Evidence Over Imitation: Developing Research-Informed Strategies for Pretrial Decision-Making

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WHEN A PERSON is arrested and charged with a criminal offense, judicial officials must determine whether that person (the defendant) should be released back into the community or detained pretrial (American Bar Association, 2007). The decision to release or detain a defendant pretrial represents a crucial, some would say even key, "pivot point" within the criminal justice process (Carr, 2017). Defendants facing pretrial incarceration are beset with numerous consequences that can border on the catastrophic, including the curtailment of their personal liberties with accompanying losses in their employment status, residential stability, and even parental rights (Stevenson & Mayson, 2017; Bergin et al., 2022). Pretrial detention can also have negative implications for pretrial outcomes, such as failure to appear and new pretrial arrests (Holsinger, Lowenkamp, & Pratt, 2023) as well as case outcomes. A plethora of research studies has empirically demonstrated that detained defendants are more likely to be convicted, receive longer incarceration terms, and engage in higher levels of future criminal activity than defendants placed on pretrial release (Dobbie, Goldin, & Yang, 2016; Gupta, Hansman, & Frenchman, 2016; Heaton, Mayson, & Stevenson, 2017; Leslie & Pope, 2017; Lowenkamp, VanNostrand, & Holsinger, 2013; Koppel et al., 2022; Oleson, VanNostrand, Lowenkamp, Cadigan, & Wooldredge, 2014; Reitler, Sullivan, & Frank, 2013; St. Louis, 2023). In fact, it seems that the pretrial stage is so crucial to the criminal justice process that the statement "pretrial determines mostly everything" sums up the importance of this pivot point quite meaningfully (McCoy, 2007).

In recognition of the heavy costs associated with pretrial detention, many jurisdictions throughout the country are engaged in various reform efforts aimed at reducing pretrial detention in a way that alleviates socio-economic inequalities without resulting in potentially adverse outcomes, including increases in the proportion of released defendants failing to make court appearances or engaging in pretrial crime (Stevenson & Mayson, 2017). Most of these efforts have occurred at the state level, where many jurisdictions are attempting to move from systems where release hinges on the defendant's capacity to pay financial bail to systems in which the release decision is guided by actuarial risk tools (Grant, 2018; Mamalian, 2011; Pretrial Justice Institute, 2012; Stevenson, 2018).[5] At the federal level, the Administrative Office of the U.S. Courts Probation and Pretrial Services Office (PPSO) sponsored its first-ever national conference devoted to federal pretrial issues in 2018. The conference ended with a call to action for federal pretrial officers, judicial officials, and policymakers to devote more attention, resources, policy guidance, and research to pretrial decision-making in the federal justice system.[6]

Given the surging interest and reform efforts focused on the pretrial process, it seems an opportune time to take stock of our understanding of several issues that are of critical importance to the pretrial stage of criminal justice case processing. Specifically, this essay will provide a general overview of actuarial pretrial assessments and the implementation of these tools in criminal court systems and highlight the characteristics of pretrial conditions and interventions related to monitoring, treatment, and supervision currently being delivered to defendants on release and the efficacy of these conditions and interventions. It is our hope that this essay

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[5] The most recent of these reform efforts occurred in California, which recently passed a law eliminating cash bail for the entire state. The law is scheduled to go into effect on October 1, 2019 (Park, Tuesday August 2018), but was later recalled.

[6] A follow-up federal pretrial conference occurred in 2023 covering issues somewhat similar to those highlighted in the initial federal pretrial conference.

will highlight our current understanding of these key pretrial areas, identify knowledge gaps that a research agenda could fulfill, and initiate a call to action for developing a theoretical framework directed at the pretrial field.

The need for theoretical development in the pretrial arena is especially acute since, unlike the community corrections field where the evolution and development of a comprehensive theoretical paradigm has occurred (that is, the Risk, Needs, and Responsivity model), no similar framework exists in the pretrial sphere (Andrews & Bonta, 2017). As will be demonstrated, attempts to graft the Risk, Needs, and Responsivity model (hereinafter the RNR model) onto the pretrial process have been somewhat problematic; hence, there is an urgent need for more theoretical development directed at this key pivot point within the criminal justice system (Carr, 2017).

Pretrial Risk Assessment

What Do We Know About Pretrial Risk Assessment?

The use of actuarial risk instruments to inform pretrial release and detention decisions has an extensive history. The first pretrial risk instrument dates to the early 1960s, originating with the Vera Institute's attempt to construct a scale capable of predicting whether a defendant would show up to court (Ares, Rankin, & Sturz, 1963; Eskridge, 1983). Since that period, a substantial amount of research has occurred around pretrial risk assessments, with several states and the federal system using these instruments to inform pretrial decision-making (Bechtel, Holsinger, Lowenkamp, & Warren, 2016; Cadigan & Lowenkamp, 2011; Desmarais et al., 2021; Desmarais, Monahan, & Austin, 2022; Goldkamp & Vilcia, 2009; Mamalian, 2011; Picard-Fritsche, Rempel, Tallon, Adler, & Reyes, 2017; Summers & Willis, 2010; LJAF, 2013). Moreover, the recent development of a national pretrial risk tool by the Arnold Ventures Foundation (titled the Public Safety Assessment or PSA) that could be used in any jurisdiction has further accelerated the embracing of these practices by criminal justice officials, stakeholders, and policymakers (LJAF, 2013).

