

**A DISCUSSION OF ONGOING EFFORTS  
TO EVALUATE THE PUBLIC SAFETY ASSESSMENT  
IN POLK AND LINN COUNTIES: AMENDED REPORT**

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This amended report supersedes the report the Access to Justice Lab issued on December 3, 2018. The present document provides updated figures based on the correction of data anomalies understood and addressed after December 3. The conclusions of this amended report are identical to those of the December 3 version that it supersedes.

## EXECUTIVE SUMMARY

In January 2018, Polk County, Iowa began a testing period for use of the Public Safety Assessment (“PSA”), an evidence-based pretrial risk assessment instrument. In July 2018, Linn County, Iowa began a similar test. The Laura and John Arnold Foundation (“LJAF”) had previously funded the creation of the PSA to assist judges in deciding which arrestees should be released while awaiting case disposition, and, if release were ordered, what level of monitoring should be imposed. The PSA scoring system purports to band arrestees by risk of failure to appear, new criminal activity, and new violent criminal activity. Judges provided the PSA may choose to consult the scores and corresponding recommendation among several factors in determining initial release. The PSA’s purpose is to assist jurisdictions in their efforts to minimize rates of pre-disposition incarceration, failure to appear, and new (violent) criminal activity.

LJAF, Polk County, and Linn County requested that the Access to Justice (“A2J”) Lab at Harvard Law School evaluate the PSA’s effects. Working with stakeholders in both counties, the A2J Lab designed and initiated a randomized control trial evaluation in which the PSA would be available to district associate judges in some cases but not in others. A comparison of the outcomes in the PSA and no-PSA groups will provide gold-standard information on the PSA’s effects. When the PSA and the randomized evaluation launched, the A2J Lab warned that, because many criminal cases can take a year or more to reach disposition, and because a sufficient number of cases must reach disposition to allow statistical analysis, credible information on the PSA’s effects would not be available until three to four years after launch. At LJAF’s request, however, the A2J Lab agreed to produce a report by December 3, 2018, discussing the results for the small fraction of randomized cases that had reached resolution by mid-fall of the same year.

As the A2J Lab predicted, credible information about the PSA’s effects in Polk and Linn Counties is not yet available. Too few cases have reached disposition, and those cases that have reached disposition are not representative of the two jurisdictions’ overall arrestee profiles. At this time, based on the small amount of information available, the A2J Lab observes no credible evidence that PSA availability decreases or increases rates of incarceration, failure to appear, new criminal activity, or new violent criminal activity. Moreover, because the present analysis took place under conditions of haste, the A2J Lab cannot rule out the possibility of data, coding, or comprehension errors, despite measures taken to eliminate each such danger.

The A2J Lab’s evaluation design contemplated two years of randomization followed by a two-year follow-up period, the latter included so that cases could reach disposition and to observe post-disposition recidivism rates. The A2J Lab recommends that the evaluation be permitted to finish so that credible information on the PSA’s effects will be available to policy makers who decide whether its use should continue.

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## I. INTRODUCTION

Polk County, Iowa launched the Public Safety Assessment (“PSA”) in January 2018 for use in post-arrest release/detain decisions at initial appearance. In July 2018, Linn County followed suit. The PSA is a pretrial risk assessment instrument developed by the Laura and John Arnold Foundation (“LJAF”) for use in making release/detain decisions in criminal cases (and recommending levels of monitoring if the decision is to release). The algorithm on which the PSA is based bands arrestees according to risks regarding both public safety (in terms of committing new criminal acts and new violent criminal acts) and failure to appear for future court hearings. LJAF, in coordination with state and local stakeholders in Iowa, contacted the Access to Justice (“A2J”) Lab at Harvard Law School to perform a randomized evaluation of the PSA in Polk and Linn Counties, with a randomization period of two years and a two-year follow-up period. The A2J Lab began collecting data as soon as the PSA launched in both counties. At LJAF’s request, the A2J Lab also agreed to produce the present report. At the time of LJAF’s request, the A2J Lab informed all concerned that the time period between launch of the PSA and this report would almost certainly be too short to allow substantive conclusions. Because criminal cases can take months, sometimes more than a year, to reach disposition, the report would be based on only a few months of cases, and many of those cases would still be ongoing at the time the A2J Lab collected relevant data. Those predictions have proven true. This document thus explains the ongoing efforts to conduct a credible evaluation of the PSA, reports what the data show thus far, explains why the data do not allow useful conclusions as yet, and discusses prospects for the future. We begin with the reasons why no useful conclusions can be drawn at this time.

