THE TRANSPARENCY OF JAIL DATA

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Across the country, pretrial policies and practices concerning the use of cash bail are in flux, but it is not readily possible for members of the public to assess whether or how those changes in policy and practice are affecting outcomes. A range of actors affect the jail population, including: law enforcement who make arrest decisions, magistrates and judges who rule at hearings on pretrial conditions and may modify such conditions, prosecutors and defense lawyers who litigate at hearings, pretrial-service providers who assist in evaluation and supervision of persons detained pretrial, and the custodian of the jail who supervises facilities. In the following Essay, we present the results of a case study in Durham, North Carolina. We began this project in the fall of 2018 by scraping data portraying daily pretrial conditions set for individuals in the Durham County Jail. The data was scraped from the Durham County Sheriff’s Inmate Population Search website and details the individual’s name, charges, bond type, bond amount, court docket number and time served. Scraping was initiated on September 1, 2018,

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and continues to the present. Beginning in early 2019, the judges and prosecutors in Durham, North Carolina, adopted new bail policies, reflecting a shift in the pretrial detention framework. This Essay provides a firsthand look into the pretrial detention data following these substantive policy changes. Our observations serve as a reflection on how the changes in Durham reflect broader pretrial detention reform efforts. First, we observe that a dramatic decline in the jail population followed the adoption of these policy changes. Second, we find that the policy changes corresponded with changes in aggregate conditions imposed pretrial. We describe, however, why public data that simply reports initial pretrial conditions cannot answer additional questions concerning the jail population or outcomes for the released population. Nor can this data fully answer questions concerning which actors can be credited with the observed changes. During a time in which jail populations are a subject of pressing public concern, we have inadequate information, even in jurisdictions with public jail websites, to assess policy. We conclude by discussing the implications of data limitations for efforts to reorient bail policy.

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I. INTRODUCTION

Across the country, pretrial policies and practices concerning the use of cash bail are in flux.¹ Increasingly, litigation has raised

constitutional challenges to bail policies. In addition, researchers have examined the costs of cash bail, including increasing factors such as the likelihood and severity of a conviction and the likelihood of reoffending. Accordingly, jurisdictions have reconsidered cash bail, adopted new policies prioritizing release on written promise or unsecured bond, and used risk assessments to identify individuals who pose a risk of nonappearance or reoffending. COVID-19 added to these challenges, with jails and prisons serving as the epicenter of some of the largest outbreaks across the country.

In response, some jails experienced reductions in populations of individuals detained, while others experienced lengthier stays in the absence of trials, and some became the subject of federal and state litigation seeking to reduce the number of individuals potentially exposed to COVID-19.

The mixed responses to a pressing public health crisis expose the larger and longstanding problem that poor information exists with which to evaluate the pretrial system. Indeed, calling it a system begs the question whether pretrial decisions are systematic: which government actors are responsible for pretrial policies resulting in individuals being held before trial in jail? A range of actors affect the population of people held pretrial, including: law enforcement who make arrest decisions; magistrates and judges who rule at hearings

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2. See infra notes 38–39.
4. See infra note 39.
on pretrial conditions and may modify those conditions; prosecutors and defense lawyers who litigate at hearings; pretrial-service providers who assist in evaluation and supervision of persons detained pretrial; and custodians of the jail who supervise facilities. The interests and practices of these actors may not be aligned. Which of these relevant actors can affect policy change? It is often not possible to readily examine that question based on publicly available data. Indeed, it may not even be possible for actors within the criminal system to obtain good answers to these questions, even though they may have access to internal administrative data. Within a jurisdiction, it may even be difficult to determine whether a pretrial system is working to improve outcomes of interest, much less whether actors are following the policies and goals that they adopted. 7

This Essay examines the challenges in the public assessment of who is responsible for bail policy based on pretrial outcome data from Durham, North Carolina. In addition, we provide a first look at data scraped from the Durham County Sheriff’s Office Inmate Population Search (“Durham Sheriff’s jail website”). 8 While the data permits some insight into pretrial outcomes before and after these changes in policy, other key questions remain unanswered.

As in many other jurisdictions, most courts in North Carolina had, for decades, adopted bail schedules that set out, based on the type of offense charged, cash bail amounts to be used as pretrial conditions in criminal cases. 9 In 2019, those policies changed due to community expressions of concern with the jail population, new bail funds and advocacy groups, and newly elected officials who campaigned against the use of cash bail. 10 In the prior pretrial policy dating back to 2009, the District Court in Durham, North Carolina, adopted a bail schedule that assigned recommended secured bond amounts for each level of offense. 11 Beginning in early 2019, however, the judges and then prosecutors in Durham, North Carolina, adopted new policies concerning pretrial detention, release, and bail. On February 28, 2019, the Fourteenth Judicial District, which consists of

7. O’Donnell v. Harris County, 251 F. Supp. 3d 1052, 1117–18 (S.D. Tex. 2017) (finding that “Harris County does not track the comparative failure-to-appear or new-criminal-activity rates of misdemeanor defendants released on different types of bonds.”)


Durham County, issued new policies relating to bail and pretrial release.\textsuperscript{12} The district court judges modified the preexisting bail schedule in a number of respects and also stated that prosecution recommendations would be considered.\textsuperscript{13} Subsequently, the Durham District Attorney’s Office released in February 2019, and formally announced on May 21, 2019, their adoption of a new policy based on a presumption of pretrial liberty, while seeking unafforded bond and resulting detention for dangerous offenders.\textsuperscript{14} The policy rejected any bail schedule.\textsuperscript{15} Accordingly, under these two new policies, both prosecutors and defense lawyers can advocate for pretrial conditions, but apart from a handful of charges for which detention is mandatory, judges retain discretion to set conditions of release.\textsuperscript{16}

It is clear that the Durham jail population has steeply declined during the time period, beginning in 2019, when these new policies were adopted.\textsuperscript{17} The average jail population had been over 600 individuals in 2007, and it had already fallen somewhat, to about 500, by 2018.\textsuperscript{18} After the adoption of new policies in early 2019, it fell to 366.\textsuperscript{19} Still more recently, we note that Durham actors announced that they took steps to release nonviolent detainees in response to COVID-19.\textsuperscript{20} During this time, Durham County Detention Facility staff tested positive for COVID-19, and one detention official died.\textsuperscript{21} As a result, by mid-2020, the jail population fell again, to 334.\textsuperscript{22} By late August, 2020, the jail population fell further, to 251.\textsuperscript{23}

The aggregate numbers suggest important policy changes at work; however, the question of who is responsible for these changes and how well they are working is harder to examine, despite the fact that, unlike many jurisdictions, the Durham jail population can be
viewed on a publicly accessible website. This is not just a local problem. Data concerning the pretrial process in the U.S. are very difficult to obtain at the local, state, or national level. As we will describe, Durham, North Carolina, provides a microcosm of this problem. National data exists only through a federal survey, conducted annually, of a sample of 950 jails.24 State-level data is wholly lacking, apart from basic information about jail capacity.25 Local data often consists of information, at best, concerning jail rosters and populations but not regarding how pretrial decisions were reached, justified, and modified, as well as what outcomes resulted.26

The lack of adequate jail data reflects a traditional low priority placed on pretrial adjudication and the fact that the U.S. traditionally did not have large populations of individuals detained pretrial.27 Now that the U.S. faces this problem, it is increasingly important to track and understand that population, just as the U.S. tries to do so regarding prison populations. Tracking the seven hundred thousand plus individuals detained daily in jails in the U.S., over thirteen million detained annually28 and about 60 percent of whom are individuals who have not been convicted of a crime,29 is still more urgent post-COVID-19.30 We require far better pretrial data to fully understand whether public health risks are involved, whether individuals are detained too often due to inability to pay cash bail, and whether magistrates and judges are consistent, or fair, or biased in their decision-making.31

We began this project in the fall of 2018 by scraping data from the Durham Sheriff’s jail website.32 That website displays daily

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24. See infra note 99.
25. Id.
26. Id.
28. Id. at 40 (“The short sentences and pretrial detention of the jail population create a high turnover and vast numbers of admissions.”).
31. Regarding the need for cost-benefit analysis in pretrial decision-making and outcomes, see Crystal S. Yang, Toward an Optimal Bail System, 92 N.Y.U. L. REV. 1399, 1404 (2017) ("I argue that current bail practices fail to take into account the private and social costs of pre-trial detention—notably, the loss of freedom to defendants, the collateral consequences to defendants and their family members, and the administrative costs to the state. Instead, bail practices primarily reflect a concern with certain benefits of pre-trial detention, namely, preventing flight and new crimes if defendants are released.").
32. DURHAM CNTY. SHERIFF’S OFF., supra note 8.
pretrial conditions set for people in the Durham County jail. It is intended primarily to provide information to victims (and not to permit systematic analysis of information regarding the pretrial or jail population). The Durham Sheriff's jail website displays the individual's name, charges, bond type, bond amount, court docket number, and time served. Scraping was initiated on September 1, 2018, and continues to the present. The data analyzed here is current through September 21, 2019. We scraped approximately 35,294 charges, which we collapsed into 9,000 pretrial incidents (each incident may include more than one concurrent charge, grouped by each individual). This analysis does not shed light on more recent changes to Durham policy and practice in response to COVID-19.

