

# The Case Against

# Pretrial Risk Assessment Instruments

## KEY TAKEAWAYS

- Pretrial risk assessment instruments (RAIs) are constructed from biased data, so the RAIs perpetuate racism.
- RAIs are not able to accurately predict whether someone will flee prosecution or commit a violent crime.
- RAIs label people as “risky” even when their odds of success are high.
- RAI scores inform conditions of release, but there is no proven connection between RAI scores, specific conditions, and pretrial success.

**Pretrial risk assessment instruments (RAIs)** are actuarial tools intended to estimate two key outcomes for those who are released pending trial: the likelihood that someone will fail to appear for court, and the likelihood that someone will be arrested for a new crime before the disposition of their case. The use of RAIs is a topic of great debate among criminal justice practitioners, community advocates, formerly incarcerated people, policymakers, and academics. Some see them as an important tool for facilitating pretrial release, while others argue that they perpetuate racial bias and unfairly label people as “risky.”

In 2020, after an extensive period of reflection, the Pretrial Justice Institute [released a statement](#) opposing RAIs. First and foremost, that position was driven by a strengthening commitment to racial equity and a conviction that the tools do not adequately address the biases inherent in the system. Underscoring this new position, though, was the understanding, based on research, that these tools are not able to do what they claim to do—accurately predict the behavior of people released pretrial and guide the setting of conditions to mitigate certain behaviors. RAIs simply add a veneer of scientific objectivity and mathematical precision to what are really very weak guesses about the future, based on information gathered from within a structurally racist and unequal system of law, policy and practice. This paper interrogates the role that RAIs are supposed to play in advancing pretrial justice, and how they fall short.

## I. RAIs CANNOT RELIABLY PREDICT FLIGHT FROM PROSECUTION

The most basic tenet of pretrial justice is that people need to appear in court to face the charges against them. The initial concern, centuries-old, was that people would flee the jurisdiction to avoid prosecution, and the purpose of bail was to address this risk of flight. But RAIs are not constructed to estimate the likelihood of flight.<sup>1</sup> Instead, they are constructed to estimate the likelihood of a “failure to appear”—and they typically treat past failure to appear, regardless of the reason, as a valid predictor of future failure.

RAIs do not—*cannot*—distinguish between an actual flight from prosecution and missed court appointments. The omission of “true flight” from RAIs reflects the use of readily available data such as failures to appear or bond forfeitures, which do not make distinctions among types of nonappearance, and the fact when “tools promise only to predict nonappearance broadly, they can claim greater success than if the tools purported to predict the narrower and more serious categories of risk.”<sup>2</sup>

**RAIs do not distinguish between people who have the means to flee the jurisdiction to avoid justice and people without resources who have problems coming to court due to transportation or housing instability, child care or employment issues.** The inclination and ability to flee prosecution is a relatively rare event in criminal court.<sup>3</sup> Data show that only three percent of all released people charged with felonies do not appear in court at all and are not returned to court after a year.<sup>4</sup> More plainly, most people lack the means to flee. Over one-third of people (36%) who had one arrest in the preceding 12 months had annual incomes below \$10,000. That percentage increased to nearly half (49%) among people who are arrested multiple times in a year—a population that represents more than one-fourth of people who are jailed.<sup>5</sup>

People who are poor face greater obstacles to appearing in court than those who have greater access to resources. Forgoing paid time, risking employment, finding childcare, and accessing reliable transportation are just some of the barriers experienced by people with low-paying jobs and few resources. This issue is compounded by higher rates of poverty among Black, Latinx,



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and Indigenous people. Acknowledging and addressing these barriers could raise court appearance rates.

Even if RAIs could be revised to focus on the risk of willful flight, they cannot predict this behavior to a level of accuracy that justifies the restriction of liberty on individuals. Consider that the predictive accuracy for the failure to appear model of the Public Safety Assessment, developed by Arnold Ventures, is 0.644, where 0.5 is considered a coin flip and 1.0 is perfect prediction.<sup>6</sup> While some have argued that in the criminal justice arena, 0.64 to 0.7 is acceptable predictive power for pretrial assessments,<sup>7</sup> many disciplines consider a score of less than 0.7 to have poor discriminatory power.<sup>8</sup> Rather than accept this lower standard of predictive power, it should be rejected as a basis for depriving people of their right to pretrial liberty and presumption of innocence. The mere existence of this information perpetuates the conflation of flight with nonappearance, and encourages the corresponding use of incarceration or restrictive conditions.

