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**Disclaimer**

APPR developed this summary—using online searches of academic databases and publicly available information—to provide an overview of current research on this topic. The online search may not have identified every relevant resource, and new research will shed additional light on this topic. APPR will continue to monitor the research and will update this summary as needed. Due to the broad nature of this summary, readers are encouraged to identify areas to explore in depth and to consider the local implications of the research for future advancements related to pretrial goals, values, policies, and practices.

## Pretrial Assessment Tools

The two main pretrial outcomes that jurisdictions seek—and the only two outcomes that can legally be considered when deciding whether to detain or release a person pretrial—are to maximize court appearance and maximize community well-being and safety (i.e., minimize the likelihood of a person’s rearrest). This summary examines the current base of knowledge regarding the effectiveness of pretrial assessment tools in achieving these positive outcomes.

Efforts by jurisdictions across the country to improve pretrial decision making and pretrial outcomes are becoming commonplace. These efforts increasingly include the adoption of pretrial assessment tools, which can aid decision making by providing data-driven information about the likelihood of people released pretrial appearing in court and remaining arrest-free while on release. According to a 2019 survey of pretrial practices, close to two-thirds of jurisdictions across the country use a pretrial assessment tool, with nearly 50% having implemented one within the last five years.<sup>1</sup>

*In 2017 alone, 14 states either enacted laws instituting or regulating the use of pretrial assessments or passed bills directing the development of a local assessment tool.<sup>2</sup>*

Predictive analytics routinely inform decisions across the criminal justice system, including in court, correctional, and community supervision contexts. Regardless of the policy context in which they are used, assessment tools (also referred to in the literature as “risk assessment instruments”) are developed and tested in a similar manner. Tool developers draw on large data sets about people who have previously come into contact with the justice system to identify factors that are associated with the likelihood of certain events (e.g., new arrest, new arrest on a violent charge, appearance in court, etc.). These factors are then entered into actuarial (or probabilistic) models—also called algorithms—that estimate outcomes for similar people in future cases.<sup>3</sup>

Assessment tools come in an array of lengths and formats and can include demographic, criminal history, or needs-related factors.<sup>4</sup> For practical and

due process reasons, pretrial assessment tools generally rely on static factors that can be obtained from administrative records, such as age at arrest, prior convictions, and prior failures to appear in court—factors that are often already considered by judges at the pretrial stage.<sup>5</sup> With that said, several dynamic needs factors—including substance abuse, unemployment, and housing instability—have also been shown across studies of pretrial assessment tools to be associated with a lack of success pretrial.<sup>6</sup>

This summary reviews the research literature on the accuracy of actuarial assessment tools for informing decisions in the criminal justice field, and presents the results of recent evaluations of the use of pretrial assessments from jurisdictions around the country.

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## Key Finding #1: Actuarial Tools Can Reliably Predict Future Outcomes

A longstanding body of validation research—studies that specifically examine the predictive accuracy of assessment instruments—demonstrates that actuarial tools made up of a limited set of factors can reliably estimate the likelihood of recidivism (the definition of which may vary from one study to the next) in general correctional populations.<sup>7</sup> These findings have since been confirmed in a variety of subgroups, including people with records of violent behavior,<sup>8</sup> people with mental illness,<sup>9</sup> and people charged with misdemeanor crimes.<sup>10</sup>

A number of validation studies specific to the use of assessment tools in the pretrial context have also been conducted. These studies have generally confirmed the accuracy of actuarial models for estimating the likelihood of pretrial court appearance and remaining arrest-free pretrial, including in a recent statewide study of the Public Safety Assessment (PSA) in Kentucky<sup>11</sup> and a revalidation of the Pretrial Risk Assessment (PTRA) in a sample of over 85,000 people who were assessed in federal jurisdictions across the country.<sup>12</sup> It is important to note, however, that systematic reviews of pretrial validation research reveal that pretrial assessment tool performance can vary widely depending on the tool's construction and the context in which it is used, and researchers emphasize the need for local validation prior to implementation.<sup>13</sup>

*Studies have confirmed the accuracy of pretrial assessment tools in estimating the likelihood of pretrial court appearance and pretrial arrest. While a number of pretrial assessment tools have been independently validated in large and diverse jurisdictions, researchers emphasize the need for local validation prior to implementation.*

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## Key Finding #2: Actuarial Tools Can Improve Decision Making