Below, Part II provides an overview of North Carolina law concerning bail and pretrial release. Next, Part III describes the policy changes that have occurred in Durham, North Carolina. Part IV turns to our empirical findings. Part V details the benefits and challenges of using data scraped from publicly available jail websites. Part VI concludes the implications of these findings for pretrial reform efforts and discusses further efforts to better empirically study pretrial policies and practices.

II. NORTH CAROLINA LAW ON BAIL AND PRETRIAL RELEASE

A. U.S. Constitutional Rulings Regarding Bail

The U.S. Constitution regulates bail and pretrial release, for which multiple lines of constitutional rulings apply, including the U.S. Supreme Court's ruling in *Bearden v. Georgia,* concerning equal protection and due process rights to not be punished based on poverty, and *United States v. Salerno,* recognizing the fundamental right to pretrial liberty. Thus, as the Court put it in *Stack v. Boyle,* the "traditional right to freedom before conviction permits the unhampered preparation of a defense and serves to prevent the infliction of punishment prior to conviction. Unless this right to bail before trial is preserved, the presumption of innocence, secured only after centuries of struggle, would lose its meaning." "Time spent in jail... often means loss of a job; it disrupts family

33. *Id.*
34. *Id.*
36. *Id.* at 672-73.
38. *Id.* at 755 (describing pretrial detention as a "carefully limited exception" to the "norm" of pretrial liberty); see also *United States v. Montalvo-Murillo,* 495 U.S. 711, 716 (1990); Sandra G. Mayson, *Dangerous Defendants,* 127 YALE L.J. 490, 504-507 (2017).
40. *Id.* at 4.
life; and it enforces idleness." 41 Lower courts have increasingly engaged with these constitutional questions to challenge cash bail practices. 42 One such federal lawsuit is currently pending in Alamance County, North Carolina. 43

B. North Carolina Pretrial Rules

Article I, Section 27 of the North Carolina Constitution provides, as does the Eighth Amendment to the U.S. Constitution, that “excessive bail shall not be required.” 44 A judge in North Carolina has discretion in determining conditions for pretrial release in most noncapital cases. 45 The forms of available pretrial release include: (1) written promise, or release of the defendant on his written promise to appear; (2) unsecured bond, release of the defendant upon execution of an unsecured appearance bond in an amount specified by the judicial official; (3) release to supervised custody, placing the person in the custody of a designated person or organization; (4) secured bond, requiring execution of an appearance bond in a specified amount by a cash deposit of the full amount of the bond or by a mortgage; and (5) electronic house arrest with secured bond. 46 The judge must choose “at least” one of these pretrial release conditions. 51 In addition, a judge may release the defendant to the supervision of a pretrial service agency. 52

42. See, e.g., Buffin v. City & County of San Francisco, No. 15-CV-04959-YGR, 2018 WL 424362, at *9 (N.D. Cal. Jan. 16, 2018) (finding that constitutional considerations apply “with special force in the bail context, where fundamental deprivations are at issue and arrestees are presumed innocent”); accord Walker v. City of Calhoun, 901 F.3d 1245, 1259-60 (11th Cir. 2018); ODonnell v. Harris County, 892 F.3d 1245, 1257 (5th Cir. 2018); Pugh v. Rainwater, 572 F.2d 1053, 1056 (5th Cir. 1978) (en banc) (“Pretrial imprisonment solely because of indigent status is invidious discrimination and not constitutionally permissible.”).
44. U.S. CONST. amend. VIII; N.C. CONST. art. 1, § 27.
45. N.C. GEN. STAT. § 15A-533.
46. Id. § 15A-534(a)(1).
47. Id. § 15A-534(a)(2).
48. Id. § 15A-534(a)(3).
49. Id. § 15A-534(a)(4).
52. See § 15A-535(b); see also JOHN RUBIN ET. AL., NORTH CAROLINA DEFENDER MANUAL: VOL. 1 PRETRIAL 1-18 (2d ed. 2013) (“Defendants supervised by a pretrial services program often do not have to post bond and may obtain release more quickly than they otherwise could. Defendants may have to comply with various conditions, such as reporting periodically to a pretrial services caseworker, obtaining substance abuse treatment, etc.”).
After an arrest, police are obligated to take a defendant before a magistrate "without unnecessary delay." A magistrate will inform the defendant of the charges and certain rights, as well as general circumstances concerning pretrial release and bail. The magistrate has initial discretion to make a release and pretrial condition decision; however, in felony cases or if the person is sent to the jail, a separate hearing before a district judge occurs at a first appearance.

At the first appearance, the district court judge (or potentially a clerk of court) will review the pretrial status of the defendant and appoint counsel. North Carolina law then contains detailed rules regarding bail, including exceptions and special procedures for particular crimes. Finally, the statutes list factors that judges must consider, "on the basis of available information," when setting pretrial conditions:

- The nature and circumstances of the offense charged;
- The weight of the evidence against the defendant;
- The defendant’s family ties, employment, financial resources, character, and mental condition;
- Whether the defendant is so intoxicated that he or she would be endangered if released without supervision;
- The length of the defendant’s residence in the community;
- The defendant’s record of convictions;
- The defendant’s history of flight to avoid prosecution or failure to appear at court proceedings; and
- Any other evidence relevant to pretrial release.

53. See § 15A-511(a)(1) ("A law-enforcement officer making an arrest with or without a warrant must take the arrested person without unnecessary delay before a magistrate as provided in G.S. 15A-501."); see also § 15A-501(2).
54. Id. § 15A-511(b).
55. A district judge does not automatically review a magistrate’s determination in a misdemeanor case. Rubin et al., supra note 52, at 4 ("Typically, at initial appearance the magistrate sets a trial date in district court, which may be a week or more away.").
56. § 15A-521(b)(5) (alternatively, a defendant may be produced before the district court judge for a probable cause hearing or for trial or held for another specified purpose). In addition, for certain domestic violence crimes, only a judge can determine conditions for release for the first forty-eight hours after arrest. See § 15A-534.1. See also Criminal Cases, N.C. Jud. Branch, https://www.nccourts.gov/help-topics/criminal-law/criminal-cases (last visited Nov. 26, 2020).
57. §§ 15A-601-06.
59. § 15A-534(c).
Thus, unless these findings are made, a judicial official must release the defendant upon: (1) written promise to appear; (2) an unsecured bond; or (3) a custody order.  

III. DURHAM POLICIES ON PRETRIAL RELEASE AND BAIL

The Fourteenth Judicial District, which consists of Durham County, includes criminal magistrate judges, district judges, and superior court judges. Magistrates are nominated by the clerk of court and are appointed by the senior resident superior court judge for two- and then four-year terms. District judges are elected for four-year terms; such elections had been nonpartisan, but beginning in 2017, such elections became partisan. By statute, all district courts in North Carolina must issue pretrial release policies for each county in a given district. The chief resident superior court judge and chief district judge set the bail policy in District Fourteen, which provides guidelines for magistrates and district judges when they make decisions regarding pretrial conditions.

The following presents three subparts. Subpart A describes the preexisting 2009 Durham Judges' Pretrial Policy. Subpart B describes the revised 2019 Durham Judges' Pretrial Policy. Lastly, Subpart C describes the 2019 Durham District Attorney's Office Policy, as well as Table 1, a side-by-side comparison of these three policies.