## II. LIMITS OF THE CURRENT DATA

### A. Low Statistical Power

The full research design the A2J Lab is currently pursuing contemplates a two-year period for running the field experiment, followed by two years of follow-up to allow cases to conclude and to observe recidivism rates. The A2J Lab anticipates producing an interim report shortly after the end of the third study year based on the first year’s worth of randomized cases, *i.e.*, at a time when follow-up for those cases is complete. These timeframes were chosen for two reasons. First, the A2J Lab estimated that two years of randomization would provide the number of cases necessary to observe policy-relevant differences between PSA-available cases and no-PSA-available cases. The likelihood that statistical results are based on true causal relationships—and not mere chance—is central to any credible program evaluation. The A2J Lab therefore proposed a two-year randomization period. Second, the A2J Lab proposed that each criminal case randomized should be followed for two years to ensure that it reached disposition and to allow a reasonable time within which to observe arrestees’ behavior after release.

Given that the A2J Lab envisioned collecting data on two years of *completed* randomized cases, an evaluation based on shorter time periods is unlikely to produce statistically meaningful answers. Data from three months of initial appearances in Linn County include 607 study-eligible cases, 234 of which have reached final disposition. But as discussed below in Part II.C, those completed cases are a non-representative group. The respective numbers in Polk County are 6690 and 4266. The upshot is that there is not enough information to produce credible results. The A2J Lab therefore does not endorse the numbers reported below. Only more time—and

more cases—will allow the generation of useful information about how the PSA has changed (or has not changed) pretrial outcomes in Iowa.

### *B. Inability to Analyze Outcomes by Arrestee Characteristics*

The problem of insufficient statistical power is enough, in the A2J Lab’s view, to require more time to assess the impact of the PSA. There are other significant reasons to wait for more data. The national conversation about adopting pretrial risk assessment instruments has included their potential benefits and drawbacks. One prevalent concern is the possibility that risk assessments induce or reinforce racial disparities in risk prediction and judicial decisions.

The A2J Lab, in consultation with LJAF and Iowa stakeholders, agreed that providing a body of evidence on possible racial disparities would be useful to stakeholders. This objective puts further pressure on the statistical power issues described above. When analyzing PSA effects by subgroups in the data (*e.g.*, outcomes for white versus non-white arrestees) the reliability of the statistical test depends on the number of cases within the smallest subgroup. Considering that the current case volume is insufficient to measure the impact of the PSA on the general population, any subgroup analysis will be still less reliable.

### *C. Completed Cases Not Representative of the Whole*

The concerns discussed so far revolve around the need to have a sufficient number of cases to draw meaningful conclusions about the impacts of the PSA. There is another limitation that calls into question the usefulness of a preliminary report. PSA-eligible criminal cases often remain open for a year before reaching disposition. Polk County has held initial appearances on over 9000 cases, while Linn County has held just under 1200 study-eligible hearings. Of these cases only 5233 and 518 cases in Polk and Linn, respectively, have reached disposition. The A2J Lab’s concern for the evaluation is that cases reaching disposition more quickly are different from cases that take longer to reach disposition.

The usefulness of a statistical evaluation rests in part on how closely the cases in the study resemble the typical case in the study location. Researchers refer to this issue as one of “generalizability.” A PSA study that is not generalizable is not credible.