## II. RAIs CANNOT RELIABLY PREDICT VIOLENT CRIME

The second basic tenet of pretrial justice is protecting the public from danger. The concern is that people will commit an act of violence in the community while awaiting trial. But RAIs do not actually estimate the likelihood of this outcome. Instead, most existing pretrial RAIs estimate the likelihood of any new arrest, regardless of whether it involves an accusation of violence. According to the Court Statistics Project, in 2018, misdemeanors made up 77% of criminal cases in state trial courts, and felonies made up 23%. Of those cases, a small percentage made up “person” cases, i.e., those cases involving bodily harm, including homicide. Person cases made up 9% of misdemeanor cases, and 18% of felony cases.<sup>9</sup>

Because violence is rare, RAIs do not—*cannot*—reliably predict future arrest for violence. Being charged with an act of violence while awaiting trial has always been a second “statistically rare event” that cannot be accurately predicted. In Washington, DC, where 88 percent of all people are released before trial, [the percentage of people who remain arrest-free is 89%](#). Of those who are released, only 1% are arrested for a violent crime.



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When RAIs do attempt to identify people who are more likely to commit a crime of violence, rates of rearrest for violence are quite low even among the “high risk” group. The Public Safety Assessment, developed by Arnold Ventures, contains a flag suggesting someone is at a higher risk for being arrested for what they label a “New Violent Criminal Activity.” However, more than 9 times out of 10, people who receive that flag are not arrested for a violent offense while on pretrial release.<sup>10</sup> High risk designations are also biased against Black people. A study of 175,000 people arrested in New York City found that looking at a hypothetical classification of high risk and no actual re-arrest, 23% of Black defendants would have been classified as high-risk and flagged for detention, compared with 17% of Hispanic defendants, and only 10% of white defendants.<sup>11</sup>

### III. FACTORS EMPLOYED BY RAIs REFLECT AND PERPETUATE STRUCTURAL RACISM

RAIs are presented as “objective” or “race neutral” because the items are statistically validated as predictive of court appearance and new crime. However, when the data used for that statistical analysis reflect bias against Black, Latinx, Indigenous and poor people, the resulting tool is inherently biased as well.

Structural and individual biases in policing practices make it more likely that Black people will be stopped, searched, subjected to force and arrested than white people for the same behavior.<sup>12</sup> RAI developers have attempted to mitigate bias using statistical techniques that identify racial differences in specific items on the tool. These analyses have resulted in incremental improvements by removing items that are overtly biased, like whether someone owns or rents their home. Still, a tool that can accurately “predict” biased outcomes, such as the likelihood of arrest, is more of a reflection of the system than it is of the person.<sup>13</sup>

Each RAI uses a different combination of factors and weighting of factors. The table on the next page includes some commonly used factors and how each factor reflects bias.



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## Bias in Pretrial Risk Assessment Instruments

FACTOR	HOW IT IS BIASED
<b>Age at first arrest</b>	Police are more likely to arrest Black people, even after controlling for factors such as seriousness of the offense and prior record, according to a meta-analysis of 23 research studies looking at arrests between 1977 and 2004. <sup>14</sup> Thirty percent of Black men have experienced at least one arrest by age 18, compared to 22% of white males. This differential increases with age. <sup>15</sup>
<b>Current charge</b>	A 2020 study from Harvard Law School found that one factor, racial/ethnic differences in the initial charge, accounted for 70 percent of racial disparities in sentence length; which were approximately 5 months longer for Black and Latinx people than white people, among those sentenced to incarceration. <sup>16</sup> A 2017 study of 48,000 misdemeanor and felony cases in Wisconsin found that white people were 25 percent more likely to have their top charge dropped or reduced by prosecutors than Black people. <sup>17</sup>
<b>Employment</b>	Employment as a factor is highly biased against Black people. Since 1954, when the Bureau of Labor Statistics began tracking these numbers, the unemployment rate for Black people has consistently been twice that of white people. <sup>18</sup>
<b>Drug use</b>	Black and white people use and sell drugs at approximately the same rates, but Black people are 2.7 times more likely to be arrested for drug-related offenses. <sup>19</sup> Moreover, Black and Latinx people are more likely to be incarcerated for drug-related offenses than white people. <sup>20</sup>
<b>Pending charge at time of arrest</b>	A study of 10,753 cases in San Francisco over a three-year period revealed cases involving Black people take longer to resolve. On average, cases for Black people took 90 days to process, compared to 77.5 days for white people (making it more likely for a Black person that a charge would be pending in the event of arrest). <sup>21</sup>
<b>Prior convictions (for violence)</b>	People with felony convictions (which do not exactly match to arrests for violence) account for 8% of all adults and 33% of the Black adult male population, and likely reflect police sweeps and mass arrests executed disproportionately in neighborhoods of color. <sup>22</sup> At the same time, Black people are more likely to be wrongfully convicted than white people. Half of people exonerated for murder and 59% of people exonerated for sexual assault are Black people; ninety percent of people framed in large-scale police scandals are Black. <sup>23</sup>
<b>Prior sentence to incarceration</b>	A study of men charged with felonies in urban U.S. counties calculated that the cumulative effects of bias in the criminal legal system made the probability of going to prison 26% higher for a Black man, and 30% for a Latino, than that of a white man charged with a felony. <sup>24</sup> A literature review on race and sentencing found that Black and Latino people were much more likely to be disadvantaged in the decision to incarcerate than whites, and this initial disparity was greater than the subsequent decision around how long to incarcerate. <sup>25</sup>