A. 2009 Durham Judges' Pretrial Policy

The preexisting pretrial policy for the Fourteenth Judicial District largely consisted of a bail schedule. Cash bail approaches toward pretrial release have been a comparatively recent phenomenon in the U.S., dating back about a hundred years. In Durham, for offenses apart from A-level felonies (which have no bond under North Carolina law), the policy recommended a cash bail

60. *Id.* § 15A-534(b) (“The judicial official in granting pretrial release must impose condition (1), (2), or (3) in subsection (a) above unless he determines that such release will not reasonably assure the appearance of the defendant as required; will pose a danger of injury to any person; or is likely to result in destruction of evidence, subornation of perjury, or intimidation of potential witnesses.”).

61. N.C. CONST. art IV, § 10; N.C. GEN. STAT. § 7A-171.


63. N.C. GEN. STAT. § 15A-535(a) (requiring that the senior resident superior court judge, in consultation with chief district court judge or all district court judges, must issue pretrial release policies for each county in judicial district).

64. *See supra* notes 11-12.

65. *See infra* Table 1.

amount or a range of possible amounts.\textsuperscript{67} Notably, the policy recommended fairly high bond amounts, from $1,000–$1,500, for misdemeanor cases.\textsuperscript{68} Further, the bond amounts rapidly grew in size as felonies became more serious. The policy never suggested that any inquiry be made into a person’s ability to pay any particular amount. Nor did the policy discuss any presumption of pretrial liberty. The copy of the policy provided included handwritten notes updating the cash bail schedule, which apparently increased some of the dollar amounts at some point in time.\textsuperscript{69}

B. Revised 2019 Durham Judges’ Pretrial Policy

On February 28, 2019, the Fourteenth Judicial District issued new policies relating to bail and pretrial release.\textsuperscript{70} In announcing the new policy, Chief Resident Superior Judge Orlando Hudson explained that it “de-emphasizes” cash bond: “The use of cash bonds doesn’t protect the public because the mere fact that you have money doesn’t mean that you are not a dangerous person.”\textsuperscript{71} Upon the announcement of the new guidelines, advocates in Durham immediately protested that it did not go far enough; one local organizer commented, “We want an end to cash bail and we want it now.”\textsuperscript{72}

The current 2019 Durham Judges’ Pretrial Policy states that the “primary purposes of a condition of pretrial release are reasonably to assure (1) that the defendant will appear as required, and (2) the safety of the community.”\textsuperscript{73} The policy creates a rebuttable presumption against pretrial release for trafficking, gang activity, use of a firearm, and methamphetamine offenses.\textsuperscript{74} The policy also includes a schedule of revised bond amounts. The schedule provided new dollar ranges, with the lower end of the range reduced from prior pretrial and bail policies in Durham; however, the higher end of the range remained unchanged. The new policy notes that the “Court takes notice that the District Attorney[‘s] Office for this District” has a new assistant district attorney assigned to jail court, and judges may “consider the State’s motion and in appropriate cases modify the release orders.”\textsuperscript{75} Finally, the new policy includes a checklist for magistrates.\textsuperscript{76} It is noteworthy that the 2019 Durham Judges’

\begin{footnotesize}
\begin{enumerate}
\item \textsuperscript{67} See infra Table 1; see also Fourteenth Jud. Dist., supra note 11.
\item \textsuperscript{68} See infra Table 1; see also Fourteenth Jud. Dist., supra note 11.
\item \textsuperscript{69} See infra Table 1; see also Fourteenth Jud. Dist., supra note 11.
\item \textsuperscript{70} Fourteenth Jud. Dist., supra note 12.
\item \textsuperscript{71} Id.
\item \textsuperscript{72} Id.
\item \textsuperscript{73} Fourteenth Jud. Dist., supra note 12, at 3.
\item \textsuperscript{74} Id. at 3–4.
\item \textsuperscript{75} Id. at 12.
\item \textsuperscript{76} Id. at 13–14.
\end{enumerate}
\end{footnotesize}
WAKE FOREST LAW REVIEW  

C. 2019 Durham District Attorney’s Office Policy

District Attorneys in North Carolina are elected in a partisan election and serve four-year terms. In January 2019, District Attorney Satana Deberry took office as a newly-elected district attorney for Durham County, having campaigned to reform bail’s effects on the poor and individuals with mental health needs. Subsequent to the adoption of the 2019 Durham Judges’ Pretrial Policy, the Durham District Attorney’s Office released, in May 2019, a new policy concerning their approach toward making pretrial recommendations to judges. The policy begins by emphasizing that North Carolina law “expressly favor[s] the policy that pretrial release of the defendant should be effected under the three conditions that do not depend upon the defendant’s financial condition.” The policy notes that “[d]espite statutory limitations on the use of secured bonds, the practice in this county has been to impose secured bonds in many cases pursuant to a bond schedule which fails to consider the unique circumstances of the individual and the individual’s ability to pay the secured bond.” Such practices “unjustly and disparately treat defendants with limited financial means.” The policy also notes that “[f]ollowing a predetermined bond schedule without considering individual circumstances is contrary to federal and state law. Secured bond should only be imposed in rare circumstances, and when imposed, the judge must consider the individual’s financial circumstances.”

Unlike the 2019 Durham Judges’ Pretrial Policy, the 2019 District Attorney’s Office Policy does not contain a bond schedule. Instead, it states that “[f]or all felony offenses that do not involve the use or threat of force against another person, the presumption at initial or first appearance is release upon (1) a written promise to appear or (2) a custody order.” The policy states that arrests should generally not be sought for failures to appear, unless a trial date has been set. Instead, generally, the prosecution should request that the

77. See id. at 1.
78. N.C. CONST. art. IV, § 18(1); N.C. GEN. STAT. § 163-106(c).
81. Id.
82. Id.
83. Id.
84. Id.
85. Id. at 1–2.
matter be reset with a new date. In contrast, unattainable secured bond, the policy states, should be reserved generally for persons with Class E felonies or above. The policy explains:

Barring unusual circumstances, a prosecutor should only request an unattainable secured bond pursuant to § 15A-534(a)(4) where the defendant is (1) charged with a crime involving the use or threatened use of force, (2) a substantial probability exists that the defendant committed the crime, and (3) clear and convincing evidence demonstrates that no conditions of release are sufficient to protect the community from the risk of physical injury to another person or to prevent the destruction of evidence, subornation of perjury, or intimidation of potential witnesses.

Table 1 below provides a comparison of each of the three Durham policies just discussed. We note that all of the policies share that judges retain discretion concerning pretrial condition setting. Second, while the new 2019 Durham Judges’ Pretrial Policy sets lower cash bail amounts, it also expands discretion for a number of offenses by creating a broader range of cash amounts at the upper end, even while reducing the lower end.

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<tbody>
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<td>Class A1 (DV):</td>
<td>$1,500–$3,000 Class A1:</td>
<td>Class A1 (DV): N/A Class A1: $0–$1,000 Class A1: $0–$1,000 Class A1: $0–$1,000</td>
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<td>$1,000–$1,500</td>
<td>Class 1: $1000 Class 2: written promise Class 3: written promise</td>
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<td>Class 2: $0–$250</td>
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<td>Class 3: written promise</td>
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<td>Class A: no bond</td>
<td>Class A: no bond (unless judge sets)</td>
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<td>Class B1: $200,000–$750,000</td>
<td>Class B1: $50,000–$1,000,000</td>
<td>Nonviolent felonies: presumption of release upon written promise to</td>
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86. Id. at 3.
87. Id.
88. See infra Table 1.
89. See infra Table 1.
90. Domestic violence ("DV").
### Drug Trafficking

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<th>Class</th>
<th>Amount</th>
<th>Appearance or Custody Order</th>
<th>Violent Felonies: Written Promise to Appear or Custody Order Requiring Community Reporting. Electronic Monitoring or House Arrest if Less Restrictive Measures Would Fail.</th>
</tr>
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<tbody>
<tr>
<td>Class B2</td>
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<td>Class C:</td>
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<td>Class E:</td>
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<tr>
<td>Class I:</td>
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### Other Factors