Here, the data on which the analysis below rests reflect a particular type of case, one that reached disposition within a few months. These cases likely involve less severe charges, arrestees with relatively light criminal records, and more straightforward fact patterns. These systematic differences mean that the cases on which the analysis below is based are probably not representative of all cases in the two counties.

Without more time, the figures below are not credible. A two-year study with two years of follow-up should provide sufficient case volume and time to encompass both the quick- and slow-disposition cases needed for a credible analysis. The issues of insufficient statistical power, small subgroup sample sizes, and lack of case generalizability hamper our ability to derive meaningful conclusions with any level of confidence from the current data.

#### *D. Possible Data or Analysis Error*

Finally, the A2J Lab conducted the analysis leading to the present report under conditions of haste. Learning the criminal justice and data systems involved in Polk and Linn Counties was challenging. Despite the A2J Lab's best efforts, it cannot rule out an error in data processing or analysis at this time.

### **III. PRETRIAL RISK ASSESSMENT INSTRUMENTS AND RANDOMIZED CONTROL TRIALS**

#### *A. The Basics of Pretrial Release and Money Bail*

##### **i. Procedure**

Initial appearances in criminal cases generally involve the state's presentation of charges and possibly a determination of probable cause for holding the arrestee.<sup>1</sup> Arrestees are usually present in person (as in Polk County) or by video feed (as in Linn County). The judge's<sup>2</sup> primary task at the initial appearance is to decide whether the arrestee should be released on his own recognizance, released with supervisory conditions, released only if he can post bail (cash or surety), or be remanded to the jail (perhaps accomplished by ordering a high bail amount). If the judge chooses money bail, the posting of the full value or a surety bond at a percentage of the full amount acts like a security deposit to ensure that the arrestee does not fail while awaiting disposition. The bail is returned (sometimes after deducting a fee) at case disposition if paid in full, but a surety fee is ordinarily not refunded. States ordinarily require judges to consider limited criteria when imposing bail; common elements include the judge's estimation of the arrestee's likelihood of failure to appear for court dates and of the arrestee's threat to public safety (*e.g.*, the likelihood of the arrestee committing another criminal act) if released.<sup>3</sup>

A judge may be asked to take a defendant's ability to pay into consideration, but few states cabin judicial discretion regarding the bail amount.<sup>4</sup> Bail can be set at levels that may be difficult or impossible for arrestees to pay, even with the presence of a bail bonds industry, effectively incarcerating the arrestee until case disposition.

##### **ii. The Role of Pretrial Risk Assessment Instruments**

Empirical studies have raised questions about the capacity of unguided human decision makers to predict future events, including arrestees' likelihood of failing to appear or committing new crimes.<sup>5</sup> Judges making release/detain decisions at initial appearance sometimes lack

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<sup>1</sup> This report uses the term "arrestee" to refer to persons formally charged by a prosecutor by the time of initial appearance and those whose cases are reviewed based on recommended law enforcement charges.

<sup>2</sup> This report also uses the general term "judge" to refer to the judicial official—alternatively a judge, commissioner, or magistrate—presiding over initial appearances.

<sup>3</sup> See AM. BAR ASSOC., HOW COURTS WORK (2013), available at [https://www.americanbar.org/groups/public\\_education/resources/law\\_related\\_education\\_network/how\\_courts\\_work/bail/](https://www.americanbar.org/groups/public_education/resources/law_related_education_network/how_courts_work/bail/).

<sup>4</sup> See *id.*

<sup>5</sup> See Eric Silver & Lynette Chow-Martin, *A Multiple Models Approach to Assessing Recidivism Risk: Implications for Judicial Decision Making*, 29 CRIM. JUST. & BEHAV. 538 (2002).

complete information about an arrestee, and different judges may weigh available information differently.