#### IV. RAI SCORES PUT A MISLEADING EMPHASIS ON CALCULATED RISK

Constructors of RAIs have always reminded users that RAIs are actuarial tools and do not give the court specific, individualized information about the person facing charges. They create categories that reflect their similarity to others “like them.” As shown above, it is not possible to reliably predict willful flight or arrest for a violent crime, so RAIs are designed to estimate the likelihood of any missed court appearance or new arrest. **Many RAIs even combine risk of missing court and risk of any rearrest into a single risk of “pretrial failure.”** Most RAIs focus on the likelihood of failure rather than the likelihood of success, which creates a misleading perception of risk, and combining risk of missing court and risk of any arrest does not decrease that likelihood. As shown earlier, many factors are biased against Black and Latinx people.

Within the label of “risk,” RAIs rate the probability of success or failure using various units. Some have just three levels of risk, typically labeled “Low,” “Medium,” and “High,” while others have four, five or six levels of risk. Either way, these boundaries are artificially drawn. They can be cut-points set by the researchers who conducted the study that developed the tool, or they can be negotiated by a policy team based on local risk tolerance. Cut-points may also be based on interests of court systems that are unrelated to the rights of an accused individual, such as case flow needs or jail population management. One group may set the boundaries of each risk level one way, and another group may set them another way.

In California, for example, four counties developed their own RAIs; 18 counties use the Virginia Pretrial Risk Assessment Instrument; 17 counties use the Ohio Risk Assessment System tool; four counties use the COMPAS (Correctional Offender Management Profiling for Alternative Sanctions) and two counties use the Public Safety Assessment.<sup>26</sup> This patchwork shows how variable justice can be even though RAIs purport to be “evidence-based.” Two similarly-situated people, just a few miles apart, will be treated differently depending on what county they are in.



When the data used for that statistical analysis reflect bias against Black, Latinx, Indigenous and poor people, the resulting tool is inherently biased as well.

## Court Appearance and Arrest Rates Based on Risk Levels

Colorado presents its rates in terms of public safety (no arrest) and court appearance. New York looks only at court appearance. Other tools consider both arrest rates and failure to appear, or a combination of the two.

