



JUDICIAL COUNCIL OF CALIFORNIA

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REPORT TO THE JUDICIAL COUNCIL

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Title

Pretrial Reform: Pretrial Reform and Operations Workgroup Update and Recommendations on Use of Pretrial Risk Assessment Instruments

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Submitted by

Pretrial Reform and Operations Workgroup
Hon. Marsha G. Slough, Chair

Contact

Deirdre Benedict
415-865-7543
deirdre.benedict@jud.ca.gov

Executive Summary

The Chief Justice appointed the Pretrial Reform and Operations Workgroup (PROW) (the Workgroup) in January 2019 to review progress on reforms to California's system of pretrial detention and release and identify next steps. PROW was charged with (1) reviewing progress on reforms to California's system of pretrial detention and release; (2) developing recommendations for funding allocations of court pilot projects, should they be included in the final State Budget for fiscal year 2019–20; (3) developing a plan for judicial branch education on pretrial issues; and (4) conducting an examination of pretrial risk assessment instruments.

The Workgroup has met frequently since its appointment, both in-person and virtually, to fulfill these charges. It has reviewed progress on pretrial reforms, developed funding recommendations and provided ongoing oversight to the Pretrial Pilot Program, and developed judicial branch education programs on pretrial issues. The documents provided as Attachment A, *Pretrial Risk Assessment Instrument Recommendations and Areas for Further Policy Development*, and Attachment B, *Fundamentals of Pretrial Risk Assessment Instruments*, are the culmination of PROW's comprehensive examination of pretrial risk assessment instruments (PRAIs) and recommended best practices for their use by California trial courts and justice partners. PROW submits this report, including the attached documents relating to its fourth charge, for the consideration of the Judicial Council.

Relevant Previous Council Action

In January 2019, the Chief Justice appointed the Pretrial Reform Operations Workgroup (PROW) and charged this group with reviewing progress on reforms to California's system of pretrial release and detention and identifying next steps to continue work on this important issue. The 12-person group is comprised of trial court judges, appellate justices, and court executive officers with varying backgrounds and experience, who serve in courts of various sizes, geographic locations, and communities. Judge J. Richard Couzens serves as the Criminal Law Advisory Committee Liaison to the Workgroup.

The members of the Pretrial Reform and Operations Workgroup include:

- Hon. Marsha G. Slough (Chair), Associate Justice, Court of Appeal, Fourth Appellate District, Division Two (Riverside)
- Hon. Marla O. Anderson, Judge, Superior Court of Monterey County
- Hon. C. Todd Bottke, Presiding Judge, Superior Court of Tehama County
- Hon. Thomas DeSantos, Associate Justice, Court of Appeal, Fifth Appellate District (Fresno)
- Hon. Judith K. Dulcich, Presiding Judge, Superior Court of Kern County
- Hon. Jackson Lucky, Judge, Superior Court of Riverside County
- Hon. Serena R. Murillo, Judge, Superior Court of Los Angeles County
- Hon. Sam Ohta, Judge, Superior Court of Los Angeles County
- Hon. Winnifred Younge Smith, Judge, Superior Court of Alameda County
- Hon. J. Richard Couzens (Ret.), Superior Court of Placer County (**Criminal Law Advisory Committee Liaison**)
- Mr. Alex Calvo, Court Executive Officer, Superior Court of Santa Cruz County
- Ms. Sherri R. Carter, Court Executive Officer, Superior Court of Los Angeles County
- Mr. David Yamasaki, Court Executive Officer, Superior Court of Orange County

PROW continues the work of the Pretrial Detention Reform (PDR) Workgroup, a group appointed by the Chief Justice in the fall of 2016 to provide analysis and recommendations for identifying better ways for courts to make pretrial release decisions. The PDR workgroup presented its final report to the Chief Justice in October 2017, which included a recommendation that money bail be replaced with a risk-based assessment and supervision system for releasing and detaining defendants before trial based on their threat to public safety and their likelihood of appearing for court as required (see Link A).

Two PROW members, Mr. Alex Calvo and Judge Serena Murillo, previously served on the PDR workgroup, and provided PROW members with an overview of the work of PDR and the recommendations included in its final report to the Chief Justice.

Analysis/Rationale

The Chief Justice charged PROW with (1) reviewing progress on reforms to California's system of pretrial detention and release; (2) developing recommendations for funding allocations of

court pilot projects, should they be included in the final State Budget for fiscal year (FY) 2019–20; (3) developing a plan for judicial branch education on pretrial issues; and (4) conducting an examination of pretrial risk assessment instruments (PRAIs).

In February 2019, PROW members held an introductory conference call at which Justice Marsha Slough, Workgroup chair, introduced members and gave an overview of the Workgroup’s charge, goals, and scope. Since its initial conference call, the Workgroup has held seven in-person meetings, 10 virtual meetings, and numerous email and phone communications in order to fulfill the charges assigned to it by the Chief Justice. As a result of the ongoing COVID-19 pandemic, all in-person PROW meetings scheduled after March 2019 took place via videoconference.

Pretrial detention and release in California

Workgroup members initially undertook an exhaustive education in the many elements of the pretrial landscape in California. Members reviewed a wide variety of research and policy materials on pretrial detention and release issues, including those gathered by the PDR workgroup.

Over the last 18 months, the Workgroup received in-person and virtual presentations on pretrial issues from more than 35 speakers, including state and national experts, justice system partners, victim and civil rights advocates, California counties that have had experience with pretrial services programs, and jurisdictions outside California that have undertaken pretrial reform efforts. PROW also heard from Judicial Council research, legal, programmatic, and information technology staff at various points throughout their work. (For a complete list of presenters, see Attachment B.)

Pretrial Pilot Program: funding recommendations

In January 2019, Governor Gavin Newsom included in his FY 2019–20 budget a proposed two-year court pretrial pilot program to be funded at \$75 million. Since its appointment that same month, PROW immediately began work on its charge to develop recommendations for the selection criteria, application process, and funding allocations for court pretrial pilot projects, should they be included in the final State Budget for FY 2019–20.

The goals of the Pretrial Pilot Program, as set by the Legislature in the 2019–20 Budget (Assem. Bill 74; Stats. 2019, ch. 23), are to (1) increase the safe and efficient prearrestment and pretrial release of individuals booked into jail; (2) implement monitoring practices with the least restrictive interventions necessary to enhance public safety and return to court; (3) expand the use and validation of pretrial risk assessment tools that make their factors, weights, and studies publicly available; and (4) assess any disparate impact or bias that may result from the implementation of these programs.

Between February and May 2019, PROW held multiple in-person meetings and conference calls to work with Judicial Council staff on developing, reviewing, and approving the goals and scope of the pilot program. In June and July 2019, the Workgroup engaged in an extensive and

methodical process of interviewing and selecting pilot courts for participation in the program. The eligibility requirements and application and review processes were designed based on the budget bill language, feedback from legislative budget committee members, and the recommendations of the Chief Justice's Pretrial Detention Reform Workgroup. (For more detailed information on the application and selection process of pilot programs, see Link B.)