A review of the pretrial risk assessment literature shows most of these instruments using some combination of similar factors to predict a defendant's likelihood of failing to appear or being arrested for pretrial crime. The most common risk elements embedded within these instruments include current offense charge, prior convictions, prior incarceration, pending charges, history of failure to appear, community ties and residential stability, substance abuse, employment and education, and age (Bechtel et al., 2016; Bechtel, Lowenkamp, & Holsinger, 2011; Desmarais & Lowder, 2019; Desmarais et al., 2021; Desmarais et al., 2022; Latessa, Lemke, Makarios, Smith, & Lowenkamp, 2009; Mamalian, 2011). Information on these factors is typically obtained by reviewing criminal records, investigating court documents, and interviewing defendants and verifying the information gleaned through the interview (Bechtel et al., 2016).

While gathering information on these pretrial risk factors should be relatively straightforward, pretrial assessments are often conducted in an environment in which the presence of high caseloads, the lack of staff dedicated to pretrial decision-making, and the limited period between arrest and initial appearance creates barriers to completing these assessments in an accurate, timely, and complete manner (Mamalian, 2011). As a consequence, there have been efforts to construct pretrial assessments based solely on static factors that could be obtained without conducting interviews, while maintaining levels of predictive validity similar to those obtained by risk assessments relying on interviews (Bechtel et al., 2016). These efforts were guided by research showing that the items most strongly correlated with pretrial failure are typically static and related to criminal history—prior convictions, prior felonies, prior misdemeanors, juvenile arrest, and prior failure to appear—and ultimately resulted in the creation of a pretrial risk assessment tool (i.e., PSA) that can be completed without having to conduct an in-person interview with the defendant (LJAF, 2013).[7]

In general, research has shown that risk assessment tools, including those used at the pretrial stage, provide more accurate predictions than clinical approaches where decisionmakers rely on professional judgment or intuition gleaned through interviews or documentation reviews to best assess a person's risk (Andrews & Bonta, 2010; Grove, Zald, Lebow, Snitz, & Nelson 2000). The first meta-analysis of actuarial pretrial tools found a "medium" effect size in terms of their capacities to predict pretrial outcomes of missed court appearances and pretrial crime (Bechtel et al., 2016). Similarly, a recent meta-analysis demonstrated that the predictive validity of pretrial risk assessments could be classified as good to excellent (Desmarais et al., 2021). Other agencies highlight the potential benefits of using risk assessment tools, including a reduction in jail populations and an increase in pretrial release recommendations (Cooprider, 2009; Desmarais, 2022; Lowder et al., 2020; Mahoney, 2001; Marlowe et al., 2020; Stevenson & Doleac, 2018; Viljoen, 2019).

Moving Forward With a Pretrial Risk Agenda – Challenges and Considerations

While we know a great deal about pretrial risk assessments, there's a continual need for a research agenda that can further our understanding of these tools. Constructing a research agenda focused on risk assessments is particularly necessary because, though much effort has been expended on validating the predictive efficacy of these instruments (see Mamalian, 2011; Bechtel et al., 2016), little is understood about how these tools are being implemented by local actors within specific criminal justice systems and their potential limitations in pretrial recidivism prediction that might necessitate non-quantitative approaches to move the field forward.

Of all the varied issues that could inform a pretrial research agenda, one of the most important involves understanding exactly how these instruments are being implemented by local criminal justice actors (Stevenson, 2018). Many proponents of risk tools hope that implementing these assessments will result in an increase in release rates as lower risk defendants are placed on pretrial release without having to pay any financial bail, with no simultaneous increases in missed court appearances or pretrial crime. While the advocates of risk assessment approaches have been optimistic about the potential effects of these devices, there are relatively few empirical studies "about how risk actuarial assessments have affected practices and outcomes" (Berk, 2017: 193). Specifically, several recent studies have shown risk instruments having minimal impacts on overall pretrial release or violation rates (see Brooker, 2017; Cohen & Austin, 2018; Stevenson, 2018); other research, however, has shown that implementing these instruments can be associated with reductions in pretrial jail populations and detention

[7] The PSA is currently being used statewide in Kentucky, Arizona, New Jersey, and Utah. It is also being used in several major cities and multiple counties across the country (See PSA Map on the Advancing Pretrial Policy and Research website: PSA Map | Advancing Pretrial Policy & Research (APPR)).

rates, at least in the short term (Pretrial Justice Institute, 2019), including reducing booking rates, without an increase in failure to appear or new pretrial arrests (Lowenkamp, DeMichele, Klein, & Warren, 2020).