Name of Tool	Lowest Risk	Medium Risk	Highest Risk
<b>RAIs based on likelihood of success</b>			
<a href="#">Colorado Pretrial Assessment Tool (CPAT)</a> CPAT has four risk categories	91% – Public safety rate 95% – Court appearance rate	69–80% – Public safety rate 77–85% – Court appearance rate (representing the two middle categories)	58% – Public safety rate 51% – Court appearance rate
<a href="#">New York City Criminal Justice Release Assessment</a> New York considers appearance only This assessment has four recommendations based on the score.	For all charge types, release on recognizance is recommended for those whose scores suggest appearance rates of 82.3–93%.	Depending on the charge type (misdemeanor, non-violent felony, or violent felony), release on recognizance or consideration of all options may be considered for those whose scores suggest appearance rates of 71–76%.	For all charge types, release on recognizance is not recommended for those whose scores suggest appearance rates of 41.7–63%.
<b>RAIs separating risk of arrest and failure to appear</b>			
<a href="#">Federal Pretrial Risk Assessment (PTRA)</a> PTRA has five risk categories	0.3% – Arrest for violent offenses 0.7% – Failure to appear	1.3% – Arrest for violent offenses 2.5% – Failure to appear	2.9% – Arrest for violent offenses 4.6% – Failure to appear
<a href="#">Public Safety Assessment (PSA)</a> As validated on data from Kentucky PSA has six risk categories	3.9% – New criminal arrest 7.5% – Failure to appear	10.9–15.1% – New criminal arrest 13.9–19.8% – Failure to appear (representing the two middle categories)	26.3% – New criminal arrest 32.1% – Failure to appear
<b>RAIs combining risk of arrest and failure to appear</b>			
<a href="#">Virginia Pretrial Risk Assessment Instrument – Revised (VPRAI-R)</a> VPRAI-R has six risk categories	6.1% – Any failure rate	14.9–21.4% – Any failure rate (representing the two middle categories)	37.1% – Any failure rate
<a href="#">Ohio Risk Assessment System – Pretrial Assessment Tool (ORAS-PAT)</a> ORAS-PAT has three risk categories	5% – Any failure rate	18% – Any failure rate	29% – Any failure rate

## V. RISK ASSESSMENTS CAN DRIVE UNNECESSARY AND UNPROVEN SUPERVISION (AND DETENTION)

How “risk levels” are defined has serious implications for those being assessed. Some state statutes or court rules require certain actions or decisions based on whether a person scores a “Low,” “Medium,” or “High” on the RAI. This has a cascading effect; a higher risk designation can result in more intensive levels of supervision, an increased likelihood of returning to jail on a technical violation, and higher fees related to supervision conditions—all consequences that have very real impacts on people’s lives. Most counties with pretrial services reported that they charged people fees for some type of pretrial service, such as drug testing, surveillance technologies or supervision, which can lead to a cycle of debt.<sup>27</sup> Very little data exists about how race factors into the setting and enforcement of non-financial pretrial release conditions.

**Subjective designations of high, medium or low risk are used to legitimize conditions of pretrial release, such as supervision, drug testing, and electronic monitoring, and contribute to our nation’s mass supervision and surveillance crisis.** In most jurisdictions, the results of an RAI are applied in a decision making framework or matrix to determine the level of supervision. Typically, the score and the most serious charge are used together to determine the supervision/surveillance to which a person will be subjected.

Notably, courts should not use the results of an RAI to determine detention; that decision should be made in a separate hearing with full due process protections. However, according to the PJI 2019 Scan of Pretrial Practices, many jurisdictions **do** use the RAI to determine detention. Nearly three out of four counties (73 percent) that had a pretrial assessment tool reported using them to make the “release or detain” decision.<sup>28</sup>

There is little research demonstrating that supervision conditions actually improve court appearance and public safety; what information is available on specific conditions, such as drug testing and electronic monitoring, shows they are not effective but are rapidly expanding in their usage. On a more nuanced level, there is no research showing that specific conditions are appropriate for people with specific RAI scores. Instead, the type and dosage of supervision



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are determined by policy, and can vary widely across jurisdictions. If the pretrial field took the approach that no specific condition could be assigned unless it was proven effective, then supervision and surveillance would be virtually obsolete.<sup>29</sup>

**Even the color-coding used by decisionmaking frameworks or matrices seem designed to provoke alarm.** Below is an example of a matrix used by Denver Pretrial Services Investigation Unit as of 2018. Note the use of the color red for maximum supervision. Moreover, the levels of supervision shown were created by policy makers and practitioners in Colorado, not derived from any research showing these specific conditions are related to any “risk” purportedly assessed.