These concerns led to the development of algorithms, tools that convert arrestee information into risk scores and/or recommendations to help judges assess the likelihood of certain behaviors. The hope of these pretrial risk assessment instruments is that they enable judges to ground release decisions in more objective and predictive factors than either the charge alone or legally fraught characteristics (*e.g.*, race, gender, physical appearance). The instruments take a set of inputs, often including a few demographic factors, the charge, and the arrestee's criminal history. Some require information that can only be gleaned from a personal interview. These data are then used to produce one or more risk scores, often on a numerical or classification scale.

### *B. The Public Safety Assessment*

LJAF's Criminal Justice Initiative "aims to advance community safety and the values of equity, fairness, effectiveness, and racial justice."<sup>6</sup> One LJAF effort in this field has been the creation of a pretrial risk assessment instrument, one that would not require an arrestee interview to implement. The result is the PSA, which used 750,000 cases from approximately 300 jurisdictions across the United States to determine the risk factors that best predict an arrestee's likelihood of failing to appear in court or being arrested on a new criminal charge. The PSA relies on an arrestee's criminal history, age, and charge in compiling scores associated with risk of new (and new violent) criminal activity and failure to appear. LJAF has collaborated with academics and other researchers to evaluate the PSA in adopting locations.

### *C. Randomized Control Trials*

Determining whether a change in policy caused observed outcomes (such as reduced incarceration, failure to appear, new criminal activity, or new violent criminal activity) is a difficult task. LJAF has engaged the A2J Lab to design, implement, and analyze two randomized control trial ("RCT") evaluations of the PSA. RCTs are the gold standard for determining whether a policy or program caused outcomes. By way of analogy, the FDA currently requires RCT evaluations of new drugs before they can be marketed to the public. RCTs rely on the random selection of units (*e.g.*, criminal cases, arrestees) to create a "control group," which usually follow the status quo, and a "treated group" that is exposed to the policy or program. The PSA RCTs create control groups in which the PSA is not available to a judge at initial appearances and treated groups in which the PSA is available. After the field experiment closes, researchers will compare outcomes between control and treated groups for evidence of any statistically significant difference.

The RCT will provide credible information as to PSA's effects. So-called "before-and-after" comparisons cannot provide credible information in the present context because they cannot account for factors that operate alongside a policy or program, such as changes in criminal justice policy that occurred at the same time as PSA adoption. Governments often adopt other, related policies at the same time they launch the one being evaluated. Populations also

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<sup>6</sup> The Laura and John Arnold Foundation, *Criminal Justice*, <http://www.arnoldfoundation.org/initiative/criminal-justice/>.

change. Community demographics and economic conditions fluctuate over time, and, when they do at the same time as a policy’s introduction, it becomes difficult or impossible to attribute changes in observed outcomes to the policy change. When properly designed and implemented with sufficient case volume, RCTs allow researchers to isolate the effects that the policy alone has on study participants, in this case arrestees.

#### **IV. DESCRIPTIONS OF THE PSA RCTs IN IOWA**

##### *A. Polk County*

The Polk County PSA RCT launched when its initial appearance court started using the PSA in January of 2018. The study randomizes PSA-eligible, in-custody appearances (rather than arrestees); therefore, the unit of analysis is a court case, not a person. The treated group consists of all initial appearances where the associated booking number ends in an even number; control cases are bookings with odd-numbered identifiers. The Fifth District Department of Correctional Services provides the PSA report and recommendation to initial appearance judges in treated cases and not in control ones. The primary outcomes of interest include: (1) the number of days arrestees spend incarcerated before case disposition; (2) failures to appear (“FTA”); (3) new criminal activity (“NCA”); and (4) new violent criminal activity (“NVCA”).

##### *B. Linn County*

The Linn County PSA RCT launched when its initial appearance courts started using the PSA in July of 2018. The study randomizes PSA-eligible, in-custody arrestees, rather than cases; therefore, the unit of analysis is a person, not a case. The treated group consists of all initial appearances where the arrestee’s unique Iowa Corrections Offender Network (“ICON”) identification number ends in an even number; control units are persons with odd-numbered ICON identifiers. The Sixth District Department of Correctional Services provides the PSA report and recommendation to initial appearance judges in treated cases and not in control ones. The primary outcomes of interest include: (1) the number of days arrestees spend incarcerated before case disposition; (2) failures to appear (“FTA”); (3) new criminal activity (“NCA”); and (4) new violent criminal activity (“NVCA”).