Local criminal justice systems have a variety of organizational, structural, and operational barriers that could potentially thwart the effective implementation of pretrial assessment tools (Mamalian, 2011). Specifically, most criminal courts operate within the context of the "court workgroup," in which key players, including defense attorneys, prosecutors, judges, and pretrial officers, share responsibilities for criminal case processing decisions, including whether to place on pretrial release or keep detained a defendant (DeMichele et al., 2018; Eisenstein, Fleming, & Nardulli, 1988; Eisenstein & Jacob, 1977). Any of these courtroom actors could use their local discretion to impede the effective use of assessment tools in pretrial systems, and the likelihood of pushback could be especially acute in systems where these actors have not bought into using assessments to inform release and detention decisions (Mamalian, 2011). This is particularly true for judges, who in many instances are the ultimate arbiters of the release decision. If, for example, judges have discretion to depart from or ignore the risk assessment guidelines or (as in the case of the federal justice system) must consider factors that do not specifically incorporate risk tools, the risk assessment instrument may not work as intended (Pretrial Justice Institute, 2019). Hence, any pretrial research agenda should consider comprehending the ways in which local court actors interact with and react to attempts to integrate risk assessments into the pretrial decision-making processes.

An additional complication and little noted factor in the effective implementation of risk assessments is the potential for financial bail systems to disrupt the assessment process. Though recent reform efforts have attempted to mitigate the use of financial bail, the Bureau of Justice Statistics (BJS) reports that, for defendants charged with felony offenses in the nation's 75 most populous counties in 2009, bail bondsmen still accounted for the most common forms of pretrial release. Moreover, nearly 90 percent of detained felony defendants were held in jail because they were unable to meet the financial conditions required to secure release (Reaves, 2013). Given that many state and local jurisdictions still rely on bail schedules and bail bondsmen to effect pretrial release, the potential nexus between risk assessments and the imposition of financial bail has been barely acknowledged and poorly understood. In many jurisdictions using bail schedules, defendants could simply bail out of jail prior to being assessed with any risk tool, or, even if assessed as high risk, buy their freedom if bail amounts are attached to high-risk classifications. The extent to which the ability to post financial bail could potentially undermine risk assessment efforts in states using both mechanisms of release needs to be further explored by researchers and policymakers.

In addition to resistance from court actors and bail systems to the wholesale adoption of actuarial assessments, there are a variety of methodological issues associated with deficiencies in the quality and standardization of data warehoused in local pretrial or court systems that could potentially disrupt risk assessment implementation (Mamalian, 2011). Due to a lack of financial resources and personnel, many pretrial programs do not possess information systems that are sufficient to the task of risk validation or even data quality assessment and maintenance (Clark & Henry, 2003; Mamalian, 2011). Even for those systems with adequate pretrial data, accessing the data for validation and research purposes and then employing personnel with the requisite skills to conduct appropriate analyses can be a time consuming and expensive endeavor (Mamalian, 2011).

Jurisdictions, moreover, differ on how they measure or count the core pretrial outcome metrics of failure to appear (FTA) or pretrial crime. Most jurisdictions with pretrial programs, for example, only count FTA or pretrial crime events for those defendants under pretrial supervision, ignoring these outcomes for unsupervised defendants (Pretrial Justice Institute, 2009). Furthermore, a survey of pretrial programs showed that only 37 percent of these programs have the capacity to calculate rearrest rates (Pretrial Justice Institute, 2009). Last, the way FTAs are measured can vary across jurisdictions, with some basing the rate on the number of court appearances with skips, while others base it on the number of defendants with FTAs (Mamalian, 2011; Pretrial Justice Institute, 2009). It is quite possible that the paucity of well-funded and maintained pretrial case management systems, the absence of staff with the skills to conduct analyses directed at risk prediction and quality maintenance, and the lack of uniformity in measuring and collecting various outcomes have hindered the capacity of many local jurisdictions to effectively implement and validate their risk instruments (Pretrial Justice Institute, 2009).[8] Research should focus on how these data quality issues might hinder effective risk assessment implementation and suggest mechanisms for overcoming these data quality barriers and challenges.

An issue related to data quality is that, to our knowledge, there have been no attempts to assess the extent to which court or pretrial staff are being trained on the scoring of pretrial assessment tools and whether these tools are being scored accurately, consistently, and reliably.[9] As a result, the research on the degree of inter-rater reliability among officers using risk assessments at the pretrial stage is slim to nonexistent. The dearth of research on scoring reliability is unfortunate because, though reliability is an often-neglected issue in the risk assessment field (Desmarais & Singh, 2013), its importance is crucial to successful implementation of these devices and to the accurate recidivism prediction. In fact, some studies suggest that poor reliability can result in a degradation of risk prediction (Duwe & Rocque, 2017). A pretrial research agenda should consider attempting to gauge the issue of reliability and the possibility that poor reliability might be hindering the effective application of pretrial risk instruments.