### Denver Pretrial Supervision Guidelines-Misdemeanor and Felony Offenses

Primary Charge and CPAT Category <b>Enhancers</b> (move up one level of supervision)	•Non VRA Misdemeanors	•NonVRA Felonies	•VRA Misdemeanors	•Misdemeanor DV  •Indecent Exposure	•VRA Felony Crimes  •Felony DV  •DF1  •Burglary of a Dwelling	•Felony Sex Offenses
<ul style="list-style-type: none"> <li>• Currently supervised on felony probation, parole, or pretrial supervision for any criminal offense</li> <li>• Two or more pending felony cases or misdemeanor assault cases within one year of current offense date</li> <li>• Offense Involves a knife or a firearm in current charge</li> <li>• High ODARA score (7+)</li> <li>• Felony Child Abuse or Felony Sex Assault on a Child</li> </ul>						
<b>Category 1</b> Score: 0 to 17 (87% Success) 91% Public Safety, 95% Court Appearance						
<b>Category 2</b> Score: 18 to 37 (71% Success) 80% Public Safety, 85% Court Appearance						
<b>Category 3</b> Score: 38 to 50 (58% Success) 69% Public Safety, 77% Court Appearance						
<b>Category 4</b> Score: 51 to 82 (33% Success) 58% Public Safety, 51% Court Appearance						

No Pretrial Services Supervision	Administrative (Adm)	Enhanced (Enh)	Intensive w/EM Monitoring (Int)	Maximum Supervision Restrictions
Statutory Conditions Only	Court Reminder Calls Only	Court Reminder Calls	Court Reminder Calls	Court Reminder Calls
	Notification of New Arrest	Notification of new arrest	Notification of new arrest	Home Confinement
	Telephone check ins after court appearances	Check-in physically after court appearances	Check-in physically after court appearances	Electronic Monitoring/Surveillance
		Telephone check ins 1 to 4x per month (30 days)	Alcohol/ GPS/ Home Monitoring* Curfew/Employment Leave Only*	Check-in physically after court appearances
		Case Management meetings 1 to 2x per month (30 days)	Case Management meetings 1 to 4x per month (30 days) Telephone Check Ins As Needed	
		Substance Testing if ordered	Substance Testing if ordered	

*Denver Pretrial Decision Making Framework, as presented to the Colorado Supreme Court Bail Blue Ribbon Commission, August 16, 2018.*

The Virginia Pretrial Risk Assessment Instrument-Revised (VPRAI-R) Praxis, as presented to the Pretrial Services Stakeholder Group, June 11, 2018, contains six different types of outcomes, raising questions of whether these modifications actually make a difference. The outcomes include release with no supervision, release with supervision monitoring (court reminder and criminal history check before every court date), three levels of supervision monitoring with increasing frequency and compliance verification, and detention.

Charge Category	Non-Violent Misdemeanor	Driving Under the Influence	Non-Violent Felony	Violent Misdemeanor	Violent Felony or Firearm
<b>Level 1</b> (0-2 points)	<b>Release</b> With no Supervision, (Monitoring if Supervision Ordered)	<b>Release</b> With no Supervision, (Monitoring if Supervision Ordered)	<b>Release</b> With no Supervision, (Monitoring if Supervision Ordered)	<b>Release</b> With no Supervision, (Monitoring if Supervision Ordered)	<b>Release</b> With Supervision Level II
<b>Level 2</b> (3-4)	<b>Release</b> With no Supervision, (Monitoring if Supervision Ordered)	<b>Release</b> With Supervision Monitoring	<b>Release</b> With Supervision Monitoring	<b>Release</b> With Supervision Monitoring	<b>Release</b> With Supervision Level III
<b>Level 3</b> (5-6)	<b>Release</b> With Supervision Monitoring	<b>Release</b> With Supervision Monitoring	<b>Release</b> With Supervision Level I	<b>Release</b> With Supervision Level I	<b>Detain</b> (Level III if Supervision Ordered)
<b>Level 4</b> (7-8)	<b>Release</b> With Supervision Level I	<b>Release</b> With Supervision Level I	<b>Release</b> With Supervision Level II	<b>Release</b> With Supervision Level II	<b>Detain</b> (Level III if Supervision Ordered)
<b>Level 5</b> (9-10)	<b>Release</b> With Supervision Level II	<b>Release</b> With Supervision Level II	<b>Release</b> With Supervision Level III	<b>Detain</b> (Level III if Supervision Ordered)	<b>Detain</b> (Level III if Supervision Ordered)
<b>Level 6</b> (11-14)	<b>Detain</b> (Level III if Supervision Ordered)	<b>Detain</b> (Level III if Supervision Ordered)	<b>Detain</b> (Level III if Supervision Ordered)	<b>Detain</b> (Level III if Supervision Ordered)	<b>Detain</b> (Level III if Supervision Ordered)

*Praxis accompanying the Virginia Pretrial Risk Assessment Instrument - Revised (VPRAI-R)*

## CONCLUSION

It is time to transform pretrial reform. As an organization that was deeply involved in the proliferation of RAIs, PJI has spent years wrestling with the research on pretrial risk prediction. Our central concerns now focus on the civil rights implications of the tools, the items on them, and the ways in which courts are using these and other tools of reform that do not prioritize racial equity.