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<th>Violent Felonies: Written Promise to Appear or Custody Order Requiring Community Reporting. Electronic Monitoring or House Arrest if Less Restrictive Measures Would Fail.</th>
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<tbody>
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<td>No bond</td>
<td></td>
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<tr>
<td>Mis. w/ Firearm:</td>
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<td></td>
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<tr>
<td>Habitual Felon:</td>
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<td></td>
</tr>
<tr>
<td>Violent Habitual Felon:</td>
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<td></td>
</tr>
<tr>
<td>Mis Probation Violation:</td>
<td>variable</td>
<td>No bond</td>
<td></td>
</tr>
<tr>
<td>Fel Probation Violation:</td>
<td>variable</td>
<td>No bond</td>
<td></td>
</tr>
</tbody>
</table>

**Criticizes use of predetermined bail schedule.** Secured bonds should only be imposed if written promise, unsecured bond, or custody order will not reasonably assure defendant’s appearance, result in injury to a person, or result in destruction of evidence or witness.
IV. EMPIRICAL RESEARCH METHOD & FINDINGS

In this Part, we detail our empirical investigation of Durham bail practices, emphasizing the limitations of the data that we examined. Subpart A begins by explaining the Durham Sheriff's jail website and how our web scraper collected data. Subpart B describes the variables we collected, other sources of data we were able to link, and how these data were cleaned and processed for analysis. Finally, Subpart C describes our research questions and bail conditions in Durham.

A. Data Scraping

The Durham Sheriff’s Office maintains an online inmate population search that displays the current inmate population of the Durham Jail. The Durham Sheriff’s jail website permits individuals to be notified of changes made to any individual’s pretrial status through Victim Information and Notification Everyday ("VINE"), a commercial provider that maintains the website as a source of information to victims. Over a dozen other jurisdictions in North Carolina maintain inmate population websites. Typically these jurisdictions are larger than Durham and may use different service providers. However, the information available is largely similar. Other local jails do the same across the country. There is no statewide jail data resource in North Carolina, nor does such data exist in a uniform manner in any state in the U.S. Studies of

| $5,000 (min.); $1,000 (absconders) | intimidation. |

91. Data scraper created by Sean Chen of the Duke Law Library. Data on file with authors. Information about pretrial conditions is made public on the Durham County Sheriff’s Office Inmate Population Search (Durham Sheriff’s jail website).
92. DURHAM CNTY. SHERIFF’S OFF., supra note 8.
93. Id.; see also VINE, https://www.vinelink.com (last visited Nov. 26, 2020) ("VINE is the nation’s most reliable and confidential source for updated custody status and criminal case information.").
95. Id.
96. Id.
98. In North Carolina, the only centrally collected data is a monthly report of jail occupancy rates. See Jessica Smith, 2018 North Carolina Jail Occupancy
nationwide jail populations have relied upon data from the Annual Survey of Jails, a survey administered to about 950 local jails by the Bureau of Justice Statistics since 1982.99 Using these various sources, other studies have examined local jail data.100 Nevertheless, the lack of comprehensive and uniform data sets remains a local, state, and national problem for jail populations and pretrial decision-making.

Starting in September 2018, we used an automated program to begin scraping the Durham Sheriff’s jail website, a program that is still ongoing.101 The program ran and continues to run several times a day to catch all updates to the website, which occur at least once in the morning and once in the afternoon. The scraper collected and entered into a database each defendant’s name, date confined, date charged, date released (if applicable), charge, bail type for each charge amount, court docket number, and number of days in jail.102 We scraped from the “Last 24 Hours” page, which listed information on individuals held in the jail during the last day, even if they were released. We were able to capture information that may have changed, such as changes in bail conditions or amounts, and release date. For information that was identical between updates, no new entry was recorded. If any of the variables changed (e.g., bail type and amount charged) a new entry was recorded, allowing us to observe when bail conditions changed.103

There are important limitations with these data, reflecting how it is gathered and how it is designed. The Durham Sheriff’s jail website was designed for the purpose of victim notification in specific cases, regarding individuals detained at the jail.104 As a result, it does not display persons not detained in the jail. Thus, our data scraper, collecting data from that website, is not capturing all pretrial conditions in Durham, as people released or who receive unsecured bail from the magistrate will, in most cases, not be confined in jail and thus not be present on the scraper. The website does not reflect arrests either. To truly understand the pretrial population in

100. See, e.g., MARY T. PHILLIPS & N.Y.C. CRIM. JUST. AGENCY, PRETRIAL DETENTION AND CASE OUTCOMES, PART 1: NONFELONY CASES (2007); Heaton et al., supra note 3, at 733, 736 tbl.1.
101. See DURHAM CNTY. SHERIFF’S OFF., supra note 8.
102. See supra note 91.
103. See supra note 91
104. DURHAM CNTY. SHERIFF’S OFF., supra note 8.
Durham, including those arrested but not detained, and those released pretrial, one would need arrest data from law enforcement, as well as data from magistrate’s hearings. Nor does this website permit a full examination of judicial discretion, where any analysis of the jail website includes only cases already seen by a magistrate.\(^\text{105}\)

Second, the Durham Sheriff’s jail website does not contain more detailed administrative information from the courts, as its fields are fairly minimal.\(^\text{106}\) It does not necessarily explain why a person is no longer in jail; it just notes the fact that a person is not there anymore.\(^\text{107}\) Court officials, law enforcement officers, district attorneys, and public defenders have access to an administrative database, the Criminal Court Information System (“CCIS”), which includes far more complete information regarding pretrial conditions and status of any given criminal defendant.\(^\text{108}\) Court clerks enter information regarding pretrial conditions in that system, as well as far more updated information beyond that contained in the Durham Sheriff’s jail website.\(^\text{109}\) To provide one example of a limitation of the public-facing jail website, in most cases, one might assume that someone who stops appearing in the scraped database is released because they have made bail, but other causes are plausible as well, such as transfer to another facility.\(^\text{110}\) We are able to observe when bond types and amounts change at first appearances, but the jail website may not perfectly capture all such cases.\(^\text{111}\) For example, we cannot know from the jail website if a person’s bail changed in such a way that allowed them to be immediately released, such as when a more affordable bond amount is set or the bond type is changed. We can see if a person’s bond changed in amount, but the person remained in jail.\(^\text{112}\) However, if a person is held in jail on a secured bond and then released after first appearances, we cannot determine if the person was released because they made bail, the bond amount was decreased such that it became affordable, or if the secured bond was changed to unsecured or released on recognizance.\(^\text{113}\)

With each of these limitations in mind, we nevertheless sought to learn what we could from public jail data. To prepare our data for analysis, we cleaned the database constructed by the scraper, collapsing information from September 2018 to September 2019 into

\(^{105}\) Id.
\(^{106}\) Id.
\(^{107}\) Id.
\(^{108}\) N.C. JUD. BRANCH, CRIMINAL COURT INFORMATION SYSTEM (2017), https://www.nccourts.gov/assets/documents/publications/Technology_CCIS_CC_ Facts.pdf?HM54HZm1KsOdhpOdsPzyvYx0x0pMr.vyc (providing statistics as of July 30, 2017).
\(^{109}\) Id.
\(^{110}\) DURHAM CNTY. SHERIFF’S OFF., supra note 8.
\(^{111}\) Id.
\(^{112}\) Id.
\(^{113}\) Id.
a single arrest “incident.” These incidents were unique by defendant name and confinement date combinations. We used confinement date because, in some cases, the charge date for specific charges varied by a day or two but seemed connected to the incident that led to the arrest. We also isolated the “most serious” charge for each incident for analysis, which we defined as the charge carrying the highest (and usually only) bond amount. We observed that for nearly every person detained in jail with multiple charges, only one charge would have a bond amount. All others would have an amount of $0.00, despite all having the same bond type. For example, a person detained could have an “Assault on a Female” charge for $1,500.00 secured bond and a Driving While License Revoked (Not Impaired) charge for $0.00 secured bond. Finally, we categorized every charge into one of the following categories: special victims’ unit (“SVU”), homicide/violent crime, domestic violence (“DV”), drugs and property, traffic, failure to appear (“FTA”), or other. We also noted whether the list of charges contained any FTA, regardless of whether it was the most serious charge. In addition to the data captured by the scraper, we also identified and recorded the name of the judge who set bond for each incident by matching judge schedules for the first appearance to the date the person was confined. Because only one judge presides in first appearance court per day, and first appearances are held the business day after a person is confined, we believe that we can match the dates with a reasonable amount of confidence.