At the Judicial Council meeting on August 9, 2019, the Workgroup presented its recommendations for funding 16 courts selected for participation in the Pretrial Pilot Program. The council approved these recommendations and the allocation of approximately \$68 million to the selected trial courts for the period of August 1, 2019, to June 30, 2021, for their pretrial projects. The 16 selected pilot court projects represent a great diversity of size, geographic location, data integration status, and chosen risk assessment instruments.¹

Since fulfilling its charge to develop recommendations for the funding allocations for these pilots, PROW members have met throughout the year to address both programmatic and policy-related concerns raised by participating courts and partners. On April 11, 2020, PROW members held a conference call to discuss the potential impact of the COVID-19 pandemic on the activities and scope of the pilot program. At the time of this meeting, all 17 superior courts involved in the program were operating under individual COVID-19 emergency orders as well as emergency rules that the Judicial Council had adopted. PROW members discussed how to best support pilot courts during this unprecedented time, including scheduling conference calls with court program managers and CEOs, and introducing flexibility in submission dates for upcoming progress reports.

PROW has also overseen submission of the first two legislatively mandated reports on the Pretrial Pilot Program to the Judicial Council and the Legislature, in January and July 2020 (see Links C and D). Reports on the progress of the program will continue to be submitted by Judicial Council staff for the remainder of the program, as mandated by the Budget Act of 2019.

Judicial branch education

In recognition of the essential role of education in the success of pretrial operations, Workgroup members dedicated a significant amount of time to reviewing and developing educational materials for the branch. Four PROW members served on the PROW Education Committee, a subset of the Workgroup that met monthly to review the status of these materials and identify areas of need for future educational content. In collaboration with CJS staff, this committee developed a two-year plan to produce in-person and on-demand education resources and events for courts and justice system partners participating in the Pretrial Pilot Program, as well as for trial courts throughout the state.

¹ The superior courts in the counties of Alameda, Calaveras, Kings, Los Angeles, Modoc, Napa, Nevada-Sierra (as a two-court consortium), Sacramento, San Joaquin, San Mateo, Santa Barbara, Sonoma, Tulare, Tuolumne, Ventura, and Yuba were selected for participation in the Pretrial Pilot Program.

The judicial education plan includes developing content and selecting speakers for a series of webinars and podcasts on pretrial release and best practices. These resources cover topics including the fundamentals of pretrial release decisionmaking, guidance on conditions for monitoring pretrial release, and the basics for use of pretrial risk assessment instruments. Plans for future webinars and podcasts are underway, including a webinar on mental health and pretrial release, and another on technology for effective collection and communication of pretrial data that will be offered later in the year.

On October 9–10, 2019, PROW members and Judicial Council staff held the Pretrial Justice Practice Institute (PJPI) in Oakland, California. This two-day conference convened presiding judges, court executive officers, project managers, court information officers, chief probation officers, sheriffs, corrections authorities, and other pretrial operations staff from all 16 pilot court projects to discuss program goals and learn more about recent research and practices on risk assessments, supervision, use of technology, data exchange, and justice partner coordination. PROW members were involved in developing the content and selecting the faculty for this event, and many members served as co-presenters and facilitators at various sessions throughout the conference. PROW members also participated in the content development, design, and facilitation of a second institute, which was restructured to be held virtually on September 10–11, 2020, due to the COVID-19 pandemic.

Judge J. Richard Couzens (Ret.), Superior Court of Placer County, the Workgroup’s Criminal Law Advisory Committee Liaison, traveled to counties across the state to hold in-person roundtables with judicial officers to discuss the fundamentals of bail and pretrial release, the use of pretrial risk assessment instruments, and the legal framework for pretrial release, and addressed potential concerns of the trial courts. These sessions were offered both to counties participating in the pilot program and those not in the program but interested in having candid discussions and addressing central questions about bail and pretrial release. Roundtables have been held in four counties thus far. The remaining sessions scheduled for the year have been postponed due to the COVID-19 pandemic.

Several PROW members spent several additional meetings dedicated to educational efforts related specifically to PRAIs, including developing a benchguide to assist judicial officers using PRAIs when making release decisions. This guide, *Fundamentals of Pretrial Risk Assessment Instruments*, provides a general overview of the fundamentals of risk assessment and guidance for judicial officers (see Attachment B).

Pretrial Risk Assessment Instruments (PRAIs)

The Workgroup spent considerable time on its charge to examine the use of pretrial risk assessment instruments. Over the past 18 months, PROW has heard from numerous experts in the field—including academics, practitioners, justice system partners, and advocacy group affiliates—on the development, mechanics, and potential issues involved in the use of these instruments.

At its meeting on March 29, 2019, PROW members heard from several experts on PRAIs who spoke about the background of these tools, including racial equity concerns surrounding PRAIs and the process of local tool validation. At its meeting on October 30, 2019, the Workgroup began developing an education plan designed specifically for judicial officers on the background and use of PRAIs. The Workgroup reviewed an example of guidance on PRAIs created by the Chief Probation Officers of California (CPOC) in order to inform its work (see Link E).

On February 10–11, 2020, the workgroup met in San Francisco to hear perspectives from various groups on the use of PRAIs, with a specific focus on racial equity concerns. Over the course of the two days, the workgroup heard from five justice system partner representatives from various counties, 18 representatives of community organizations, and six academics conducting research on PRAIs from across the country. Presenters were asked to provide their perspective on the use of PRAIs, including how policy decisions might improve or impact a pretrial system with a focus on ways to improve on racial equity and mitigate bias in pretrial decisionmaking. Workgroup members received materials provided by the presenters for further study of PRAIs. (A complete list of presenters to PROW is provided as Attachment C.)

The Workgroup scheduled two public hearings to be held in March (in Los Angeles) and April (in San Francisco) to give interested organizations and members of the public the opportunity to share their thoughts and concerns relating to PRAIs. Due to the travel and crowd restrictions associated with the COVID-19 pandemic, however, both hearings have been indefinitely postponed. The Workgroup alerted individuals and organizations that expressed interest in the hearings to the cancellation and indicated that public comments could be submitted via email. All emails received by Judicial Council staff were forwarded to members of the Workgroup for review and consideration as it continued to research and work on this issue.

Between June 23 and August 17, 2020, PROW members held six virtual meetings to develop the contents of the attached report, *Pretrial Risk Assessment Instrument Recommendations and Areas for Future Policy Development*. Assisted by Judicial Council staff, PROW members reviewed the extensive information gathered over the past 18 months from a growing body of research on pretrial risk assessment instruments from the legal, policy, technology, and other communities. PROW used this research and information to develop recommendations for further guidance on the use of these tools. This document provides a set of 12 recommendations related to the design, deployment, and validation of pretrial risk assessment instruments and suggests four specific areas identified by the Workgroup as needing further study and policy development relating to the use of PRAIs. (These recommendations are provided as Attachment A.)

Fiscal Impact and Policy Implications

There are no fiscal or operational impacts directly related to receipt of this report. The recommendations provided in the attached report are being presented by PROW for consideration by the council. In the future, courts that choose to include the use of PRAIs in pretrial operations and adopt the associated recommendations in this report would likely observe

one-time and sustained annual costs related to implementation, training, and ongoing use of these instruments.