##### *C. Outcome Variable Descriptions*

All outcome information for the Polk and Linn County Studies is available through Iowa Courts Online (“ICIS”), the Polk County Jail’s database, the Linn County Jail’s database, and a statewide hub known as the Justice Data Warehouse. The relevant outcome variables and descriptions are:

1. FTA: A 0-1 variable capturing whether the arrestee missed any court date before disposition of the case.
2. NCA: A 0-1 variable, capturing whether the arrestee was arrested during the pretrial period for an offense subject to a possible incarceration sentence. This variable is computed once for any NCA committed during the pretrial period (from initial appearance to case disposition), and, in the full study (but not in the present report), again for any NCA arrest between the initial appearance and two years after the initial appearance.

3. NVCA: A 0-1 variable capturing whether the arrestee was arrested during the pretrial period for a violent offense subject to a possible incarceration sentence. This variable is computed once for any NVCA committed during the pretrial period (from initial appearance to case disposition), and, in the full study (but not in the present report), again for any NVCA arrest between the initial appearance and two years after the initial appearance.
4. Length of pretrial incarceration: The number of days the arrestee spent incarcerated between the initial appearance and case disposition.
5. Length of the pretrial period: The number of days between the initial appearance and case disposition.
6. Conviction: A 0-1 variable capturing whether the arrestee was convicted of any charge and as a 0-1 variable addressing the lead charge, *i.e.*, whether the arrestee was convicted of the charge carrying the longest possible term of incarceration.
7. Sentence: A 0-1 variable capturing whether the arrestee was sentenced to any term of incarceration and as the number of days the arrestee was ordered to serve, if any.

## V. ANALYSIS AND DISCUSSION

The final Part of the report is limited to the following two analyses: (1) a summary of collected data, including a description of the cases in the current dataset, the distributions of treated and control cases by disposition status, and the distributions of release/detain decisions by experimental treatment and judicial concurrence; and (2) comparisons between the control (no-PSA-provided) and treated (PSA-provided) groups for the primary outcomes of FTA, NCA, NVCA and time spent incarcerated before disposition.

### *A. Data Validation*

As described in Part IV, the A2J Lab used several databases to track individuals and cases. To minimize errors, anomalies, or incorrect attributions, the A2J Lab established processes to validate data across the data sources. These processes included use of ‘independent dual links’ between data sources and random sampling of cases for manual verification. Independent dual links refers to the method by which the A2J Lab is able to connect a jail booking to a court case and a court case to an FTA, NCA, NVCA, or disposition incident, all across separate state- and county-level databases. The A2J flagged any cases that did not match across databases. Data managers within the Iowa court system and the county jail systems re-verified these cases and returned them to the A2J Lab. Once all the cases were validated and matched, a handful were randomly selected for manual verification. These procedures help ensure that the data collected and analyzed for this report accurately represent outcomes in Polk and Linn Counties.

### *B. Descriptive Statistics*

Figures 1 and 2 below detail the current counts and distributions of study-eligible cases across the two evaluation sites. The cases are also divided according to their disposition status. In both Polk and Linn Counties, roughly half of the eligible cases have reached disposition (slightly

more in Polk and slightly less in Linn). Full data analysis can begin only after a case has reached disposition, and for some outcomes of interest the timeframe is even longer.

Figures 1 and 2 also divide cases by treatment condition, *i.e.*, whether a PSA printout was received by the district associate judge. The number of treated (PSA-provided) to control (no-PSA-provided) cases are roughly equivalent across counties and disposition status, indicating that the randomization scheme in place is functioning as intended. Lastly, the number of study-eligible units in Linn County does not reflect the number of cases included the data. The reason is that the study in Linn County is focused on (and applies the PSA treatment by) individuals rather than cases.