Thus, analyses were conducted primarily at an “incident” level, and we were able to consider both case- and non-case-related factors. Case-related factors include the total bond amount and type, the most serious charge category, the number of concurrent charges, and presence of an FTA. Non-case-related factors are defendant age, gender, race, and the identity of the judge setting bond. We also chose to not analyze some incidents due to possible issues with data accuracy (see Part IV for more information). Namely, we do not analyze 3,406 charges that were superior court cases, and 6,437 charges that had “N/A” listed as the bond condition. In total, this leaves 6,819 bail sentencing incidents for analysis.
B. Research Questions

Despite the important limitations of the publicly available data on the jail population, we were able to observe some general features of the bail conditions of the Durham jail population and how different case-related and non-case-related factors affect bond type and amounts. Our first goal was to provide descriptive observations of the bond conditions for those in the Durham jail, including who is being held, for how long, and under what types and amounts of bail. For our second goal, we used time series regressions to assess the impact of the two 2019 policy changes on bail practices. In the Subpart that follows, we present analyses aimed at describing and quantifying these relationships, addressing the following research questions:

1. Describe the types and amounts of bail conditions for the jail population.
2. How many people are remaining in jail on secured bond, and how many people are remaining in jail on “affordable” or low bond amounts?
3. How do bond types and amounts differ based on case factors (e.g., crime type, number of charges, and presence of an FTA)?
4. How often do bond types and amounts change?

C. Findings & Results

Before presenting the analysis, we first provide some context on the Durham County Jail. Figure 1, below, presents monthly jail occupancy counts between 2016 and 2019. As you can see, the jail population has fallen substantially since 2016. In 2016, the average monthly occupancy for the jails was 487 individuals. In 2019, the average monthly occupancy was only 428 individuals.

After cleaning the dataset, we are left with a total of 6,819 unique bail sentencing incidents between September 1, 2018, and September 31, 2019. Here, a bail “incident” is a set of all concurrent charges grouped by date and person. This means that a given incident in our dataset can contain multiple charges. In fact, our data has 4.39 charges per incident: 7.5 percent of these incidents had no bond set, 0.7 percent had a written promise, 2.1 percent had cash bond, 0.8 percent had the defendant released on custody, 71.6 percent set unsecured bond, and 17.3 percent set a secured bond. The average bail amount across these incidents was $47,629, and the median bail

122. See infra Figure 1.
123. See supra note 91.
124. Id.
125. Id.
amount was $3,000. There is substantial variation in bail amounts across bond type. Unsecured bond bail amounts were on average set at $8,096.59, while secured bonds had average bail amounts of $64,434.71. That variation also continues across offense type.

**Figure 1. Jail Population Count in Durham County (2016-2019)**

![Graph showing monthly jail population counts in Durham County from 2016 through 2019.]

These 6,819 sentencing incidents represent only a fraction of all cases in Durham during this same time span. Between September 1, 2018, and July 31, 2019, there were a total of 15,081 charging incidents. Only 5,655 (37.6 percent) of those 15,081 incidents appear in our dataset. This means that a majority of charged individuals are released by the magistrate and not detained pretrial either because of the magistrate's decision in the case or the arrest did not permit for bail.

Table 2 presents the number of incidents associated with each offense type and provides additional information on bail amounts. In total, sex offenses and violent crimes have the largest average bail amount, and traffic offenses and failure to appear offenses have the smallest average bail amount. Interestingly though, these effects are driven by extremely high outlier cases, where bail is set in the

126. *Id.*
127. *Id.*
128. *See infra* Table 2.
129. *See infra* Table 2.
hundreds of thousands of dollars, or even millions. This is reflected in the median bail amounts across offense type, where there is less difference between offense types.

Table 2. Offense Type and Bail Amount

<table>
<thead>
<tr>
<th>Offense</th>
<th>Count</th>
<th>Mean</th>
<th>Median</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traffic</td>
<td>447</td>
<td>$2,823.91</td>
<td>$1,500.00</td>
</tr>
<tr>
<td>Drugs/Property</td>
<td>1,357</td>
<td>$60,248.55</td>
<td>$4,500.00</td>
</tr>
<tr>
<td>Failure to Appear</td>
<td>1,087</td>
<td>$15,475.64</td>
<td>$2,500.00</td>
</tr>
<tr>
<td>Sex Offenses</td>
<td>114</td>
<td>$173,200.70</td>
<td>$5,000.00</td>
</tr>
<tr>
<td>Violent</td>
<td>1,792</td>
<td>$62,813.39</td>
<td>$2,500.00</td>
</tr>
</tbody>
</table>

These data provide a clear picture of some general trends regarding bail sentencing in Durham. But the unique aspect of this case study is that we have data both before and after two explicit changes to pretrial sentencing policies. This gives us leverage to analyze trends in bail hearings associated with the policy change. On March 1, 2019, judges changed their pretrial detention policies. The District Attorney’s office in Durham adopted their pretrial policy change in February 2019 and later announced the change in May of 2019. For the purposes of these analyses we treat the “reform” as occurring on March 1, 2019, unless otherwise noted. Conclusions are statistically and substantially unchanged when we treat the “reform” date as occurring in February of 2019.

The two policy changes were generally observed to: (1) reduce the rates of high, unattainable bond amounts for nonviolent offenses; (2) lower the average cash bail amount; and (3) shift the bail types away from secured bonds. Table 3 presents the distribution of bail types both before and after the March 1, 2019, judges’ policy change.

Table 3. Bail Type Pre and Postreform

<table>
<thead>
<tr>
<th>Type</th>
<th>Prereform %</th>
<th>Postreform %</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Bond</td>
<td>7.7% (235)</td>
<td>7.3% (277)</td>
</tr>
<tr>
<td>Promise</td>
<td>0.5% (15)</td>
<td>0.9% (33)</td>
</tr>
<tr>
<td>Cash</td>
<td>1.7% (53)</td>
<td>2.4% (90)</td>
</tr>
<tr>
<td>Custody</td>
<td>0.5% (16)</td>
<td>1.1% (41)</td>
</tr>
</tbody>
</table>

130. See supra note 91.
131. See infra Table 2.
135. See infra Table 3.
These data suggest that the policy change is associated with an effect in the intended direction. After the policy change, the number of sentencing incidents with unsecured bonds went up by 4.7 percent. The rise in unsecured bond sentences came from a drop in secured bonds by 5.8 percent. This is in line with the recommendations of the policy.

Figure 2 displays a scatterplot with the bail amounts for each case across the full time series. In addition, Figure 2 displays the Loess regression line across the full time series. The dotted vertical line designates the date where both the judge and district attorney pretrial sentencing policy changes were implemented. To the left of that dotted line is the prereform period, and to the right of that line is the postjudge policy reform period. This figure can show us trends in bail hearings.

We observe in these data downward trends regarding the prereform bail amounts and postreform bail amounts. Put substantively, the mean bail bond amount before the first of the two policy changes is $61,241.06, while the mean bail bond amount after the first policy change is $36,640.15. This means that since the reforms began, the mean bond amount has decreased by $24,600.91. The median bail amount has also fallen by $1,000 in the postreform period. However, in a regression with fixed effects for each date, a case being pre or postreform was not a statistically significant predictor of bail amount. This is likely due to the prereform trends in bail amount, which are decreasing monotonically.

These changes are also mirrored by an increase in the rate of attainable bond amount. After conversations with the District Attorney’s Office, we define an attainable bond amount as anything under $1,000, as these would require $100 or less up front to secure release for the accused. Before the 2019 reforms began, the percent of sentencing incidents with a bail amount under $1,000 was 13.9

<table>
<thead>
<tr>
<th></th>
<th>Secured</th>
<th>Unsecured</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>74.8% (2,277)</td>
<td>14.7% (450)</td>
</tr>
<tr>
<td></td>
<td>69.0% (2,605)</td>
<td>19.3% (727)</td>
</tr>
</tbody>
</table>

Note: Parentheses Presents Total Number of Cases in Cell

136. See supra Table 3.
137. See supra Table 3.
138. See supra Table 3; see also supra notes 80–84 and accompanying text (noting that secured bond should be reserved for rare circumstances).
139. See infra Figure 2.
140. See infra Figure 2.
141. See infra Figure 2.
142. See infra Figure 2.
143. See infra Figure 2.
144. See infra Figure 2.
145. See supra note 91.
percent. Postreform, the percent of sentencing incidents with a bail amount under $1,000 is 15.7 percent. Postreform attainable bond rates increased by 1.7 percent.\textsuperscript{146} This change is in a direction consistent with the recommendations of the bail policy.