In addition to issues of risk assessment implementation, it's important to acknowledge that research from a few years ago showed pretrial risk assessments have predictive capacities in the "good" range, with AUC-ROC scores ranging in the mid to high 0.60s (DeMichele et al., 2018; Desmarais & Singh, 2013). However, a recent meta-analysis examining pretrial assessments found that the predictive validity of pretrial assessments ranged in the "good" to "*excellent*" range (.70 or higher). Of course, these positive findings are not consistent across tools or by racial groups, as poor AUC-ROC scores have been observed (Medhanie et al., 2023). There are numerous possible explanations for why pretrial assessments are not as predictive as hoped. First, pretrial risk tools are not basing their predictive algorithms on the behavior

[8] See Pretrial Justice Institute's survey of pretrial programs in 2009 showing less than half (41 percent) of jurisdictions are using risk assessments that have been validated over the past five years (Pretrial Justice Institute, 2009).

[9] It should also be noted that there are relatively few studies examining the issue of reliability for risk instruments at the post-conviction stage (Duwe & Rocque, 2017).

of all defendants; rather, they are grounded on the outcomes for only those defendants released pretrial. While detained defendants might engage in criminal misbehavior to the same extent as released defendants, it is more likely that released defendants would have lower risk characteristics and pretrial violation rates than their detained counterparts (Mamalian, 2011; Stevenson, 2018). The extent to which selection biases might be hindering the development of effective risk assessment prediction needs to be better investigated and understood. Another issue is the short time periods many defendants stay on pretrial release, which is especially problematic when trying to predict violent crimes (Mamalian, 2011). Several reports show released defendants remaining on pretrial release for 9 months or less; these short time periods might not be sufficient when attempting to gauge the probability of low base rate events such as violent pretrial crime (Barabas et al., 2019; Pretrial Justice Institute, 2020). Despite the challenge of low base rates and the short period to predict violent pretrial crime, there are pretrial assessments that were developed to predict FTA, pretrial arrest, and pretrial arrest for a violent charge (e.g., Public Safety Assessment), and research has demonstrated the predictive validity of these assessments (Brittain et al., 2021; DeMichele et al., 2020; Desmarais et al., 2016, 2021; Lowder, Lawson et al., 2020; Lowenkamp et al., 2020; Marlowe et al., 2020). Of course, with the COVID-19 pandemic, case processing time frames have increased (Germano, Lau, & Garri, 2022) and court backlogs from the social distancing mandates and lockdowns have been attributed to these delays (Nahra, 2021).

Importantly, testing for predictive bias in risk assessments has become standard for tool development and validation studies—although validation studies do not consistently provide these analyses or present these findings. As a result, a few pretrial assessment validation studies have revealed differential prediction by race (Medhanie et al., 2023) and by race and gender for pretrial scales that aim to predict a specific outcome, such as FTA (Lowenkamp et al., 2020), and have been moderated by race, but without a disparate impact (DeMichele et al., 2020). While many pretrial validation studies have not found evidence of predictive bias by race or gender, additional research is warranted to confirm that assessments do not exacerbate bias (Desmarais et al., 2021), especially if the information produced by the assessment could result in different decision-making and treatment—such as detaining an individual or assigning unnecessarily intensive release conditions (Desmarais et al., 2022). Relatedly, a serious critique has been raised not only about the use of risk assessments and the output generated, but about concerns about the data entered to produce a score; namely, these tools primarily rely on a review of an individual's criminal history. These data may capture differential treatment across the criminal legal system for Black individuals when compared to similar White individuals (Pierson et al., 2020; Stolzenberg et al., 2013; Kochel et al., 2011). Researchers have started to take a closer look at a possible option to mitigate this concern. Specifically, one study examined the predictive validity of the Public Safety Assessment's New Criminal Arrest (NCA) scale when scored with an abbreviated criminal history rather than with a lifetime review; the study found equal predictive validity regardless of the scale being scored with a 5-year criminal history review or with a lifetime review. As a result, substantially fewer Black individuals were scored as high risk (DeMichele et al., 2023). The potential implications for this could mean that more Black individuals will be released, and pretrial detention and disparities in the jail population could be reduced. This approach has an empirical base, as research has demonstrated that recent convictions are more predictive than convictions from 10 to 20 years ago (Blumstein & Nakamura, 2009; Bushway et al., 2011), and individuals who remain crime free for 5-7 years are no more likely to be rearrested than an individual with no prior system involvement (Blumstein & Nakamura, 2009). Since many assessments use the full criminal history record for scoring (unless the item is time-bound), replicating this study with other pretrial assessments in multiple settings will be an important next step in pretrial research.

While some of the issues mentioned above that hinder effective risk prediction might be addressed by the advent of machine learning algorithms, it is also quite possible that we have reached the limits of what "big data" will tell us regarding a defendant's propensity to miss court appearances or engage in pretrial crime. Perhaps qualitative approaches involving focus groups or strategically structured interviews in which low-risk defendants who failed are asked why they failed and high-risk defendants who succeeded are queried on why they remained free of any pretrial violations are required to move the pretrial risk assessment field forward (Courtland, 2018). Alternatively, reviewing samples of officer field notes for information about defendants who succeeded or failed while on pretrial release might provide another source of valuable information about the causal mechanisms of events leading to pretrial failure. The bottom line is that the integration of conceivably less data-oriented approaches to pretrial risk assessment might be necessary to better understand risk prediction in the pretrial arena.