Figure 1

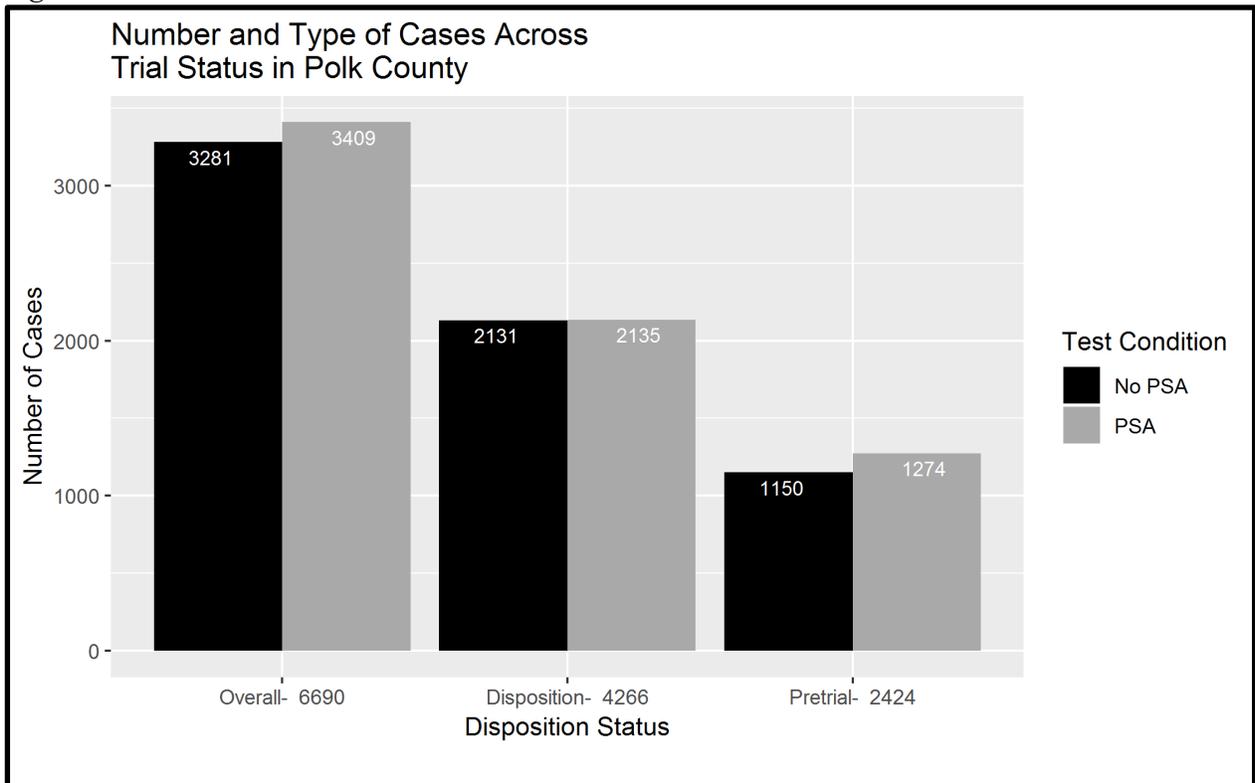
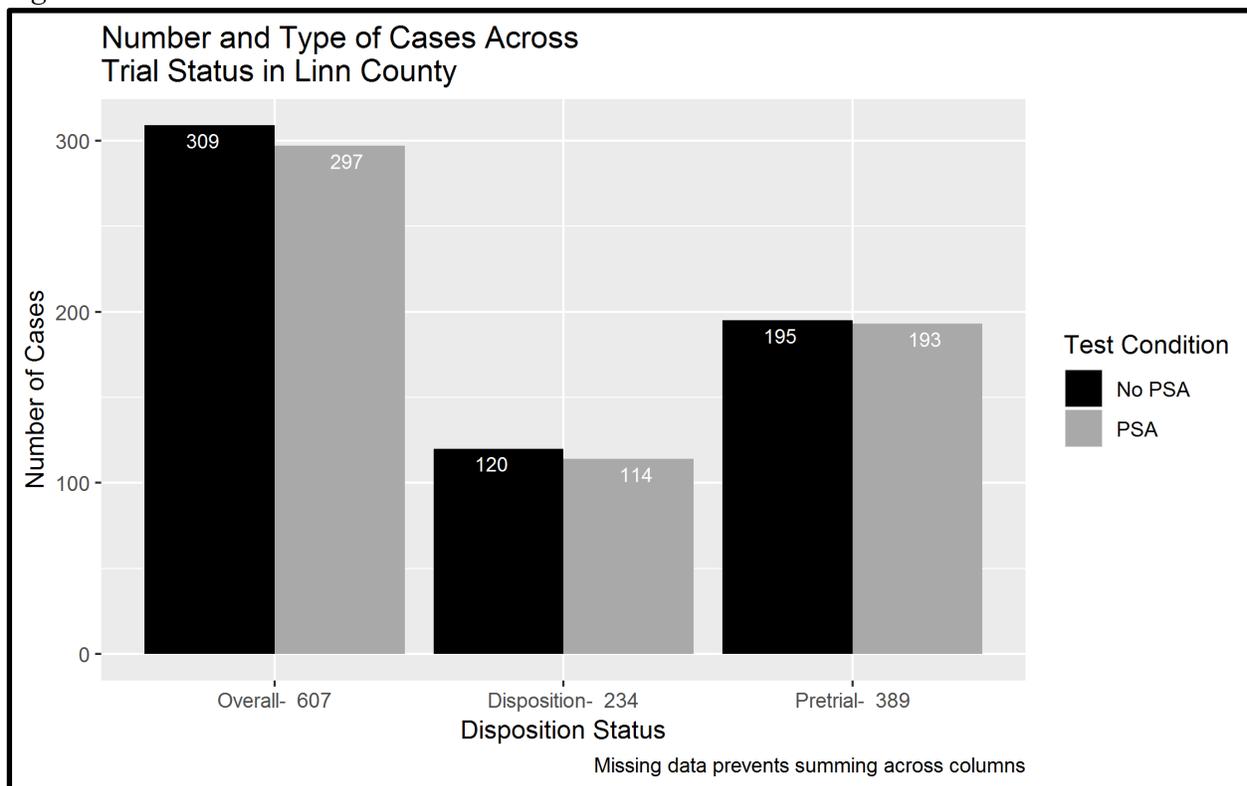