\textbf{FIGURE 2. MEAN BAIL AMOUNT PRE AND POSTREFORM}

A concern might be that these differences in average bail amount, bail type, and affordable bail amounts are the product of something other than the policy that changed between the pre and postreform period. Two reasonable explanations may be that (1) different kinds of cases are showing up before and after the reforms and (2) changes in the judges occurred before and after the reforms. We can say that these two concerns do not appear to be driving the changes over time in bail amount or type. The distribution, seriousness, and amount of charges per sentencing incident is not significantly different in the pre and postreform period.\textsuperscript{147} Between the pre and postreform period two new judges were elected in Durham. That means two judges only rule on bail hearings in the prereform period, and two judges only rule on bail hearings in the postreform period.\textsuperscript{148} However, in regression models controlling for crime type and number of charges, we find that

\textsuperscript{146} Id.
\textsuperscript{147} See supra note 91.
there are no statistically significant differences in the bond type or amount that judges set.

A related concern may be that the changes in bail policy could lead to an increase in failure to appear charges. The logic of this concern is that with greater use of attainable bond amounts and unsecured bonds, more individuals will be released pretrial, and rates of FTA would increase. We find no evidence in support of this concern. In the prereform period, 20.16 percent of cases involve an FTA, and in the postreform period only 20.04 percent of cases involve an FTA, a negligible difference.  

Next, we analyze whether judges are ruling differently, or complying differently, due to the policy changes in Durham. Across our timeseries, we have judge data for 6,045 (87.75 percent) of the 6,891 bail sentencing incidents in our sample. Among those 6,045 rulings are ten different judges. Two judges appear only in the prepolicy intervention period, while two other judges appear only in the postpolicy intervention period. This is because two judges were voted out of office during the 2018 elections that take place during our time series. Table 4, below, presents the total number of times each bail type was issued by each judge across the entire timeseries. In the interest of keeping the identity anonymous for analysis, we replaced judges’ names with letters.

<table>
<thead>
<tr>
<th>Judge</th>
<th>No Bond</th>
<th>Promise</th>
<th>Cash</th>
<th>Custody</th>
<th>Secured</th>
<th>Unsecured</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>23</td>
<td>1</td>
<td>5</td>
<td>1</td>
<td>187</td>
<td>41</td>
</tr>
<tr>
<td>B</td>
<td>80</td>
<td>9</td>
<td>17</td>
<td>15</td>
<td>826</td>
<td>200</td>
</tr>
<tr>
<td>C</td>
<td>28</td>
<td>3</td>
<td>13</td>
<td>2</td>
<td>279</td>
<td>100</td>
</tr>
<tr>
<td>D</td>
<td>16</td>
<td>0</td>
<td>3</td>
<td>3</td>
<td>126</td>
<td>31</td>
</tr>
<tr>
<td>E</td>
<td>14</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>93</td>
<td>28</td>
</tr>
<tr>
<td>F</td>
<td>46</td>
<td>5</td>
<td>23</td>
<td>10</td>
<td>606</td>
<td>168</td>
</tr>
<tr>
<td>G</td>
<td>56</td>
<td>3</td>
<td>14</td>
<td>2</td>
<td>539</td>
<td>110</td>
</tr>
<tr>
<td>H</td>
<td>3</td>
<td>0</td>
<td>3</td>
<td>0</td>
<td>29</td>
<td>4</td>
</tr>
<tr>
<td>I</td>
<td>79</td>
<td>7</td>
<td>24</td>
<td>10</td>
<td>810</td>
<td>212</td>
</tr>
<tr>
<td>J</td>
<td>66</td>
<td>8</td>
<td>20</td>
<td>3</td>
<td>791</td>
<td>160</td>
</tr>
</tbody>
</table>

We find no evidence that judges are ruling in statistically differentiable ways once we control for observable case level factors like charge level and number of concurrent charges.  

149. See supra note 91.
150. See supra note 91.
151. See supra note 91.
152. See supra Table 4.
153. See supra Table 4.
154. See supra Table 4.
among the six judges present in the entire data set, we find that their behavior was not significantly different from one another, both before and after the policy change. In general, there do not appear to be substantial differences between judges in their behavior across our sample.155

Lastly, these effects and the shrinking Durham jail population do not seem to be substantially related to changes in crime over time. Figure 3 shows the number of daily arresting incidents in Durham from September 2018 to July 2019. While there is a decrease in number of daily arrests, this decrease is relatively small, going from about 52 arrests a day in September of 2018 to about 44 arrests a day in July of 2019. There is no corresponding decrease in the number of bail incidents (decisions) in the same time span. Thus, while the policies we examine here are likely not responsible for a decline, some change in judge and district attorney decision-making is.

Ultimately, we find statistically small but apparent changes in pretrial detention in Durham after the 2019 policy change. We find that bail is more likely to be affordable, is lower on average, and is more likely to be unsecured or not set at all in a given case.156 These findings are robust to some alternative theories that could explain these results. These findings suggest, however, that the 2019 Durham Judges' Pretrial Policy best reflects current practice,157 In contrast, the District Attorney's Office Policy focuses on alternatives to secured bond for most offenses and setting unattainable bond to detain individuals for the most serious offenses.158 Thus, if the 2019 District Attorney's Office Policy best reflects current practice, we should see a bifurcated system, with far more pretrial release, and far higher bond amounts for the most serious offenders. Instead, consistent with the 2019 Durham District Judges' Pretrial Policy being largely reflective of current practice, we see lower cash bail amounts, not a dramatic change in the use of unsecured bond.159

However, we emphasize that since the public jail data reflects initial conditions, we are missing information about subsequent modifications in pretrial conditions that would reflect the 2019 District Attorney's Office Policy and interventions to alter conditions in cases. We lack information about magistrates' release decisions, which may have changed during this time period (although one might then expect to see changes in composition of cases). We also lack information about law enforcement arrest decisions during this period. Nor could we go further to assess the costs and benefits of any such change in pretrial policy.160

155. See supra Table 4.
156. See supra note 91.
157. See supra note 91.
159. See supra Figure 2 and Table 4.
160. See supra note 91.
V. SCRAPED DATA, USE, & TRANSPARENCY

The U.S. lacks reliable and accessible jail population data. Even where jails do provide public information about populations, there are important limitations to what one can observe based on these data. To be sure, web scraping is rapidly becoming a popular way to collect data from the criminal justice system, including from jails. For example, journalists have collected data using web scraping to study trends.161 Publicly available jail data is available from at least one thousand counties, and researchers have aggregated that data.162 Research projects have examined scraped data from courts, not jail websites, in order to obtain more detailed administrative data regarding pretrial outcomes in jurisdictions in which such court information is similarly available online.163 Other researchers, of course, have instead relied on administrative data, which if obtained, can permit far more detailed analysis.164

161. Eads, supra note 97 (“At ProPublica Illinois, we’ve just restarted a data collection project to get new information about what happens to inmates at one of the country’s largest and most notorious jails.”).
164. See, e.g., Arpit Gupta et al., The Heavy Costs of High Bail: Evidence from Judge Randomization, 45 J. LEGAL STUD. 471, 477–78 (2016); Yang, supra note
In this Part, we discuss some lessons from our project regarding Durham's jail data and draw conclusions about using scraped data for academic and legal advocacy purposes. We suggest that administrative data may be a far more comprehensive source of information than public data. Yet even administrative data may share some of the same limitations in many jurisdictions, due to underlying problems regarding the manner in which data is collected. Beyond academic research, public defenders, community groups, and advocacy groups may seek to rely on such information. We have received a number of requests from such groups, often with the goal of identifying detained individuals who could qualify for immediate assistance. For some advocacy efforts, public jail data may prove useful. However, far more comprehensive data is needed to more fully examine the costs and benefits of changes in pretrial policy.