PROW is providing these recommendations to the council as an informational document that may be used in future policy discussions regarding the use of pretrial risk assessment instruments by the courts. The recommendations in the attached report are the result of PROW's thorough investigation over the past 18 months and builds upon the previous study and recommendations submitted by the Pretrial Detention Reform Workgroup. They represent PROW's conclusions about the use of pretrial risk assessment instruments and recommendations for best practices for their use.

Attachments and Links

1. Attachment A: *Pretrial Risk Assessment Instrument Recommendations and Areas for Further Policy Development*
2. Attachment B: *Fundamentals of Pretrial Risk Assessment Instruments*
3. Attachment C: *Comprehensive List of Presenters to the Pretrial Reform and Operations Workgroup, February 2019–September 2020*
4. Link A: [Pretrial Detention Reform: Recommendations to the Chief Justice from Pretrial Detention Reform Workgroup \(October 2017\)](#)
5. Link B: [Judicial Council Report: Pretrial Reform: Pretrial Pilot Program Recommended Awards](#)
6. Link C: [Pretrial Pilot Program: Report to the Legislature \(Jan. 2020\)](#)
7. Link D: [Pretrial Pilot Program: Report to the Legislature \(July 2020\)](#)
8. Link E: [Effective Pretrial Practices Implementation Toolkit, CPOC \(Mar. 2019\)](#)

Pretrial Risk Assessment Instrument Recommendations and Areas for Future Policy Development

WORKING DRAFT

August 2020

OVERVIEW

This document is designed to provide a set of recommendations and points for discussion related to the design, deployment, and validation of pretrial risk assessment instruments (PRAIs), tools often used to aid judicial officers in making pretrial release determinations. The recommendations and discussion points presented are coalesced from the growing body of research on and proposals for the use of PRAIs that has emerged in recent years from the legal, policy, technology, and other communities.

The recommendations are organized into sections focused on different parts of the PRAI process. The first, “Measuring Risk,” is related to aspects of PRAI design and the selection of PRAIs for use in a jurisdiction. The next section, “Responding to Risk,” focuses on risk assessment use, including the use of decision aids like Release Conditions Matrices that connect risk assessments to possible conditions of release. “Responding to Risk” also discusses training and education around PRAIs for relevant stakeholders and the public. “Continuous improvement” includes some recommendations for best practices when validating, designing, or redesigning PRAIs. For more background on PRAIs, refer to *Fundamentals of Pretrial Risk Assessment Instruments* (provided as Attachment B).

The “Areas for Future Policy Development” section contains information on active issues around PRAIs for which the state of current research does not yet have a clear recommendation.

RECOMMENDATIONS

MEASURING RISK

- I. Instruments should produce separate scores for each outcome considered.
- II. The results of risk assessment instruments should include corresponding probabilities of FTA and new arrest to ensure decision-makers are provided with clear risk information.
- III. In selecting a risk assessment instrument, a jurisdiction's decision-makers should consider whether a tool has been validated on a similar population to that of their jurisdiction.
- IV. Mental illness or mental health status should not be included as a risk factor within or in addition to PRAIs.

RESPONDING TO RISK

- I. It is essential to the proper use of risk assessment tools that judicial officers be provided with training, guidance, and resources for using PRAIs.
- II. Education regarding the development and use of PRAIs is essential for justice system partners including probation, prosecutors, and defense attorneys.
- III. The public should be provided with educational resources regarding the development and use of PRAIs.
- IV. Guidance should be created for the design, selection, and use of Release Conditions Matrices.

CONTINUOUS IMPROVEMENT

- I. Conduct further research on how PRAIs can be used to identify and mitigate racial bias in pretrial decisionmaking, including identifying alternate proxies for new crime, developing potential improvements in PRAIs, and cultivating best practices in implementation of PRAIs.
- II. Minimum standards should be set for validation of PRAIs.
- III. Validation processes should strive to improve PRAIs rather than just test them.
- IV. The Judicial Council should continue to monitor the PRAI landscape and support coordination of local efforts.

AREAS FOR FUTURE POLICY DEVELOPMENT

- I. Monitor the evolving research related to specialized DV assessments to evaluate whether they add predictive value beyond that provided by general pretrial risk tools.
- II. Research best practices with regard to the use of interviews in PRAs and evaluate the costs and benefits of conducting an interview.
- III. Consider the effect of presenting PRA information to judicial officers as “likelihood of success” rather than “likelihood of failure.”

MEASURING RISK – I. SEPARATE SCORES

RECOMMENDATION: Pretrial Risk Assessment Instruments should produce separate scores for each outcome considered.

Background

PRAIs vary in how they distinguish and communicate estimated risk for different outcomes. Some risk assessment tools distinguish between outcomes by producing separate scores for each outcome of interest, i.e., one score for FTA risk and one score for recidivism risk. Other tools produce a composite score, a single score that represents the estimated probability of multiple outcomes like FTA and recidivism.¹

RATIONALE

- A high score in a combined risk tool does not necessarily mean a person has a high likelihood of all outcomes. Providing separate scores can more clearly communicate the specific risk that an individual poses so that decision-makers can choose how to tailor their response.
- Some commonly used PRAIs, including one in use in California, already produce separate scores for risk of FTA, new criminal activity, and new violent criminal activity. New tools being developed can choose to produce separate or composite scores. Existing tools with composite scores can undergo a validation and improvement study process if they wish to update their design to include separate scores.

¹ Robinson, D. G., Sassaman, H. J., & Stevenson, M. (2018). Pretrial Risk Assessments: A Practical Guide for Judges. *The Judges' Journal*, 57(3), 8-11.

MEASURING RISK – II. PRESENTATION OF RISK INFORMATION

RECOMMENDATION: The results of risk assessment instruments should include corresponding probabilities of FTA and new arrest to ensure decision-makers are provided with clear risk information.

Background

PRAIs often condense risk scores into less specific groupings with categorical labels such as “low,” “moderate,” and “high” risk, or numerical labels such as “Level 1” to “Level 6.” Judicial officers may only be presented with the broader categorical information rather than the risk score with the underlying probability, an estimate of the likelihood that a defendant may fail to appear in court or commit a new crime if released.²

Furthermore, there is no standard process for determining where to draw the lines between “low,” moderate,” and “high” risk. The cutoffs for each category are sometimes determined by the developer of a tool (see, for example, the ORAS-PAT tool development report³) or as a matter of policy by stakeholders in the jurisdiction where a tool is used.⁴

RATIONALE

- Categorical labels are prone to misinterpretation.⁵ For example, a 2018 study found that, when given risk assessment results in categorical form with labels like “low,” and “high,” study participants overestimated the risk of “moderate” and “high” risk defendants.⁶
- Risk scores with underlying probabilities provide judicial officers a more accurate picture of a defendant’s risk compared to condensed categories. For example, rather than just saying a defendant is “moderate risk,” a tool may specify: “the defendant scored 4 out of a possible 6 points. In the validation study, 93% of defendants who scored 4 on this tool successfully completed their pretrial period with no new arrests.”

² Desmarais, S. L., & Lowder, E. M. (2019). Pre-trial Risk Assessment Tools: A Primer for Judges, Prosecutors, and Defense Attorneys. *MacArthur Foundation Safety and Justice Challenge*.