Research suggests that assessment tools predict outcomes more accurately than professional judgment, including for decisions that are influenced by complex sets of individual and social factors. For example, a 1996 meta-analysis of 136 studies from the fields of education, psychology, and criminal justice empirically showed that, on average, actuarial assessment tools made more accurate predictions of outcomes—such as the likelihood of passing or failing a course or of complying with parole conditions—than did humans who relied on their professional judgment alone.<sup>14</sup> Similar findings have emerged from studies comparing assessment tools to specific types of human decision makers, including judges,<sup>15</sup> probation officers,<sup>16</sup> and lay people who were given anecdotal information regarding criminal cases.<sup>17</sup> Other studies have further demonstrated that seasoned professionals who rely exclusively on their experience and professional judgment are able to predict recidivism at rates no better than chance.<sup>18</sup> A more recent review of the research on actuarial assessments suggests that when criminal justice professionals use actuarial tools along with other factors when crafting decisions, outcomes improve.<sup>19</sup>

*Actuarial assessment tools generally outperform professional judgment in predicting outcomes, including when combined with professional judgment.*

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## Key Finding #3: The Use of Pretrial Assessments, in Combination with Other Pretrial Improvements, Shows Promise for Safely Reducing Detention

A growing body of evidence suggests that the implementation of pretrial assessment tools can aid jurisdictions in their efforts to reduce incarceration without compromising community well-being and safety. For example, in New Jersey, independent research showed that following the statewide implementation of the PSA—in concert with local policies on recommended release conditions and limitations on the use of financial release conditions—the state’s pretrial detention population decreased by more than 6,000 people without an associated increase in crime or failures to appear in court.<sup>20</sup> Similarly, research conducted in Yakima County, Washington, demonstrated a significant increase in pretrial release rates (73% vs. 53%) following implementation of the PSA and other pretrial improvements<sup>21</sup> but no statistically significant impact on court appearance or new pretrial arrest rates.<sup>22</sup>

There are important gaps in existing population-level studies of the impact of pretrial assessment tools.<sup>23</sup> First, studies to date have largely not been able to isolate the effects of pretrial assessment from other concurrent reform efforts, such as limitations placed on the use of financial release conditions and changes in policing, pretrial release, or pretrial supervision policies. One exception is a recent study on the use of a structured matrix in conjunction with the Virginia Pretrial Risk Assessment Instrument (VPRAI). The study found that judges randomly assigned to a group trained on the use of the structured matrix were twice as likely to release people pretrial than those not trained on the use of the matrix. Furthermore, the study found that people released pretrial whose supervision was guided by the matrix were 1.3 times more likely to appear in court or to remain arrest-free pretrial than those whose supervision was not guided by the matrix.<sup>24</sup> Second, there has been little rigorous study of the implementation of pretrial assessment tools (e.g., independent case studies of courts or jurisdictions both before and after tool adoption), leaving many unanswered questions regarding how the results of actuarial assessments actually translate into better (or worse) decision making in practice.<sup>25</sup>

Recently, researchers have undertaken randomized control trials, the “gold standard” in research, to directly test the effects of the PSA and its associated policies in well-designed field experiments.<sup>26</sup> Such an approach allows researchers to control for additional variables and establish cause and effect relationships by randomly assigning cases to different policy conditions and then measuring relevant outcomes. Although the results to date are preliminary and cannot be interpreted with certainty, such studies will fill a critical gap in knowledge.

*There is a growing body of evidence that the implementation of pretrial assessment tools can aid jurisdictions in their efforts to reduce incarceration without compromising community well-being and safety.*

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## Key Finding #4: Quality Implementation Is Critical to Success

Research in diverse fields, including health,<sup>27</sup> education,<sup>28</sup> and criminal justice,<sup>29</sup> repeatedly demonstrates that tools and practices achieve the most effective outcomes when sufficient attention is paid to how well they are implemented. In criminal justice, for example, a meta-analysis of 58 studies examining the effects of cognitive behavioral treatment (CBT)

on recidivism found that the quality of implementation (measured by proportion of treatment dropouts and level of involvement of researchers in monitoring treatment fidelity<sup>30</sup>) was statistically correlated with the degree to which recidivism outcomes changed. High-quality implementation was one of the few factors that made CBT most effective.<sup>31</sup> When these factors were present, CBT resulted in more than a 50% reduction in recidivism. As a point of reference, the study also found that when comparing the use of any CBT versus no CBT, CBT resulted in a 25% reduction in recidivism.