Pretrial Conditions and Intervention Efforts

What do we know about pretrial conditions and intervention efforts aimed at curbing missed court appearances and pretrial crime?

For those defendants placed on pretrial release, jurisdictions use a variety of conditions both standard and specific to lower the likelihood that the released defendant will miss court appearances or be arrested for pretrial crime (Clarke, 1988; Bechtel et al., 2016). Many of these conditions are applied in blanket fashion and are often imposed without consideration of a defendant's risk of pretrial failure (Bechtel et al., 2016). The types of conditions imposed on released defendants can range from those that are typically considered standard, meaning they are applied to nearly all released defendants, to those that are more specialized in their imposition, meaning they are applied to subsets of released defendants. In many jurisdictions, however, the differences between standardized and special conditions are somewhat ambiguous, as many special conditions have become relatively common in their application (Bechtel et al., 2016).

Pretrial conditions can encompass a variety of interventions, some of which are oriented to restricting the defendant's freedoms, while others are fashioned to either monitor the defendant's behavior or provide rehabilitative services. Pretrial conditions that are focused on restricting the defendant's freedoms include travel restrictions, weapons restrictions, curfews, no contact with victims or witnesses, or no arrest interactions with law enforcement officers. Monitoring conditions typically include electronic monitoring compliance, drug and alcohol testing, or search and seizure. Treatment conditions include a range of interventions involving substance abuse, mental health, or sex offender treatment (Bechtel et al., 2016). In addition to all of the above conditions, some don't fall into any classifiable categories, including court

notification programs, pretrial supervision, or financial bond.

Regardless of the condition or intervention imposed, there is a general theory that pretrial interventions should follow the model imposed on corrections populations at the post-conviction stage (Bechtel et al., 2016). In other words, there exists an expectation that applying the RNR model to pretrial systems would produce results similar to those observed in the community corrections and post-conviction arenas. As will be demonstrated, there has been relatively little empirical research on the efficacy of these pretrial interventions, and many have not worked as intended (Cohen & Hicks, 2023; Bechtel et al., 2016; Mamalian, 2011). We provide a brief overview of some predominant research examining the effectiveness of pretrial conditions and interventions below.

Among the various types of pretrial conditions, perhaps the most common involve monitoring or treatment interventions. Substance abuse testing and location monitoring encompass some of the most frequent forms of monitoring conditions (Mahoney et al., 2001; Pretrial Justice Institute, 2009, 2012). Substance abuse testing has become a particularly commonplace tool to gauge whether defendants are engaged in drug abuse while on pretrial release, but the research on its effectiveness is arguably outdated. Most of the descriptive studies have not found a clear association between drug testing and improved pretrial outcomes, and the limited rigorous approaches have not produced consistent findings. A 1992 RCT conducted in two Arizona counties found mixed results on the impact of drug testing on pretrial misconduct, which included failure to appear and pretrial arrest. One county experienced a slight reduction in pretrial arrest for the treatment group (assigned drug testing), and there was no difference in failures to appear. The other county saw a significant increase in failures to appear and pretrial arrest for the group that had drug testing (Britt et al., 1992). Randomized controlled trials of approximately 300 people in Maryland and in Wisconsin found that those assigned to drug testing did not significantly differ from those who were not assigned to drug testing (Goldkamp & Jones, 1992). Another study explored the use of sobriety monitoring across multiple jurisdictions and found mixed results in terms of avoiding pretrial arrest, but court appearance rates were the same across groups (MDRC), that those who were on sobriety monitoring avoided arrest and made court appearances at the same rates compared to those who were not (Golub, Valentine, & Holman, 2023). Much of the known research is outdated; new research must aim to produce a causal link and examine the relationship between drug and sobriety testing on pretrial outcomes, cost effectiveness, varying intensity levels, and if there are any disproportionate results for certain demographics. Ultimately, judicial authorities need to know when mandating drug testing and sobriety monitoring is beneficial and when it is harmful. Further, electronic monitoring has increased as a mechanism for reducing jail overcrowding and ensuring that released defendants comply with certain specified release conditions (Bechtel et al., 2016), with substantial increases in the use of electronic monitoring resulting from the COVID-19 pandemic and social distancing mandates (Weisburd et al., 2021). At this point, it is difficult to draw conclusions on the benefits and harms of electronic monitoring during the pretrial stage, as the research has been primarily conducted on probation and parole samples. With few exceptions, the research lacks rigor and the results are mixed (Wolff et al., 2017; Sainju et al., 2018; Belur et al, 2020). One study evaluating electronic monitoring found that moderate to high-risk individuals on electronic monitoring had significantly lower rates of rearrest compared to those not being monitored (Wolff et al., 2017). A recent multisite study compared successful outcomes of individuals released on pretrial supervision with electronic monitoring to those released on pretrial supervision without monitoring. The researchers found that those who were not assigned to monitoring were more likely to avoid arrest (76%) compared to those who were (67%) after a six-month period, suggesting that the monitored group's rearrest rate was 9 percentage points higher than the group that was not monitored (Anderson et al., 2023). When the technology is available, electronic monitoring is often assigned to individuals with domestic violence charges; however, one study found that electronic monitoring is not associated with recidivism reductions for these cases (Grommon, Rydberg, & Carter, 2017). Electronic monitoring comes at a cost, which in some jurisdictions is passed onto those under supervision (both pretrial and probation). While many states do not share information about fees associated with electronic monitoring, one report found the average yearly costs of 22 states for one person to be on a monitor was $3,284.08 (Weisburd et al., 2021). Ultimately, the current state of electronic monitoring research for pretrial populations suggests that electronic monitoring should not be broadly applied (Sainju et al., 2018), and additional research focusing on risk levels, less restrictive options, specific populations, dosage, and costs relative to alternative conditions that may produce similar or improved outcomes is warranted.

