONG-R project. My understanding is that all funds related to the STRONG-R have been paid directly to Vant4ge. Dr. Zachary Hamilton, who created the models upon which the STRONG-R is based, is employed by Vant4ge as a subcontractor, and he would have received his payments directly from Vant4ge.

Best,

Jeff Wooten, Ed.D.

Executive Officer | CENTRAL OFFICE

Nebraska Department of Correctional Services

OFFICE [402-479-5799](tel:402-479-5799)

ENDNOTES

- ⁱ U.S. Dep't of Justice, *Predictive Analytics in Law Enforcement: A Report by the Department of Justice* 4 (Nov. 2014), available at <https://epic.org/foia/doj/criminal-justice-algorithms/EPIC-16-06-15-DOJ-FOIA-20200319-Settlement-Production-pt1.pdf>.
- ⁱⁱ *Our Statement on Pretrial Justice*, Advancing Pretrial Policy and Research (Feb. 13, 2020), available at <https://mailchi.mp/7f49d0c94263/our-statement-on-pretrial-justice?e=a01efafabd>.
- ⁱⁱⁱ FOIA Production: Risk Assessment Validation Study and Predictive Bias Report, District of Columbia Pretrial Services Agency (Jan. 08, 2020), available at <https://epic.org/EPIC-20-01-08-DC-FOIA-PSA-Risk-Assessment-Maxarth-Validation-Predictive-Bias-Report.pdf>.
- ^{iv} Julia Angwin et al., *Machine Bias*, ProPublica (May 23, 2016), <https://www.propublica.org/article/machine-bias-risk-assessments-in-criminal-sentencing>
- ^v See, e.g., Melissa Hamilton, *The Biased Algorithm: Evidence of Disparate Impact on Hispanics*, 56 Am. Crim L. Rev. 1553 (2019), available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3251763.
- ^{vi} *Algorithmic Risk Assessments and the Double-Edged Sword of Youth*, 96 Wash. U.L. Rev. 681 (2018), available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3225350.
- ^{vii} *State v. Loomis*, Wisconsin 2016 cert. denied USC 2017
- ^{viii} *Henderson v. Stensberg, Northpointe et. Al.* 2020 WL 1320820, U.S. District Court, W.D. Wisconsin
- ^{ix} *Rodgers v. Christie*, D.N.J. No. 1:17-cv-05556: available at <https://www.courtlistener.com/opinion/4733267/june-rodgers-v-christopher-christie/>
- ^x <https://legislature.idaho.gov/statutesrules/idstat/Title19/T19CH19/SECT19-1910/>
- ^{xi} House Bill 585, Mississippi State Legislature (2019), available at <https://www.mdoc.ms.gov/Documents/House%20Bill%20585%20as%20approved%20by%20the%20Governor.pdf>.
- ^{xii} Bill 0068f, Maryland State Legislature (2020) available at <http://mgaleg.maryland.gov/2020RS/bills/sb/sb0068f.pdf>.
- ^{xiii} Bill 2239, Hawaii State Legislature (2020), available at https://www.capitol.hawaii.gov/session2020/bills/SB2239_.htm
- ^{xiv} Bill 1655, Washington State Legislature (2019) available at <https://app.leg.wa.gov/billsummary?BillNumber=1655&Year=2019&Initiative=false>
- ^{xv} EPIC Model Commission Bill, available at <http://epic.org/EPIC-Model-State-AI-Commission-Bill.pdf>
- ^{xvi} EPIC Testimony to Massachusetts Legislature (Oct. 2019), available at <https://epic.org/testimony/congress/EPIC-MA-H2701-S1876-Oct2019.pdf>.
- ^{xvii} Bill 2644, Washington State Legislature (2019) available at <http://lawfilesexternal.leg.wa.gov/biennium/2019-20/Pdf/Bills/House/Bills/2644.pdf?q=20200124131227>.
- ^{xviii} *Universal Guidelines for Artificial Intelligence: Endorsement*, The Public Voice (Oct. 23, 2019), <https://thepublicvoice.org/AI-universal-guidelines/endorsement/>.
- ^{xix} PSA factors
- ^{xx} Alaska factors, available at <https://www.uaa.alaska.edu/academics/college-of-health/departments/justice-center/alaska-justice-forum/34/3winter2018/a.pretrial-risk-assessment.cshhtml>.
- ^{xxi} Idaho LSI-R Scoresheet, available at <https://epic.org/EPIC-19-11-21-ID-FOIA-20191206-ID-LSI-paper-scoresheet-tips-and-hints.pdf>

^{xxii} COMPAS scoresheet, available at <https://www.propublica.org/article/machine-bias-risk-assessments-in-criminal-sentencing>.

^{xxiii} DC PSA Factor Change, available at <https://epic.org/EPIC-20-01-08-DC-FOIA-20200308-DCPSA-Factors-Change-2015-2019.pdf>.

^{xxiv} Emails between Nebraska Officials, available at <https://epic.org/EPIC-19-11-08-NE-DCS-FOIA-20191112-D-Koebernack-and-J-Wooten-Emails.pdf>.

CHANGE LOG:

[September 15, 2020]:

- Updated state-by-state survey to reflect new Open Government requests and updated Pretrial Safety Assessment deployment.
- Updated references to developers of the Pretrial Safety Assessment to clarify organizational structure. Advancing Pretrial Policy and Research, which promotes the use of the Pretrial Safety Assessment, did not *develop* the assessment themselves, but is an entity funded by the organization that did develop the tool, Arnold Ventures.