³ Edward, J., Lemke, R., Makarios, M., & Smith, P. The Creation and Validation of the Ohio Risk Assessment System (ORAS). *Federal Probation*, 74(1).

⁴ Desmarais, S. L., & Lowder, E. M. (2019). Pre-trial Risk Assessment Tools: A Primer For Judges, Prosecutors, And Defense Attorneys. *MacArthur Foundation Safety and Justice Challenge*.

⁵ Robinson, D. G., Sassaman, H. J., & Stevenson, M. (2018). A Practical Guide for Judges. *Judges’ Journal*, 57(3).

⁶ Krauss, D. A., Cook, G. I., & Klapatch, L. (2018). Risk Assessment Communication Difficulties: An Empirical Examination of the Effects Of Categorical Versus Probabilistic Risk Communication In Sexually Violent Predator Decisions. *Behavioral Sciences & the Law*, 36(5), 532–553.

- Tools that produce separate scores can provide independent probabilities of FTA and new arrest that correspond with each separate score. Even for tools with a composite score, however, validation studies can calculate separate probabilities for each outcome that correspond with the single composite score. This cannot reveal if a defendant is high risk on one outcome and low on another, as tools with separate scores can, but can clarify if the overall failure rate for that score is primarily driven by one outcome over another. For example, rather than saying, “In the validation study, 70% of defendants who scored 6 on this composite tool successfully completed their pretrial period with no new arrests or FTAs,” a tool may specify, “In the validation study, of the defendants who scored 6 on this composite tool, 93% had no new arrests during the pretrial period and 76% had no new FTAs during the pretrial period, with an overall successful completion rate of 70%.”

MEASURING RISK – III. TOOL CONSIDERATIONS

RECOMMENDATION: In selecting a risk assessment instrument, decision-makers should consider whether a tool has been validated on a similar population to that of their jurisdiction.

Background

Some risk assessments are built for particular jurisdictions using data from that area, and others are built using data from a variety of jurisdictions. Some of the PRAIs frequently used in California right now were developed using data from other states or using data from around the country.

A risk assessment tuned to a particular geographic area at a particular time may not generalize well to a different locale or era.⁷ For example, a tool that was developed on a rural population in the South may not work well on an urban population on the West Coast, due to differences in local policies, mores, and demographic distributions. This issue is known as *sample bias*, which occurs when the sample population used to develop the RAI differs from the population using the tool. Local validation with recent data is the only way to be sure that a PRAI is properly attuned to a new jurisdiction. In some cases, local validation may be possible using historical data, but when local validation is not yet possible, concerns about sample bias are reduced when a tool has been tested on a similar population.

Senate Bill 36 requires: “Any pretrial risk assessment tool used by a pretrial services agency shall be validated ... on a regular basis..., but no less frequently than once every three years.” It further specifies: “a pretrial risk assessment tool shall be validated using the most recent data collected by the pretrial services agency within its jurisdiction, or, if that data is unavailable, using the most recent data collected by a pretrial services agency in a similar jurisdiction within California.” These requirements ensure that many California-based validation studies will be available for jurisdictions looking to adopt a pretrial risk assessment tool, and that after a tool is selected it will be tested for whether it is a good fit for that jurisdiction.

RATIONALE

- Considering when a risk assessment was designed and where the data used to design it came from is important for understanding whether a risk assessment is likely to work well in a particular jurisdiction.
- SB 36 requires local validation of PRAIs at least every three years, which will test whether the tool a jurisdiction selects is a good fit.

⁷ Desmarais, S. L., & Lowder, E. M. (2019). Pre-trial Risk Assessment Tools: A Primer for Judges, Prosecutors, and Defense Attorneys. *MacArthur Foundation Safety and Justice Challenge*.

MEASURING RISK – IV. MENTAL ILLNESS AND RISK

RECOMMENDATION: Mental illness or mental health status should not be included as a risk factor within or in addition to PRAIs.

Background

As of the writing of this report, none of the PRAIs commonly used in California rely on mental illness or mental health status as a factor. However, some tools used outside of California include mental health or illness as a factor⁸ and some of the tools used in California list mental health issues as suggested reasons for professional overrides of risk assessments⁹ or as an exacerbating factor in a release conditions matrix.

Many studies have found that the presence of a mental illness does not necessarily increase a person's likelihood of pretrial failure.¹⁰ Risk in people with mental illness is predicted by the same factors that predict risk in the general population; while people with mental illness may be more likely to have general risk factors, factors specific to mental health status do not increase their risk.¹³ Mental health status and the availability of community mental health resources may be useful for judicial officers to consider in terms of responding to risk and a defendant's responsivity to conditions of release, all of which will be discussed in later sections of this document. Mental health status should not be considered as a risk factor either within or on top of PRAIs.

RATIONALE

- Research has found that general risk factors significantly predict recidivism for individuals with mental illnesses and that the addition of mental illness–specific factors does not improve predictive utility over the use of general risk factors.¹¹
- Considerations of mental health in responding to risk and responsivity to risk mitigation efforts will be discussed in later sections.

⁸ Pretrial Justice Institute, & United States of America. (2013). Colorado Pretrial Assessment Tool (CPAT): Administration, Scoring, and Reporting Manual, Version 1.

⁹ Edward, J., Lemke, R., Makarios, M., & Smith, P. The Creation and Validation of the Ohio Risk Assessment System (ORAS). *Federal Probation*, 74(1).

¹⁰ Bechtel, K., Lowenkamp, C. T., & Holsinger, A. (2011). Identifying the Predictors of Pretrial Failure: A Meta-analysis. *Federal Probation*, 75, 78.

¹¹ Skeem, J. L., Winter, E., Kennealy, P. J., Loudon, J. E., Tatar, I. I., & Joseph, R. (2014). Offenders with Mental Illness Have Criminogenic Needs, Too: Toward Recidivism Reduction. *Law and Human Behavior*, 38(3), 212.

RESPONDING TO RISK – I. TRAINING FOR JUDICIAL OFFICERS

RECOMMENDATION: It is essential to the proper use of risk assessment tools that judicial officers be provided with training, guidance, and resources for using PRAIs.

Background

In order to best integrate risk score information with other considerations, judicial officers need to be familiar with the PRAI used in their jurisdiction.

PRAIs take into account many risk factors that judicial officers typically consider in their decisionmaking process. Familiarity with the particular PRAI used in their jurisdiction can help judicial officers make informed decisions about how to weigh risk assessments and other considerations in their decisionmaking process.

Judicial discretion is an essential part of pretrial decisions even with the guidance of a risk assessment tool. Training will allow judicial officers to identify appropriate circumstances in which to follow the recommendation of the tool versus depart from it and to avoid departures which may inadvertently result in bias. Training on judicial overrides can help judicial officers evaluate and optimize their own practices.

Trainings should educate judicial officers about what pretrial supervision or programmatic options are available through their local pretrial services office and present evidence about when each may be most useful for risk mitigation. Trainings should also cover what options the local pretrial services office can offer to address concerns around responsivity, such as when the presence of mental illness or other factors raises concerns about a defendant's amenability to supervision or programming.

RATIONALE

- Training and guidance for judicial officers can help promote best practices in using PRAIs and translating risk scores into release recommendations.
- Training should provide judicial officers with information about the factors that contribute to a risk score, what outcomes the risk score predicts, and how common these outcomes are at each risk level. Training can also inform judicial officers about what services are available for risk mitigation through their local pretrial services office.