Given the importance of quality implementation to successful outcomes, a body of “implementation science” literature has grown over the decades and provides a best practices approach to implementing new practices. This approach consists of three key “implementation drivers,” or processes that can be leveraged to maximize the fidelity and sustainability of practices: 1) *competency drivers*, defined as mechanisms to “develop, improve, and sustain one’s ability to use an intervention as intended”; 2) *organization drivers*, defined as mechanisms to “create and sustain hospitable organizational and system environments for full and effective use of intended services”; and 3) *leadership drivers*, which focus on providing the “right leadership strategies for the different types of leadership challenges” (p. 2).<sup>32</sup>

Quality assurance processes are necessary but insufficient to achieving the most successful implementation outcomes. Even the use of a well-validated pretrial assessment tool, shown by locally gathered data to be accurately and consistently scored across cases, will not achieve the greatest reductions in failures to appear or new arrests if system actors do not agree that the tool (a) is an essential element of pretrial decision making and (b) should be used consistently in making pretrial determinations. As such, leadership strategies must be used to establish and maintain stakeholder buy-in, such as through providing education on evidence-based pretrial decision making, facilitating constructive dialogue around objections to actuarial assessment tools, and engaging in collaborative policy decision-making processes.<sup>33</sup>

*Research across major disciplines repeatedly demonstrates that tools and practices achieve the most effective outcomes when sufficient attention is paid to how well they are implemented. Even the use of a locally well-validated pretrial assessment tool will not achieve the greatest reductions in failures to appear or new arrests without the belief among system stakeholders that the tool is essential to making informed pretrial decisions.*

## Best Practice Recommendations

Professional practice standards are consistent with the findings of the research literature, emphasizing the importance of administering a validated pretrial assessment to assist with pretrial decisions.

### 1. American Bar Association (ABA)

*ABA Standards for Criminal Justice: Pretrial Release* provides multiple practice standards for pretrial release, including (but not limited to) the following:

- Standard 10-1.10 explains the role of the pretrial services agency: “Every jurisdiction should establish a pretrial services agency or program to...present risk assessments and...make release recommendations required by the judicial officer in making release decisions.”
- Standard 10-4.2(f) specifies the need for investigation prior to first appearance: “The pretrial services investigation should include factors related to assessing the defendant’s risk of flight or of threat to the safety of the community or any person, or to the integrity of the judicial process. Information relating to these factors and the defendant’s suitability for release under conditions should be gathered systematically and considered by the judicial officer in making the pretrial release decision at first appearance and at subsequent stages when pretrial release is considered.”<sup>34</sup>

### 2. National Association of Pretrial Services Agencies (NAPSA)

*Standards on Pretrial Release* provides multiple practice standards for pretrial services agencies, including (but not limited to) the following:

- Standard 2.8: “Stakeholders making bail decisions should use validated risk assessments to inform those decisions” (p. 29).
- Standard 4.3(a): “The pretrial services agency should conduct background investigations that solicit social background, criminal history, and other information relevant to the court’s bail decision. At minimum, the investigation should include a check of the defendant’s criminal history, an interview with the defendant, and application of a validated risk assessment” (p. 65).
- Standard 4.4(a): “(i) The risk assessment must classify defendants into distinct risk and supervision categories based on the assessment’s scoring. (ii) Pretrial services agencies should have clear policy on how staff may recommend a release or detention level that does not match a defendant’s assessed risk level” (p. 68).

- Standard 4.4(b): “The pretrial services agency should have clear policy that ensures consistency and reliability of assessment scoring and results among assessment users” (p. 69).
- Standard 4.4(c): “The pretrial services agency should review its risk assessment routinely to verify its validity to the local pretrial defendant population” (p. 69).<sup>35</sup>

### **3. National Institute of Corrections (NIC)**

*A Framework for Pretrial Justice: Essential Elements of an Effective Pretrial System and Agency* cites pretrial assessment as an essential element of an effective, high-functioning pretrial services agency in that pretrial release and detention decisions should be based on the results of a validated pretrial assessment and “risk-based decision-making framework” (i.e., defining the decision, the stakeholders involved, release and detain options available, factors influencing the decision, strategies for risk mitigation, etc.).<sup>36</sup>

### **4. National Center for State Courts**

*Offender Risk & Needs Assessment Instruments: A Primer for Courts* recommends the sound implementation of pretrial assessment tools and suggests that jurisdictions put in place quality assurance policies and practices that include using a pretrial assessment tool for which validity has been locally established and is reestablished periodically; providing comprehensive initial and ongoing training to all stakeholders responsible for administering the tool and/or understanding how to use its results; and using data to routinely monitor administration of the tool for fidelity regarding its proper use and consistency in scoring.<sup>37</sup>

### **5. American Council of Chief Defenders, Gideon’s Promise, National Association for Public Defense, National Association of Criminal Defense Lawyers, and National Legal Aid & Defender Association**

*Joint Statement: Pretrial Risk Assessment Instruments* recognizes pretrial assessment as a possible way of reducing unnecessary detention and eliminating racial and ethnic bias in pretrial decisions. The statement recommends that jurisdictions ensure the accuracy and transparency of assessment tools; engage defense stakeholders and impacted communities in the selection and implementation of an assessment tool; use assessment results to set appropriate release conditions (not to justify detention); and safeguard due process protections.<sup>38</sup>

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