One major tenet in a racial equity transformation is reckoning with intention versus impact. What was intended to support courts in better making decisions that honored the presumption of innocence and held “detention as the carefully guarded exception” has had a devastating impact on Black, Indigenous and Latinx communities. The consequences are reflected in the data on mass pretrial detention and mass pretrial surveillance, often followed by forced pleas<sup>30</sup> or dropped charges.<sup>31</sup>

If RAIs cannot predict the risk of fleeing prosecution and risk of violence against a specific person or group; **and** they reflect systemic issues such as difficulty in keeping court appointments, case processing, and over-policing; **and** they are being used to legitimize an expansion of surveillance, then we have an obligation to interrogate their use. Even relatively successful attempts to produce “race equal” outcomes in RAIs cannot address the racialization of what is criminalized and how we police. Subjective assessment of the very same items on an RAI—due to requirements in statute or court rules, or simply based on professional experience—will only reproduce these effects in a less transparent manner.

**Pretrial justice requires a radical reconstruction, which prioritizes racial equity in the presumption of innocence and pretrial liberty, and commits to long-term racially equitable solutions.**<sup>32</sup> The Leadership Conference on Civil and Human Rights and the Civil Rights Corps have proposed a [vision](#) that prioritizes upfront investments in community programs and social services, including additional resources for education, housing, employment, health care, social-emotional supports, while protecting the pretrial rights of people and requiring collection of pretrial data relating to release, detention and race to empower communities to make change. This broader view of what constitutes public safety is not only more equitable, but has the potential to make our communities safer in the short and long-term by providing opportunities to thrive and prosper.

It is time to put away RAIs and forge an approach that does not perpetuate racial inequality, court involvement, debt or poverty, or create barriers to pretrial liberty and the presumption of innocence. The focus should be on implementing a very narrow detention net and providing robust detention hearings that honor the charge of the Supreme Court forty years ago.<sup>33</sup> And we must prioritize helping people succeed—from assistance with court appointments to connecting people to support services—while addressing the needs of all people victimized by crime.