RESPONDING TO RISK – II. JUSTICE PARTNER EDUCATION

RECOMMENDATION: Education regarding the development and use of PRAs is essential for justice system partners including probation, prosecutors, and defense attorneys.

Background

It is essential that justice system partners who will interact with PRAs also receive training on PRAs. Probation plays an integral role in the use of PRAs, and therefore it is imperative that probation officers receive thorough training on the tools they will be using. The Chief Probation Officers of California have already foreseen this need and have various resources already available for probation departments.¹² Prosecutors and defense attorneys may interact with PRAs used for clients. These attorneys need to be familiar with what risk scores mean, what factors contribute to the risk score for the tool used in their jurisdiction, and how PRAs are developed and used.

RATIONALE

- Justice system partners whose work may interact with pretrial risk assessment instruments need a strong understanding of the design and use of PRAs.

¹² Chief Probation Officers of California and Pretrial Justice Institute (2019). *Effective Pretrial Practices Implementation Toolkit*, https://cpoc.org/sites/main/files/file-attachments/effective_pretrial_practices_implementation_toolkit_0.pdf.

RESPONDING TO RISK – III. PUBLIC EDUCATION

RECOMMENDATION: The public should be provided with educational resources regarding the development and use of PRAIs.

Background

The public would also benefit from training on PRAIs. The public may interact with PRAIs used for family or loved ones. Education on PRAIs would increase the transparency of their use in the pretrial justice system.

There has been increased interest amongst the public concerning pretrial systems and practices, including the use of risk assessment tools. Senate Bill 36 mandates a study to look at the use of PRAIs including outcomes and potential bias or disparate impact, the results of which will be made publicly available. Contextualizing this data with information about the development and use of PRAIs will ensure that data is consumed in an informed manner.

RATIONALE

- Public education efforts will help meet the interest around issues concerning pretrial release and build understanding in preparation for the reports on PRAIs that will be produced pursuant to Senate Bill 36.

RESPONDING TO RISK – IV. RELEASE CONDITIONS MATRICES

RECOMMENDATION: Guidance should be created for the design, selection, and use of Release Conditions Matrices.

Background

Release Conditions Matrices (RCMs) (also known as Decision-Making Frameworks) are sometimes used to translate risk scores into recommended release decisions and/or conditions of release. RCMs can be useful in establishing standardized recommendations for similarly situated defendants, but cannot replace a judicial officer's personalized assessment of individual circumstances. Although RCM recommendations are often presented to judicial officers as a part of the risk assessment tool results, RCMs are typically not designed empirically. Some jurisdictions use generic RCMs that are associated with certain PRAIs, while other jurisdictions have developed local RCMs that reflect local practices and priorities.¹³

While the recommendations that RCMs produce can have substantial influence as a factor judicial officers consider in coming to their pretrial decisions, RCMs have been criticized for lack of transparency and stakeholder input in the design process. Some researchers have argued that RCMs should not be selected off-the-shelf, but should be designed carefully and specifically by particular jurisdictions.¹⁴ Care should be taken that RCMs do not introduce bias into tool-based recommendations.

Further study is needed regarding the relationship between PRAI scores, recommended release conditions, and recidivism or nonappearance. Studies show that over-supervision of low-risk individuals can increase unwanted outcomes.¹⁵ One promising practice is providing court date reminders to pretrial defendants, which have been shown to increase court appearance rates.¹⁶ The concept of responsivity, recognized in evidence-based practice at other stages of criminal justice intervention, also merits further research in the pretrial context. For example, if amenability to pretrial services is a concern when considering risk mitigation strategies for

¹³ Koepke, J. L., & Robinson, D. G. (2018). Danger Ahead: Risk Assessment and the Future of Bail Reform. *Washington Law Review*, 93, 1725.

¹⁴ Koepke, J. L., & Robinson, D. G. (2018). Danger Ahead: Risk Assessment and the Future of Bail Reform. *Washington Law Review*, 93, 1725.

¹⁵ Lowenkamp, C. T., & Latessa, E. J. (2004). Understanding the Risk Principle: How and Why Correctional Interventions Can Harm Low-Risk Offenders. *Topics in Community Corrections*, 2004, 3–8; VanNostrand, M., & Keebler, G. (2009). Pretrial Risk Assessment in the Federal Court. *Federal Probation*, 73, 3.

¹⁶ Cooke, B., Diop, B. Z., Fishbane, A., Hayes, J., Ouss, A., & Shah, A. (2018). Using Behavioral Science to Improve Criminal Justice Outcomes.

higher-risk individuals with mental illness, community-based mental health treatment may have potential to improve engagement with pretrial services, thereby increasing pretrial success.¹⁷

RATIONALE

- Recommended release conditions are often presented along with risk information, but, unlike risk scores, RCMs are not evidence-based.
- Jurisdictions choosing to use RCMs should ensure transparency and stakeholder input in the design process.

¹⁷ Skeem, J. L., Steadman, H. J., & Manchak, S. M. (2015). Applicability of the Risk-Need-Responsivity Model to Persons with Mental Illness Involved in the Criminal Justice System. *Psychiatric Services*, 66(9), 916–922.

CONTINUOUS IMPROVEMENT – I. RACIAL BIAS IN PRAIS

RECOMMENDATION: Conduct further research on how PRAIs can be used to identify and mitigate racial bias in pretrial decisionmaking, including identifying alternate proxies for new crime, developing potential improvements in PRAIs, and cultivating best practices in implementation of PRAIs.

Background

Racial equity is a key concern among stakeholders in the adoption of PRAIs, although concerns about equity in the pretrial context predate the introduction of risk tools. Because PRAIs are based on data, potential racial disparities can be examined more closely. This offers an opportunity to directly address equity concerns, and, with appropriate study and action, has the potential to produce pretrial release and detention systems with less biased outcomes than unaided human judgment.

Under SB 36, all PRAIs in use by California pretrial agencies will be required to undergo scientific study to measure possible bias or disparate effect by race, gender, or ethnicity. The Judicial Council is required to provide a report to the courts and the Legislature containing recommendations to mitigate bias and disparate effect in pretrial decisionmaking.

Bias can be looked at through the lens of disparate treatment or of disparate impact. In order to test tools for disparate treatment, researchers look at whether a given risk score corresponds to the same rearrest or FTA rate across groups. Even if a risk tool treats individuals across groups fairly by this metric, however, it may still result in disparate impact across groups due to variations between groups in the frequency of rearrest or FTA.¹⁸ Part of this problem may derive from actions that occur outside the use of risk tools or the decisions of the court. For example, research has indicated that people of color are more likely to be arrested for drug use even when actual drug use is equivalent between racial groups.¹⁹ Because the occurrence of a new crime cannot be measured directly, rearrest is typically used as a proxy. Risk tools are designed and tested using this proxy; judges may also rely on this proxy when making release determinations based on professional experience alone, without the use of a PRAI. It may be possible to mitigate bias in pretrial practices by examining alternate proxies for new crime that are less susceptible to racial bias, such as new convictions instead of new arrest, or by focusing on types of arrest that are known to have less disproportionate impact across groups.