In addition to these monitoring programs, some pretrial interventions attempt to treat defendants for substance abuse, mental health problems, or specific charges, such as domestic violence or sex crimes. Existing research, however, has failed to generate any conclusive evidence that these pretrial monitoring or treatment programs reduce the likelihood of missed court appearances or pretrial crime (Cohen & Hicks, 2023; Bechtel et al., 2016). Moreover, there is some evidence that the placement of these conditions on lower risk defendants is associated with an increase in the likelihood of pretrial failure (VanNostrand & Keebler, 2009).

Another commonly used pretrial condition involves the placement of released defendants on some form of pretrial supervision program. Pretrial supervision can encompass a range of interventions and management strategies including "face-to-face contacts, home contacts, telephone contacts, collateral contacts, court date reminders, and criminal history checks" (VanNostrand et al., 2011: 29). There are pretrial services standards that support consistent policies being adopted; however, many pretrial practices, supervision techniques, and treatment strategies are not based on a sufficient body of evidence to suggest that the policies and practices are likely to be effective and should be implemented, thereby making it difficult to have a clear understanding about what interventions or practices, if any, should be incorporated into pretrial supervision programs. Some pretrial programs, for example, offer a profusion of services to defendants, while for others, pretrial supervision might entail only monthly phone check-ins via automated calling systems (Bechtel et al., 2016). However, even those services labeled as supportive, such as providing transportation or vouchers to help with court appearance, have yet to be fully studied. The one study on transportation failed to demonstrate an improvement in court appearance as a result of providing transportation subsidies (Brough et al., 2021). Given the lack of standardization of what

even constitutes pretrial supervision (let alone effective pretrial supervision), there is little known about the characteristics of these systems, the supervision stratagems they use, and the services they offer to released defendants.

The lack of uniformity regarding what constitutes pretrial supervision has created significant obstacles to the empirical evaluation of these programs. There are few empirical studies that have attempted to assess the efficacy of these programs, and in general they have not found these programs to be associated with reductions in court skips or pretrial crime (Cohen & Hicks, 2023; Bechtel et al., 2016; Mamalian, 2011; VanNostrand et al., 2011).

Most of the research on pretrial supervision and supervision intensity is descriptive. However, there are two older randomized controlled trials (RCTs) examining pretrial supervision and intensity. One RCT randomly assigned individuals to either more-intensive pretrial supervision or less intensive supervision plus access to services (vocational training or drug/ alcohol counseling). It found no difference in appearance rate or rearrest across the groups (Austin, Krisberg, & Litsky, 1985). A second RCT that randomly assigned individuals to low-supervision or high-supervision conditions in Philadelphia found no difference in appearance rates or rearrest across the two groups for low-risk or moderate-to-high-risk. The study was unable to identify whether certain types of contacts or an optimal number of contacts might be associated with decreases in pretrial supervision violations (Goldkamp & White, 2006).

While there are no RCTs that we have identified examining the impact of pretrial supervision compared with no supervision, a few studies provide some guidance about pretrial supervision policies and practices surrounding the use of assessments and supervision intensity.