## ENDNOTES

- 1 Gouldin, L. (2018). Defining Flight Risk. *University of Chicago Law Review* 85, 677, 716.
- 2 *Id.* at 722.
- 3 *Id.* at 710. Gouldin argues that examining ability to flee requires consideration of ability and inclination to flee. Gouldin notes examples where courts found resources such as a foreign passport, real property, bank accounts, access to large sums of cash and foreign contacts to be persuasive examples of ability to flee. “Successful flight from jurisdiction suggests access to networks and resources that are not part of the equation for the vast majority of nonappearing defendants.”
- 4 *Id.* at 689, citing Reaves, B.A. (2013). Felony Defendants in Large Urban Counties, 2009—Statistical Tables. Bureau of Justice Statistics.
- 5 Jones, A. and Sawyer, W. (2019). [Arrest, Release, Repeat: How police and jails are misused to respond to social problems](#). Prison Policy Initiative.
- 6 This measurement is known as the Area Under the Curve (AUC) Receiver Operator Characteristics (ROC) estimate. DeMichele, M., Baumgartner, P., Wenger, M., Barrick, K., Comfort, M. & Misra, S. (2018). The Public Safety Assessment: A Re-Validation and Assessment of Predictive Utility and Differential Prediction by Race and Gender in Kentucky.
- 7 Desmarais, S. L., and Singh, J P. (2013). Risk assessment instruments validated and implemented in correctional settings in the United States. Lexington, Kentucky: Council of State Governments; Desmarais, S., Johnson, K. and Singh, J. (2016). Performance of recidivism risk assessment instruments in U.S. correctional settings. Psychological Services.
- 8 Hosmer Jr., D.W., Lemeshow, S. and Sturdivant, R.X. (2013). Applied Logistic Regression. 3rd Edition, John Wiley & Sons, Hoboken, NJ.
- 9 See, [State Court Caseload Digest](#). (2020). 2018 Data. Court Statistics Project.
- 10 [Results from First Six Months of the Public Safety Assessment - Court in Kentucky](#). (2014). Laura and John Arnold Foundation.
- 11 Picard, S., Watkins, M., Rempel, M. & Kerodal, A. (2019). [Beyond the Algorithm: Pretrial Reform, Risk Assessment, and Racial Fairness](#). Center for Court Innovation.
- 12 Mayson, S.G. (2019). Bias In, Bias Out. 128 *Yale Law Journal*, vol. 128, 2218.
- 13 *Id.*
- 14 Kochel, T.R., Wilson, D.B., & Mastrofski, S.D., (2011). Effect of Suspect Race on Officers’ Arrest Decisions. *Criminology* 49(2), 473-512, 490 & 495-96.
- 15 Brame, R., Bushway, S.D., Paternoster, R., & Turner, M.G. (2014). [Demographic Patterns of Cumulative Arrest Prevalence By Ages 18 and 23](#), *Crime and Delinquency* Vol. 60(3), 471-486.
- 16 Bishop, E.T., Hopkins, B., Obiofuma, C. & Owusu, F. (2020). [Racial Disparities in the Massachusetts Criminal Justice System](#),” Criminal Justice Policy Program, Harvard Law School.
- 17 Berdejó, C. (2018). [Criminalizing Race: Racial Disparities in Plea Bargaining](#). *Boston College Law Review* 59, 1187.
- 18 [Rates of Drug Use and Sales, by Race; Rates of Drug Related Criminal Justice Measures, by Race](#). (2016). The Hamilton Project.
- 19 Desilver, D. (August 21, 2013). [Black unemployment rate is consistently twice that of whites](#). FactTank, Pew Research.
- 20 Bishop et al. (2020).
- 21 Owens, E., Kerrison, E.M., & Da Silveira, B.S. (2017). [Examining Racial Disparities in Criminal Case Outcomes among Indigent Defendants in San Francisco](#). Quattrone Center for the Fair Administration of Justice.
- 22 Shannon, S.K.S., Uggen, C., Schnittker, J. *et al.* (2017). The Growth, Scope, and Spatial Distribution of People With Felony Records in the United States, 1948–2010. *Demography* 54, 1795–1818. Both of these percentages have grown steadily since 1980, due to the federally-funded “war on drugs” strategy leading to a disproportionate number of arrests of Black people. See also, Human Rights Watch. (2000). [UNITED STATES Punishment and Prejudice: Racial Disparities in the War on Drugs](#); Human Rights Watch. (2009). [Decades of Disparity Drug Arrests and Race in the United States](#). See also, for example, discussion of racially biased arrests around drug charges. Ferrer, B., & Connolly, J. M. (2018). Racial Inequities in Drug Arrests: Treatment in Lieu of and After Incarceration. *American Journal of Public Health*, 108(8), 968–969.
- 23 Gross, S.R., Possley, M. and Stephens, K. (2017). [Race and Wrongful Convictions in the United States](#). National Registry of Exonerations.
- 24 Sutton, J.R. (2013). [Structural bias in the sentencing of felony defendants](#). *Social Science Research* 42, 1207-1221.
- 25 Sutton, J.R. (2013). [Structural bias in the sentencing of felony defendants](#). *Social Science Research* 42, 1207-1221.
- 26 Harris, H., Goss, J., & Gumbs, A. (2019). [Pretrial Risk Assessment in California](#). Public Policy Institute of California.
- 27 [Scan of Pretrial Practices](#). (2019). Pretrial Justice Institute.
- 28 *Id.*
- 29 The single pretrial practice that research has consistently shown to improve court appearance is court reminders. See, [Use of Court Date Reminder Notices to Improve Court Appearance Rates](#). (2017). National Center for State Courts’ Pretrial Justice Center for Courts.
- 30 Petersen, N. (2020). [Do Detainees Plead Guilty Faster? A Survival Analysis of Pretrial Detention and the Timing of Guilty Pleas](#). *Criminal Justice Policy Review*, 31(7):1015-1035.
- 31 Starger, C. (2020). [The Argument that Cries \*Wolfish\*](#). MIT Computational Law Report.
- 32 King County, Washington county council and executive rejected the use of RAIs in its Superior Courts in 2012, partly out of concerns that it would perpetuate racial disproportionality in the jails.
- 33 U.S. v. Salerno, 481 U.S. 739 (1987).