RATIONALE

¹⁸ Goel, S., Shroff, R., Skeem, J. L., & Slobogin, C. (2018). The Accuracy, Equity, and Jurisprudence of Criminal Risk Assessment. *Equity, and Jurisprudence of Criminal Risk Assessment* (Dec. 26, 2018).

¹⁹ Lum, K., & Isaac, W. (2016). To Predict and Serve?. *Significance*, 13(5), 14–19.

- Further study is needed to investigate potential racial bias in PRAIs and to develop possible mitigation strategies.
- One potential avenue for research is investigating proxies for new crime that are less susceptible to bias than the commonly used measure of rearrest.
- Further study is needed to determine whether PRAIs can be used to improve upon unaided human judgment in pretrial decisionmaking by identifying and mitigating racial bias.

CONTINUOUS IMPROVEMENT – II. VALIDATION STANDARDS

RECOMMENDATION: Minimum standards should be set for validation of PRAIs.

Background

Validation is an important part of the use of any PRAI and is widely agreed upon as crucial to the use of PRAIs. Validation can help ensure that a tool can reasonably assess the outcomes that it intends to, and validation can help surface issues with the tool’s construction and use. Under SB 36, counties in California are required to use validated risk assessment tools and to validate the tool they use at least every three years. Under SB 36, to “validate” a tool includes measuring its accuracy and reliability for assessing risk of failure to appear and public safety. It also includes assessing the tool for “disparate effects or bias...based on gender, race, or ethnicity.”²⁰

However, validation studies only measure how well tools work—they cannot determine whether that level of performance should be considered good enough for use. Bias can also be looked at in a number of different ways which often do not align.²¹ Furthermore, validation studies can vary widely in quality and approach.

RATIONALE

- Standards for validation efforts could include standards for data collection, sample size, metrics used, and infrastructure for regular monitoring and analysis in between validation studies.²² The creation and use of such standards could help jurisdictions ensure their validation efforts are continuous, effective, and actionable.
- Standards can also specify which statistics and information would be useful to include in publications to facilitate knowledge sharing and strengthen the PRAI research landscape.
- Research on the effectiveness of PRAIs and best practices for designing, deploying, and evaluating them is continuously growing and changing, further underscoring the need for clear standards for validation.

²⁰ Sen. Bill No. 36 (2019–2020 Reg. Sess.).

²¹ Corbett-Davies, S., & Goel, S. (2018). The Measure and Mismeasure of Fairness: A Critical Review of Fair Machine Learning. *arXiv preprint arXiv:1808.00023*.

²² Koepke, J. L., & Robinson, D. G. (2018). Danger Ahead: Risk Assessment and the Future of Bail Reform. *Washington Law Review*, 93, 1725.

CONTINUOUS IMPROVEMENT – III. IMPROVING TOOLS

RECOMMENDATION: Validation processes should strive to improve PRAIs rather than just test them.

Background

Validation can and should go beyond merely testing or analyzing a tool's performance. The process of validation is an opportunity to not only measure how well a tool works, but also to examine possibilities to improve the tool and the systems supporting it. As criminal justice policies shift and pretrial monitoring practices improve, some risk factors may cease to be predictive while other new risk factors may emerge. Under SB 36, PRAIs will be locally validated regularly. These check-ups could also become opportunities for tune-ups to ensure that PRAIs adapt with our changing society.

For example, the VPRAI underwent a validation study that resulted in a revision of the tool which is now widely in use as the VPRAI-R.²³ Risk factors and weights were modified in response to updated data, resulting in a more accurate and fairer tool.

RATIONALE

- While measuring PRAI performance can shed light on issues, measurement alone cannot fix any issues that come to light. Validation efforts should be designed and planned with the goal of updating the tool and the systems supporting it if necessary or possible.

²³ Danner, M. J., VanNostrand, M., & Spruance, L. M. (2016). Race and Gender Neutral Pretrial Risk Assessment, Release Recommendations, and Supervision: VPRAI and Praxis Revised. *St. Petersburg, FL: Luminosity.*

CONTINUOUS IMPROVEMENT – IV. ONGOING COORDINATION

RECOMMENDATION: The Judicial Council should continue to monitor the PRAI landscape and support coordination of local efforts.

Background

Knowledge and practices around PRAIs are rapidly evolving. As local jurisdictions validate, update, and implement PRAIs, statewide awareness of local efforts can help with knowledge-sharing. Facilitating coordination of local efforts at a statewide level would benefit local jurisdictions and strengthen California's overall pretrial landscape.

By the requirements of SB 36, each pretrial services agency in California using a pretrial risk assessment tool must validate the tool regularly and make publicly available the validation studies and details on the items and weights of the tool. This transparency requirement will help jurisdictions learn from each other as they continue to refine their tools and practices. Further efforts may be useful to increase knowledge-sharing across jurisdictions.

RATIONALE

- Ongoing statewide monitoring of the PRAI landscape will benefit local jurisdictions by facilitating knowledge-sharing and coordination of efforts.

AREAS FOR FUTURE POLICY DEVELOPMENT – I. SPECIALIZED ASSESSMENTS IN DOMESTIC VIOLENCE CASES

Monitor the evolving research related to specialized DV assessments to evaluate whether they add predictive value beyond that provided by general pretrial risk tools.

Background

Researchers have highlighted the differences between domestic violence or intimate partner violence and other types of crime when it comes to risk assessment. There are a number of existing RAIs designed specifically to predict recidivism in domestic violence or intimate partner violence cases.²⁴ An important question pertains to the use of these tools—more specifically, whether courts should adopt a specialized RAI as a supplementary or alternative tool for risk assessment in cases of domestic violence and intimate partner violence.²⁵

DV-specific tools could potentially be more accurate and pick up on crucial risk factors specific to DV scenarios that standard tools would miss, but to date studies have not examined whether this is necessary or whether general PRAIs are sufficient in DV cases. Implementation of specialized tools for DV cases would add additional complexity, time, and expense to the risk assessment process.

²⁴ Specialized RAIs also exist for other case types such as sex offenses. This open question focuses on DV-specific tools due to the relative frequency of DV cases as compared to sex offenses.

²⁵ Berk, R. A., Sorenson, S. B., & Barnes, G. (2016). Forecasting Domestic Violence: A Machine Learning Approach to Help Inform Arraignment Decisions. *Journal of Empirical Legal Studies*, 13(1), 94–115.

AREAS FOR FUTURE POLICY DEVELOPMENT – II. INTERVIEWS IN PRAIs

Research best practices with regard to the use of interviews in PRAIs and evaluate the costs and benefits of conducting an interview.

Background

Conducting interviews with defendants as part of the PRAI process takes time and may increase the workload on the agency conducting the assessment. Some research has found that the most predictive risk factors are not ones typically collected through interviews,^{26,27} and some researchers have also raised the question of whether interviews might exacerbate issues in the data collection process that could lead to inconsistency in the data, such as defendants refusing to answer or answering falsely.²⁸ There may also be legal issues around coercion to answer and self-incrimination. While some PRAIs in use today were designed to not require interviews,²⁹ many commonly used PRAIs do require a defendant interview.³⁰ Some courts appreciate the human component added by the interview. Adding interview elements to the factors in the PRAI for the purpose of assessing *risk* may unintentionally introduce bias or double counting; however, information gained in interviews may be useful to judicial officers in considering *release conditions*.