Several studies, including older evaluations, have found that conducting assessments and properly matching intensity with an individual's risk level is important for identifying the individuals who are most likely to benefit from either less or more intensive supervision (Goldkamp & White, 2006). One recent evaluation examined whether using current charge only or the Public Safety Assessment (PSA) and Release Conditions Matrix (RCM) was better at predicting any new pretrial arrest and violent pretrial arrests. The results suggest that using the PSA with the corresponding RCM supervision levels is a stronger and more consistent predictor of future arrest compared to using the most recent charges (Labrecque et al., 2024). Another study employed a regression discontinuity designed to estimate the impact of using a pretrial risk assessment conducted by the county pretrial services department as part of their supervision practices. The findings indicate that implementing a tool to inform the release decision resulted in an increase in non-financial bonds and a decrease in pretrial detention (but the effects of these two outcomes dissipated within two months). For pretrial crime, releases associated with the use of an assessment did not result in any changes to violent pretrial crime, although there was some suggestive but non-significant evidence of an increase to non-violent recidivism—and these results were also observed when comparing indigent and non-indigent defendants (Sloan, Naufal, & Caspers, 2023). Relatedly, another study estimating the impact of supervision intensity using a regression discontinuity design in two jurisdictions found that lower intensity supervision was as effective as higher intensity supervision in helping individuals appear in court and avoid new arrests. Further, individuals who received no supervision were just as likely to appear in court and avoid arrests as those who received less intensive supervision. Additionally, risk scores were strongly associated with pretrial arrests and moderately associated with court appearance—so while those who had the higher risk scores were more likely to be arrested pretrial, more intensive supervision did not mitigate this (Anderson et al., 2023). Another study examined the effectiveness of an intensive pretrial supervision program that targeted those who are the least likely to succeed pretrial. The findings revealed that when comparing similarly situated individuals who only differed in terms of program participation (enrolled or not enrolled), the results indicate that there were no significant differences in court appearance and arrests for new crimes despite the supervised group spending nearly twice as long in the community with a pending case (Skemer, Redcross, & Bloom, 2020). Taken altogether, we have yet to reach any firm conclusions on the impact of supervision intensity. Rather there are outstanding questions about applying restrictive conditions during the pretrial period and whether there are any benefits in terms of improving court appearance and public safety. While risk assessments may help by screening lower risk individuals out of supervision (as there may be little benefit to those persons), evaluating supervision intensity and reporting requirements may be an appropriate area of study for a pretrial research agenda.

At this point, the only pretrial supervision strategies that have proved quite successful involve the use of court notification programs to address failure to appear rates (Bechtel et al., 2016; Bornstein et al., 2018; Cooke et al., 2018; Ferri, 2020; Fishbane, Ouss, Shah, 2020; Schnacke, Jones, & Wilderman, 2013). Court notification programs utilize a variety of techniques to connect with defendants about their upcoming court appearances, including mailing out postcards and letters, making telephone calls, sending out text messages, and nudges to defendants. The content of these messages can range from simple notifications of impending court dates to warnings of potential consequences associated with skipping court appearances (Bechtel et al., 2016; Crozier, 2000; Herian & Bornstein, 2010; Nice, 2006; Rouse & Eckert, 1992). Overall, studies on court notification have shown substantial promise, with several demonstrating a reduction in FTA being associated with these programs (Bechtel et al., 2016; Bornstein et al., 2018; Cooke et al., 2018; Ferri, 2020; Fishbane, Ouss, Shah, 2020; Schnacke, Jones, & Wilderman, 2013). Though these initial findings are encouraging, additional work is required before firmer conclusions can be drawn about the efficacy of these programs, especially on unique samples, such as those who are facing challenges with residential and financial stability.

Last, it's important to acknowledge that the imposition of financial bail constitutes another form of restrictive special conditions placed on defendants. In criminal justice systems, defendants can be released on their own recognizance (ROR), unsecured bail, or secured bail. An ROR release means that the defendant was not required to pay or promise to pay any money in order to obtain release. Defendants released via unsecured bail are not obligated to pay for their release either; however, any missed court appearance could result in their having to pay a specified bail amount set by the court. When defendants are released through secured bail, that means the court has imposed a financial bond that the defendant has met by paying the full cash amount, posting property in lieu of a cash payment, depositing a certain percentage—usually ten percent—with the court, or having a third party—typically a bail bondsmen—post the bail in exchange for a fee (Cohen & Reaves, 2007; VanNostrand et al., 2011).

Several outdated studies have found that the more restrictive bond types (e.g., financial bonds) are associated with lower rates of FTA (see Cohen & Reaves, 2007; Helland & Tabarook, 2004). A meta-analysis of pretrial interventions, moreover, highlighted the fact that most studies examining the issue of financial bail and pretrial failure show a reduction in FTA occurring for those defendants placed on financial release (Bechtel et al., 2016). While the likelihood of skipping court seems to be lower for defendants released on financial conditions, it's important to note that none of the older empirical research shows reductions in pretrial crime occurring for defendants released through financial bail (Cohen & Reaves, 2007). Also, some caution is required when interpreting these studies, since many failed to account for differences in risk that might explain the reduction in FTAs when financial bail is used (Bechtel et al., 2016; Bureau of Justice Statistics, 2010).

Most of the recent research examining bail has leveraged policy changes where jurisdictions have placed restrictions on the assignment of financial conditions or have aimed to eliminate the use of cash bail altogether. Evaluations of recent bail reform efforts indicate that many of these policy changes have not resulted in significant increases in pretrial misconduct, including pretrial arrests, arrests for violence, and failures to appear. New Jersey's criminal justice reform resulted in a decrease in pretrial detention, with no observed changes to crime rates (Anderson, Redcross, & Valentine, 2019). An evaluation of a no-cash bail policy for 25 non-violent crimes implemented within the Philadelphia District Attorney's Office found a 41 percent reduction in the use of cash bail, 22 percent reduction in pretrial detention, with no significant increases in missed court appearances or new charges (Gur, Hollander, & Alvarado, 2019; Ouss & Stevenson, 2022).