A. Policy and Privacy Considerations

The data that is available on government jail websites are not designed to answer many of the policy questions that researchers and the public may have. Jail websites designed to provide victim information may not provide accurate information about court processes that explain pretrial outcomes. They do not permit evaluation of upstream policies, such as arrest practices by law enforcement, nor downstream consequences, such as court outcomes or criminogenic effects of detention. They may provide a window that would otherwise not be available, but any analysis of such data can be misleading.

Transparency can also come with potential costs. Such data raises privacy considerations. To be sure, police blotter and arrest information are generally quite widely available in the U.S., although the dissemination of criminal history information is regulated at the state and federal level. Jail websites themselves may make arrest information publicly available online, which can harm the reputations of individuals who have not been convicted of any crime, and who in many cases will not be convicted of any crime.


To be sure, state courts and statutes have held that such arrest and jail roster information is of public record and can be made available to the press and to the public.\footnote{See Police Blotter, supra note 166; see, e.g., Florence Morning News v. City of Florence, 218 S.E.2d 881, 883–84 (S.C. 1975).} Scraping that data may make it usable and available to be linked with other information in ways that could create further harm to individuals' privacy and reputation. In our project, we reported only aggregate data and not information about any individuals or their cases. Web scraping can also raise other practical and policy issues. Doing so can violate terms of service on a website, if such a site does not permit access in the manner that the scraper operates. Scraping can create demands on a website.\footnote{EADS, supra note 97 ("We follow the golden rule at ProPublica when we're web scraping: 'Do unto other people's servers as you'd have them do unto yours.").} A Cook County, Illinois, scraper apparently overwhelmed the website, causing it to shut down and make data temporarily unavailable to the public.\footnote{Id.}

B. Research Applications

Our original plan for the Durham jail data was to conduct more detailed inferential statistical analyses to determine the effect of policy changes on bail conditions and amounts. Sources of unknown variance and ambiguity in our data, however, prevented us from conducting such analyses because we had too few observations for well-powered analyses and had little confidence in the randomness and representativeness of the sample. Detailed below, these problems reflect issues with scraped data and present considerations future researchers should be mindful of for academic research.

First, it was difficult for us to verify that the data on the jail website was complete, up to date, and accurate. In numerous conversations with the Durham District Attorney's Office, the district attorney would look up specific case numbers in the CCIS-district attorney case management system. For some cases, we found inconsistencies in bail amounts, types, release dates, and release conditions. Superior court cases (demarcated by “CRS” tags in case files) were particularly problematic, both in our cross-referencing and based on the district attorney’s experience. Hence we decided to exclude them from our reporting.

Second, we observed some irregularities in reporting on the jail website that complicated our understanding of individual cases. For one, many cases had bail conditions set to “N/A.” In some cases, we suspect “N/A” represented a special condition, such as a temporary
hold related to domestic abuse charges, for which Durham requires a two- to forty-eight-hour detainment. Yet, for some “N/A” cases, people were held in jail for upwards of twenty days. We observed other irregularities as well, such as cases in which the person was categorized as “No Bond” but released, cases in which misdemeanors had “No Bond” conditions, cases in which people were held in jail for multiple days despite having “unsecured bond” conditions, and cases where bond amounts were in the hundreds of thousands of dollars. There are plausible explanations for these irregularities. Indeed, our contacts at the District Attorney’s Office and Sheriff’s Office suggested some, such as defendants awaiting transfer to other facilities, charges from other counties, or unresolved charges pending from before our scraping, affecting bond conditions. We are confident that on the aggregate, our data are reasonably accurate in reflecting the situations of people held in the Durham jail over a year; because of these irregularities, we are less confident about drawing conclusions about individual-level analyses, where each case is an observation.171 Additionally, even if we were to start cleaning our data and excluding cases to try to limit such inaccuracies and irregularities, we worry we would be nonrandomly pruning cases, thereby interfering with the randomness of our sample, and further limiting the generalizability of any conclusions we do draw.

To be clear, we are not suggesting that jail data are largely inaccurate for all purposes or that they are not valuable to academic research. Jail roster information may be of sound and straightforward use. Some jurisdictions have invested in more comprehensive and accurate jail data. We do argue that researchers should proceed with caution when using such data, particularly public-facing data. Researchers should verify with data providers (such as court clerks, sheriffs, jails, and prosecutors) their assumptions about the collected data, including completeness, abbreviations, codes, data collection process, and posting procedures. Researchers should also consider variations in departments’ interpretation of data fields, statutory definitions, and website constructions, especially if comparing any two sources of data. In our experience, there are different technological infrastructures for hosting the data that may have more or fewer variables and different definitions for those variables (e.g., “No Bond” means denied bond in Durham; it may mean “Release” for other jails; in still other jurisdictions “0” as a dollar amount for bond may mean one or the other, or both).172 This presents challenges both of the technical sort, such as setting up scrapers that function similarly for different websites, and of the analytical sort, such as drawing valid comparisons between different jurisdictions.

171. See supra note 91.
These challenges relate to a larger and more general problem that pretrial systems have traditionally not been set up to collect consistent and well-defined data. Unlike criminal conviction and sentencing records, which must be maintained for public purposes, pretrial conditions are not final judgments. They can be modified, and they may reflect inputs from multiple decisionmakers. Those decisionmakers may have different working definitions of variables that they do code, and they code information during fast moving and sometimes quite brief hearings. It is a persistent problem, for example, that failures to appear in court, which can impact pretrial conditions, may not be documented or understood in a consistent way.\textsuperscript{173} Practices regarding pretrial services and supervision pretrial may vary.\textsuperscript{174} Representation at pretrial hearings may also be variable.\textsuperscript{175}

Nor is transparency, or even just the pretrial condition-setting process, necessarily improved by visiting jail court in person. Court observers in Durham, in 2019, attempted to document what was discussed during pretrial proceedings and had real difficulty hearing what was being said in that setting. The records of that court watching program are extremely sparse. We are acquiring other forms of data including more detailed jail data from the sheriff and notes from the district attorney that detail first appearance hearings. We are exploring whether we can analyze what recommendations prosecutors make pretrial and whether judges follow them, by examining additional records from the Durham District Attorney’s Office. In addition, we are exploring linking to court administrative data to assess recidivism rates among the pretrial release population in Durham. These further analyses can only be made possible through remarkable cooperation by stakeholders in Durham County; not all jurisdictions will collect or share these types of data.

In sum, our experience with web scraping Durham jail data had considerable limitations for research purposes. The data gave us insight into bail conditions over time but not a complete picture. Specifically, it is difficult to rely on these data to draw conclusions about incident and case level observations, thus limiting the usefulness of these data in observing trends. The challenges and

\textsuperscript{173} O’Donnell v. Harris County, 251 F. Supp. 3d 1052, 1118 (S.D. Tex. 2017) (finding that “Harris County does not track the comparative failure-to-appear or new-criminal-activity rates of misdemeanor defendants released on different types of bonds[,]” however, “Harris County does keep and was able to produce, data coded as ‘bond forfeiture,’ ‘bond revocation,’ and ‘bond surrender.’ But this data is not consistently kept or recorded.”).


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weaknesses of these data are certainly not new; indeed, researchers dealing with archival criminal data frequently face these limitations. However, given how easily one can set up a scraper and access these websites, we think additional words of caution are appropriate.

C. Policy and Advocacy Applications

To fully assess the impact of policy changes, and not just whether policy changed pretrial condition setting, one would need to measure outcomes in criminal cases, in recidivism, in court appearances, or other measures of social welfare in the community, in order to better assess costs and benefits. Early intervention regarding behavioral health, for example, might occur before or at the time of arrest and would not be captured by jail data.\(^\text{176}\) Nor would downstream consequences, such as conviction outcomes, be captured by jail data.\(^\text{177}\) Some research has attempted to address some of those larger questions concerning the cost and the effectiveness of pretrial approaches.\(^\text{178}\)

Data obtained just from a jail website is limited in its usefulness, but nevertheless, it can have some benefits for advocacy. If just rough trends in jail population or cash bail amounts is of interest to the advocacy community, that information may be accessible through a public website. The Vera Institute for Justice, for example, has made available data from three hundred jurisdictions, which showed that jail populations decreased 20 percent in the first few weeks of the pandemic.\(^\text{179}\) While not permitting detailed analysis, that aggregate data provided a useful snapshot. Our Durham web scraper created an easy-to-access screenshot of the jail population each day, capturing a defendant’s name, charges, bond type and amount, and how long they have been in jail. For groups such as public defenders or community bail funds that want to identify cases that meet certain criteria (such as, say, less than $5,000 secured bond amounts, or defendants held facing nonviolent offenses), these data would be useful for helping them target cases in which they might assist.