²⁶ VanNostrand, M., & Lowenkamp, C. T. (2013). Assessing Pretrial Risk Without a Defendant Interview. *Houston, TX: The Arnold Foundation*.

²⁷ Bechtel, K., Lowenkamp, C. T., & Holsinger, A. (2011). Identifying the Predictors of Pretrial Failure: A Meta-Analysis. *Federal Probation*, 75, 78.

²⁸ VanNostrand, M., & Lowenkamp, C. T. (2013). Assessing Pretrial Risk Without a Defendant Interview. *Houston, TX: The Arnold Foundation*.

²⁹ VanNostrand, M., & Lowenkamp, C. T. (2013). Assessing Pretrial Risk Without a Defendant Interview. *Houston, TX: The Arnold Foundation*.

³⁰ Robinson, D. G., Sassaman, H. J., & Stevenson, M. (2018). A Practical Guide for Judges. *Judges' Journal*, 57(3).

AREAS FOR FUTURE POLICY DEVELOPMENT – III. SUCCESS VERSUS FAILURE FRAMING

Consider the effect of presenting PRAI information to judicial officers as “likelihood of success” rather than “likelihood of failure.”

Background

Research shows that framing the same probabilities in terms of success versus failure can change how the probabilities are perceived.^{31,32} For example, if a defendant is described as having a 10% chance of failure pretrial, that defendant will be perceived more negatively than if the same defendant were described as having a 90% chance of success pretrial, even though the percentages are equivalent.

Other presentational choices may also impact risk perception. The fields of economics and psychology have extensive literature demonstrating that details such as the order that information is presented in, the availability of base-rate information, and the use of emotionally charged words can impact perception of the same factual information.³³ Marketing and public health fields also have extensive bodies of literature on conveying information, focused on techniques to enhance persuasive messaging. For example, using the color red to present risk information may artificially enhance the perceived threat.³⁴ Care should be taken to ensure that stakeholders are aware of the impact of the manner in which risk information is conveyed.

³¹ Piñon, A., & Gambará, H. (2005). A Meta-Analytic Review of Framing Effect: Risky, Attribute and Goal Framing. *Psicothema*, 17(2), 325–331.

³² Levin, I. P., Schneider, S. L., & Gaeth, G. J. (1998). All Frames Are Not Created Equal: A Typology and Critical Analysis of Framing Effects. *Organizational Behavior and Human Decision Processes*, 76(2), 149–188.

³³ Kahneman, D., Slovic, S. P., Slovic, P., & Tversky, A. (Eds.) (1982). *Judgment under Uncertainty: Heuristics and Biases*. Cambridge University Press.

³⁴ Gerend, M. A., & Sias, T. (2009). Message Framing and Color Priming: How Subtle Threat Cues Affect Persuasion. *Journal of Experimental Social Psychology*, 45(4), 999–1002.

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Attachment B: Fundamentals of Pretrial Risk Assessment Instruments

WHAT DO RISK ASSESSMENT INSTRUMENTS DO?

Risk assessment instruments (RAIs) estimate the probability of future events. By analyzing data about how people have behaved in the past, RAIs provide information about how similarly situated people might behave in the future [8]. Pretrial RAIs (PRAIs) are typically designed and deployed to inform pretrial release decisions by helping a judge answer two questions about a defendant: will this person fail to appear for future court appearances, and will this person commit a new offense pending trial if released [1]? Although numerous studies have found that risk assessment instruments can perform better than unaided human judgment [2, 3], they are intended to enhance, not replace, judicial decisionmaking. In order to do so effectively, judges must understand how these tools work, what the score means, how the score is communicated, and the tool's limitations.

HOW DO PRETRIAL RISK ASSESSMENT INSTRUMENTS WORK?

To understand how RAIs work, it is essential to first understand their key components. RAIs estimate the probability of certain **outcomes** by weighting different **factors**. While RAIs can be designed to estimate the probability of many different outcomes, **pretrial** RAIs commonly estimate the likelihood that an individual will **recidivate** and/or **fail to appear in court** if released pending trial [1]. Common factors that PRAIs use include an individual's prior convictions, prior failures to appear (FTA), other criminal history details, employment information, and residential stability. Although many PRAIs consider common factors, they are not uniform. For instance, some PRAIs do not use employment or residential stability as a factors.

Most PRAIs are relatively short instruments that associate numerical **weights** with each risk factor. The researchers developing the PRAI determine the weight to give each factor based on past data. The PRAI user computes a **risk score** by adding the weights associated with the presence or absence of each risk factor. The risk score estimates the probability of the outcome(s) at hand, e.g., reoffense or FTA [2]. This sequence of steps, checking risk factors and adding up their weights, is sometimes called an algorithm.

The example in Figure 1 below represents a hypothetical risk assessment. The algorithm is simple: the user adds two points to the total risk score if the individual is under 30, two points if the individual has at least one prior conviction, and one or two points for prior failures to appear.

Figure 1: Hypothetical Risk Assessment Instrument

Risk Factor	Weight
Age	<ul style="list-style-type: none"> • Over 30 = 0 points • Under 30 = 2 points
Prior convictions	<ul style="list-style-type: none"> • No prior convictions = 0 points • 1+ prior convictions = 2 points
Prior failure to appear in court	<ul style="list-style-type: none"> • No prior failures to appear = 0 points • 1 prior failure to appear = 1 point • 2+ prior failures to appear = 2 points

Let's try it: John Doe is a 31-year-old with no prior convictions and three failures to appear. Based upon the hypothetical algorithm, the tool might score John Doe at 2. [Over 30 = 0; No Prior Convictions = 0; Three Failures to Appear = 2: 0+0+2=2.] The meaning of this score and how it is communicated to the judge will be discussed next.

HOW IS THE SCORE COMMUNICATED?

PRAIs often group risk scores into **risk categories** with nominal labels such as “low,” “moderate,” and “high” risk, or numerical labels such as “Level 1” to “Level 6.” In both cases, either the tool or local policy assigns the raw score to a label. Using the example of John Doe, above, some tools might translate his raw score of “2” into a category like “low risk,” or “Level 1,” depending upon the risk category assigned. Tools also vary in how they distinguish and communicate **types** of risk. For example, John Doe may pose a moderate risk of failing to appear, but low risk of committing a new crime while released. An individual with a high probability of failing to appear in court may not necessarily have a high probability of recidivating, and vice versa. Some risk assessment tools distinguish between these types of risk by producing separate scores for each outcome of interest, i.e., one score for FTA risk and one score for recidivism risk. Other tools produce a **compound score**, a single score that represents the probability of multiple outcomes like FTA and recidivism [2]. A high score in the latter combined risk tool does not necessarily mean a person has a high likelihood of both outcomes. Understanding what scores actually mean and how they are communicated enables judges to ask the right questions and better assess the information provided by the tool used in their county.

WHAT DOES THE SCORE MEAN?