Moving forward with a research agenda on pretrial interventions

It is our hope that this discussion of pretrial conditions and interventions has clearly shown that there is a glaring lack of empirical research in this crucial area. Specifically, there are few if any studies that have attempted to empirically examine the types of pretrial conditions and interventions currently imposed on released defendants, the characteristics of these interventions, and the overall efficacy of these programs in preventing missed court appearances or pretrial crime (Cohen & Hicks, 2023; Bechtel et al., 2016). To make matters worse, the existing studies focusing on these issues tend to be published as technical reports with relatively few if any peer-reviewed publications examining what conditions or interventions might work in the pretrial field (Bechtel et al., 2016). Furthermore, those studies highlighted in this paper show that most did not work as intended. In other words, there's a paucity of research demonstrating that pretrial conditions and interventions which restrict the defendants' freedoms, monitor their compliance, or place them on various treatment programs can successfully reduce pretrial failure. Additionally, these interventions may exacerbate the likelihood of pretrial failure for defendants on the lower end of the risk spectrum.

The relative dearth of empirical studies centered on what works in the pretrial arena should be contrasted with the community corrections and post-conviction fields, where there exists a solid research base of published peer-reviewed studies highlighting best practices and effective supervision strategies (Andrews & Bonta, 2017). The experience of community corrections research might suggest a way forward for researchers and policymakers interested in implementing a pretrial research and policy agenda. Specifically, research on community corrections did not occur in a vacuum; rather, there has been an extensive effort to develop a theoretical framework (see Andrews & Bonta, 2017; Trotter, 2012) that can serve to guide empirical studies directed at correctional or post-conviction populations (that is, the RNR model). While many assumed that the RNR model could be applied to pretrial populations, that assumption might not be valid. Stated another way, the RNR model might not provide sufficient guidance to understanding people's behavior in pretrial systems, and it might have to be modified, restructured, or replaced by another theoretical framework to place pretrial research on a more solid empirical footing. In sum, we are calling for the academic, research, and policymaker communities to work towards either modifying the existing theoretical constructs of RNR or developing an entirely different theoretical foundation that could be used to move our understanding of the pretrial process forward. Without this necessary theoretical development, it will be difficult to formulate a pretrial research agenda that can assist practitioners in devising evidence-based approaches that highlight best practices in this field.

On a practical level, more work needs to be done conducting research that unpacks the "black box" that is pretrial supervision. Key issues including the types of conditions, contacts, and interventions being imposed on released defendants, the frequency with which these different forms of pretrial supervision are being imposed, and the overall effectiveness of these supervision stratagems have barely been addressed in any systematic fashion. Moreover, and just as importantly, we know next to nothing about the criminogenic needs or treatment barriers of released defendants and whether these issues are being addressed. Future research efforts should consider attempting to ascertain whether core criminogenic factors and treatment barriers can be measured at the pretrial stage and what if anything could be done to alleviate defendants with these problems. Without knowing more about the populations currently on pretrial release and the reasons for their behavior, it's difficult to formulate successful treatment and intervention strategies.

Conclusion

This essay sought to take stock of our current state of knowledge of what is probably the most important "pivot" point in the criminal justice system: the pretrial release process. Specifically, it provided an overview of actuarial pretrial assessments and the implementation of these tools in criminal court systems and highlighted the characteristics of pretrial conditions and interventions currently being delivered to defendants on release and the effectiveness of these interventions. Overall, we provide evidence supporting the contention that we know a great deal about the factors that predict pretrial failure and hence can use this information to construct valid pretrial risk assessments. We know a great deal less, however, about the operation of these assessment instruments in local systems and the potential of local court actors, financial bail systems, problematic case management systems, unstandardized outcome measures, and poor training and implementation regimes to thwart the successful utilization of these instruments—hence, negating their capacity to increase release rates for low-risk defendants while minimizing missed court appearances and pretrial crime. Moreover, we might have reached the limits of "big data's" capacity to wring out more effective prediction for released defendants. A renewed pretrial research agenda would move beyond

risk assessment prediction to addressing issues of whether or not these instruments are changing local system behavior without any concomitant increases in defendant flight risk and community dangerousness. Additionally, this research agenda would begin to contemplate ideas for enhancing risk prediction that are more qualitatively based.

In addition to these risk assessment issues, we have demonstrated that the research focused on pretrial conditions and interventions is relatively meager, and what little information exists shows that these programs are in general ineffective at reducing missed court appearances or pretrial crime. There are many possible reasons that might explain these disappointing findings, one of which might be the lack of a theoretical framework that could be used to guide pretrial research. A renewed pretrial research agenda, therefore, must seriously contemplate either revising the RNR model to reflect the unique circumstances of released pretrial defendants or generating a theoretical framework that is distinctively suited to the challenges associated with pretrial supervision. Moreover, this agenda must contemplate providing baseline details about the "black box" of pretrial supervision so that we better understand the conditions, interventions, treatments, and supervision practices being employed on released defendants; furthermore, such an agenda would clarify the criminogenic needs and treatment barriers of released defendants. It is through these efforts that we hope to place the pretrial process on a firmer footing for the 21st century.

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