177. Heaton et al., supra note 3, at 734–35.
178. CARMICHAEL, supra note 174, at xiii–xvi. Regarding the challenges of evaluating several key costs, see Yang, supra note 31, at 1406 (“For example, there exists limited empirical evidence on how to quantify the loss of liberty imposed by pre-trial detention. Nor does there exist any quantitative evidence on the effects of pre-trial detention on deterrence more generally. In addition, I do not discount the possibility that some costs and benefits may be difficult to quantify, such as trust in, and legitimacy of, legal institutions.”).
Recently, a more immediate and time-sensitive use of such data has become relevant as well: identifying people in jail that could be released during the COVID-19 pandemic. Identifying inmates who are older, detained on low level charges, or fitting other criteria, may be possible using web scraping.

If a jurisdiction sought to provide more comprehensive and accessible data concerning pretrial policy and outcomes, it could create a public-facing dashboard that displays visuals and data in a manner that answers the key questions that the public might have. Some jurisdictions have created such dashboards. Many display an interactive version of basic booking and jail roster information, with detailed fields and customizable displays. Given the limitations of jail roster information, it is worth considering what a more robust pretrial dashboard would look like. Such a dashboard might include booking information at arrest, information concerning magistrate rulings on pretrial conditions, any further modifications by a judge, and subsequent outcomes in cases (or even for individuals). A more comprehensive dashboard could include pretrial recommendations submitted by prosecutors and defense attorneys. Researchers could subsequently observe whether judges tend to follow one set of recommendations more frequently. Additionally, such a dashboard could enable the public to see which conditions are imposed pretrial in any individual case while also providing for analysis of the aggregate data—helping to understand why people are detained pretrial, for how long, and under what circumstances. While more rigorous study of the costs and benefits of outcomes under pretrial policy would require far more data, such a data portal would permit a far clearer understanding of pretrial policy in a given jurisdiction.

VI. CONCLUSION

Our investigation of bail conditions for people held in the Durham jail are informative as to how new pretrial policies affect outcomes over time. We observe a notable decline in the Durham jail


181. For an example of a dashboard that includes arrest information, see Justice Dashboard, S.F. DIST. ATT’Y, https://sfdistrictattorney.org/policy/justice-dashboard/ (last visited Nov. 26, 2020) (measuring subsequent contact rates for three years at arrest, arraignment, and conviction).

182. An extremely comprehensive public data collection effort is contemplated under the Consent Decree in the Harris County misdemeanor bail litigation. Consent Decree at 8, O’Donnell et al v. Harris County, No. 16-cv-01414 (S.D. Tex. Nov. 21, 2019). We note that one of the authors, Professor Brandon L. Garrett, presently serves as court-appointed monitor in that consent decree.
population, from over 600 people to just over 250 people. During the
year following adoption of new policies in early 2019, we observe a
decrease in the average bond amounts over time and shifts away from
secured bail. We also observe a decline in average bail amounts
before the policy changes. While we observe an increase in unsecured
bond amounts after the changes, we also see an increase in no bond
incidents. Second and more broadly, we see significant variation in
the mean and median amount of bond amounts across bail types. It
is clear that judges view different crimes with different associated
risk. Whether or not these amounts are appropriate or fully reflect
the goals of recent policy changes, however, is less clear. The average
bond amount for traffic cases was nearly $1,500 (median $1,000). Few
bail bond companies will provide for amounts lower than $5,000,
meaning that the $1,500 may need to be paid by the defendant.1

We do not take a position on whether these new policies are a
success or are responsible for the steep decline in the jail population.
Such a position would require additional data and analysis. Further
changes in practice have occurred following COVID-19, resulting in a
deeper reduction in the jail population in 2020. We highlight here that
based on public data, we could not fully articulate which of the
overlapping policies is more consistently followed.

One reason why it was a challenge to examine that question is
because the new Durham policies are in some tension with each other,
and they each have different goals.184 In Durham, North Carolina,
the 2019 District Attorney’s Office Policy aims to release low level
offenders and detain serious offenders.185 To release offenders, they
must largely use the mechanism of low cash bail, although they may
also simply dismiss cases, or use pretrial diversion options.186
Similarly, to detain serious offenders, they must largely use the
mechanism of cash bail, since pretrial detention is only available for
a limited number of offenses, such as capital offenses.187 As a result,
the policy focuses on alternatives to secured bond for most offenses
and setting unattainable bond to detain individuals for the most
serious offenses.188 If the 2019 District Attorney’s Office Policy best
reflects current practice, we should see a bifurcated system, with far
more pretrial release, and far higher bond amounts for the most
serious offenders. As such, we might actually see a higher percentage
of bond as secured, but many fewer people in jail. That pattern would
be difficult to detect given the limitations of these data. Similarly, if

183. See supra Table 3; see generally Dorothy Weldon, More Appealing:
Reforming Bail Review in State Courts, 118 Colum. L. Rev. 2401, 2402-03 (2018)
(proposing appellate review of determinations as a method for reform).
184. Compare Dist. Atty’s Off., Durham Cnty., N.C., supra note 14, with
Fourteenth Jud. Dist., supra note 12.
186. Id. at 1.
187. Id. at 3.
188. Id.
the 2019 Durham Judges’ Pretrial Policy were largely reflective of current practice, then we might see lower cash bail amounts, but largely the same composition of outcomes as before the change in policy. Unsurprisingly, the interaction between these two policies is complex. These competing policies make explicit what is often implicit in pretrial adjudication: different actors have different policies, practices, and goals, making it difficult to assess their respective roles over time.

Further, bond is one piece of a puzzle that includes arrest decisions, pretrial services, community organizations and advocacy, fines and fees, and plea-bargaining, each of which feedback to arrest, pretrial, and conviction outcomes. Pretrial outcomes, as discussed, reflect decision-making by a number of actors. For example, arrest diversion could reduce arrests and the reliance on cash bail. Alternatively, pretrial services and supervision could lessen the reliance on cash bail. Jurisdictions, such as Durham, with strong community interest in criminal justice reform can put pressure on elected judges and prosecutors to change pretrial practices and policies. A person’s inability to make bail can negatively affect trial outcomes and make them far more likely to plead guilty. Jailtime can affect healthcare coverage, behavioral health, employment, housing, child custody, and so many other community outcomes. Studying those broader costs and benefits is an important challenge.

Perhaps the biggest limitation of this project, and any other project that relies on jail roster data, is that we can only observe people held in jail and not upstream policies (or downstream consequences). We cannot observe people who are initially released by a magistrate on recognizance, unsecured bond, or any other bail decisions in Durham. As a result, we cannot definitively say how the cases we do observe fit into an overall picture of what bond conditions look like in Durham. As previously mentioned, we are unable to observe why people are released from jail, who paid bail, or when a bond condition is changed at a first appearance from secured to unsecured or release. Nor can we observe downstream outcomes, which are available only in court data, concerning subsequent dismissal, conviction, sentencing, or other subsequent legal and social outcomes. Thus, there is a real lack of transparency to the pretrial process, despite the existence in many jurisdictions of jail websites like the one that we scraped data from and some that convert such data into visual dashboards. A seeming transparency disguises a real lack of basic information concerning case processing pretrial.

Thus, understanding bail policy changes requires far more than just observing the change in bond types and amounts. A more

190. Id. at 512-13.
191. Id. at 512.
complete evaluation must also consider how these changes interact with other parts of the system, including the behavioral health system, employment outcomes, housing, health care coverage, and public benefits.\textsuperscript{192} Given the pressing need to reconsider jail populations, including post-COVID-19, researchers should, and will, continue to carefully evaluate the state of pretrial reform in the growing number of jurisdictions nationwide that are reconsidering pretrial practices.

\textsuperscript{192} See, e.g., Dobbie, supra note 3, at 2.