PRAIs estimate the probability of outcomes (failing to appear, committing a new crime) for individuals released on their own recognizance. Importantly, the labels assigned to risk categories do not translate directly into a statistical probability of misconduct. For instance, a risk score of “Level 3” on a scale of 4 does not mean a person has an estimated 75% chance of

committing a new crime or failing to appear. Similarly, while risk categories can create **comparative** groupings of individuals, it is important to also understand the amount of risk as it corresponds to a given label. For example, in tools that assign nominal categories, “High” risk indicates higher risk than the medium risk group, but some studies of some commonly used PRAs found that less than 10% of individuals in the highest risk group were rearrested within a six-month period [6, 7]. Thresholds for risk categories vary amongst PRAs and can vary between jurisdictions as well [2].

Lastly, PRAs estimate the probability of outcomes for individuals released on their own recognizance. Risk scores don’t indicate what release conditions are appropriate or how those release conditions can mitigate a person’s risk of recidivism or FTA [2]. Some jurisdictions supplement PRAs with **Release Conditions Matrices** (RCMs) or Decision-Making Frameworks (DMFs), which can be used to translate risk scores into release decisions. These frameworks may be paired with specific PRAs, or a county may use its own processes to design a DMF or RCM in accordance with their PRAI use and local circumstances [5].

LIMITATIONS OF RISK ASSESSMENT INSTRUMENTS

Risk assessment instruments are criticized for a variety of reasons, and some of the most common criticisms concern training data, lack of validation, and lack of transparency.

Training data is the data used to develop the assessments [3]. Figure 3 below illustrates some hypothetical training data that might be used to create PRAs.

Each row represents an individual for whom criminal history, case information, and one-year pretrial monitoring outcomes are available. Each column, aside from the ID column, represents information about the individuals in the data. The blue columns represent factors that are known or recorded before an individual’s pretrial release, such as prior convictions and the nature of the current offense. Red columns represent outcomes for these individuals after a year—in particular, were they arrested for a new crime or did they fail to appear in court within a year of release?

Figure 3: Hypothetical Training Data for a Pretrial Risk Assessment Instrument

ID	Is the current offense violent?	Prior convictions	Were they arrested for a new crime within one year?	Did they fail to appear in court within one year?
1	No	0	No	Yes
2	Yes	0	Yes	No
3	No	2	No	No

It is important for judges to be mindful of the fact that the factors or outcomes used in the training data may be inaccurately measured [3]. This is known as **measurement error**. For example, when judges determine whether to release individuals pretrial, judges must consider whether those individuals are likely to *commit* a new crime if released. However, the data collected cannot measure whether a released individual committed a new crime; the data can only reveal whether released individuals were *arrested* for or *convicted* of a new crime. For this reason, measurement error can be very difficult to avoid in practice. Research has indicated that arrest is an imperfect proxy for measuring which individuals commit new crimes [3, 4].

In addition, training data can be subject to **sample bias**. This can occur when the sample population used to develop the RAI differs from the population using the tool. For example, a risk assessment designed on a small sample size in a particular geographic area may not generalize well on another group in a different geographic area.

Validation allows jurisdictions using the tool to collect data on the tool's performance to evaluate its accuracy or equity in those jurisdictions [3]. Validation is one way to overcome the issue of sample bias when using a tool on a new population.

Lack of Transparency: While many risk assessments have published the factors, weights, and other methodology details of their instruments, others have protected the development of their tools as trade secrets [2]. Such secrecy may impede a judge's or researcher's ability to evaluate important characteristics of the tool, including characteristics related to measurement error, sample bias, and validation of the tool.

CONCLUSION

PRAIs are a valuable addition to a judge's pretrial release toolbox. When used with an understanding of how these tools work, what the scores mean, how the scores are communicated, and the tool's limitations, PRAIs provide judges with valuable information about risk. This information enhances a judge's ability to make sound release decisions that meaningfully assess an individual defendant and increase public safety.

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Attachment C: Comprehensive List of Presenters to the Pretrial Reform and Operations Workgroup, February 2019–September 2020

Academics/Researchers/PRAI Experts

Dr. Crystal S. Yang, Professor of Law, Harvard University
Dr. Jennifer L. Skeem, Professor, School of Social Welfare & Goldman School of Public Policy, University of California, Berkeley
Dr. Mathew Mizel, Associate Policy Researcher, RAND Corporation
Dr. Megan Stevenson, Assistant Professor of Law, George Mason University
Dr. Phil Malone, Professor of Law and Director, Juelsgaard Intellectual Property and Innovation Clinic, Stanford Law School
Dr. Richard A. Berk, Professor of Criminology and Statistics, University of Pennsylvania
Dr. Sarah Picard, Director, Research-Practice Strategies, Center for Court Innovation
Dr. Sharad Goel, Assistant Professor, Department of Management Science & Engineering, School of Engineering, Stanford University
Prof. David G. Robinson, Visiting Scientist, AI Policy and Practice Initiative, Cornell University
Prof. Sandra G. Mayson, Assistant Professor of Law, University of Georgia School of Law
Marissa Kumar Gerchick, Student, Stanford University

Court & Justice System Partner Representatives

Hon. Heather Mardel Jones, Judge, Superior Court of Fresno County & Board Member of CJA
Alma Zamora, Captain, San Mateo County Sheriff's Office, California State Sheriffs' Association
David Koch, Chief Probation Officer, Sonoma County, Chief Probation Officers of California
Oscar Bobrow, Chief Deputy Public Defender of Solano County & President of the California Public Defenders Association
Nancy O'Malley, District Attorney, Alameda County, California District Attorneys Association

Community Organizations & Advocates

Aaron Fischer, Litigation Counsel, Disability Rights California
Angie Wolf, Chief Program Officer, National Center on Crime and Delinquency
Hallie Fader-Towe, Program Director, Council of State Governments
Jessica Bartholow, Policy Advocate, Western Center on Law and Poverty
John Bauters, Budget Advocacy Director, Alliance for Safety & Justice
John Raphling, Senior Researcher, U.S. Program, Human Rights Watch
Kit Walsh, Senior Staff Attorney, Electronic Frontier Foundation
Krista Niemczyk, Public Policy Manager, Partnership to End Domestic Violence
Lisa Dyer, Director of Policy, Partnership on AI
Michelle Parris, Senior Program Associate, Vera Institute of Justice

Mona Wang, Staff Technologist, Electronic Frontier Foundation
Pilar Weiss, Director, Community Justice Exchange
Raj Jayadev, Cofounder, Silicon Valley DeBug
Robin Steinberg, CEO & Founder, The Bail Project
Sam Lewis, Executive Director, Anti-Recidivism Coalition
Tiffany Whiten, Long Term Care Director, SEIU State Council
Tyler Rinde, Policy Advocate, County Behavioral Health Directors Association
Zoe Willmott, Manager of Advocacy and Programs, Essie Justice Group

Judicial Council Staff

Shelley Curran, Director, Criminal Justice Services
Eve Hershcopf, Attorney, Criminal Justice Services
Deirdre Benedict, Supervising Analyst, Criminal Justice Services
Sonya Tafoya, Supervising Research Analyst, Criminal Justice Services
Noah Lehman, Senior Analyst, Criminal Justice Services
Sal Lempert, Analyst, Criminal Justice Services
Heather Pettit, Chief Information Officer, Information Technology