Figure 2



Figures 3 and 4 detail the distribution of cases across categories of release/detain decisions made by judges. A key consideration in evaluating the PSA is understanding whether judges actually utilize the information provided, since the PSA is entirely non-binding in nature. Counts are reported for each possible release/detain decision made or release/detain recommendation ranging from own-recognition release to release not recommended, as well as by the judges' concurrence with the PSA recommendation. Cases in which arrestees pleaded guilty at initial appearance or in which judges issued orders inconsistent with the PSA release/detain options were not included in Figure 2. In Polk County, judicial decisions tend to be uniformly spread over the range of release options, with the exception of PM4 release, which is rare. In Linn County, judges tended to be more likely to release on the arrestee's own recognition than the PSA suggested, although the PSA also recommended own-recognition release more often than any other outcome.

Figures 3 and 4 also show the distributions of judicial release outcomes when the judge concurred (or did not concur) with the PSA recommendation. In Polk County, concurrence occurred in 58% of cases and concentrated primarily on the endpoints of the release spectrum scale: own-recognition release or release not recommended. Disagreement between PSA recommendations and judicial decisions tended to occur over the level of conditional release. In Linn County, judges concurred with the PSA recommendations in 83% of cases, leaving too few disagreements to provide meaningful analysis.

Figure 3

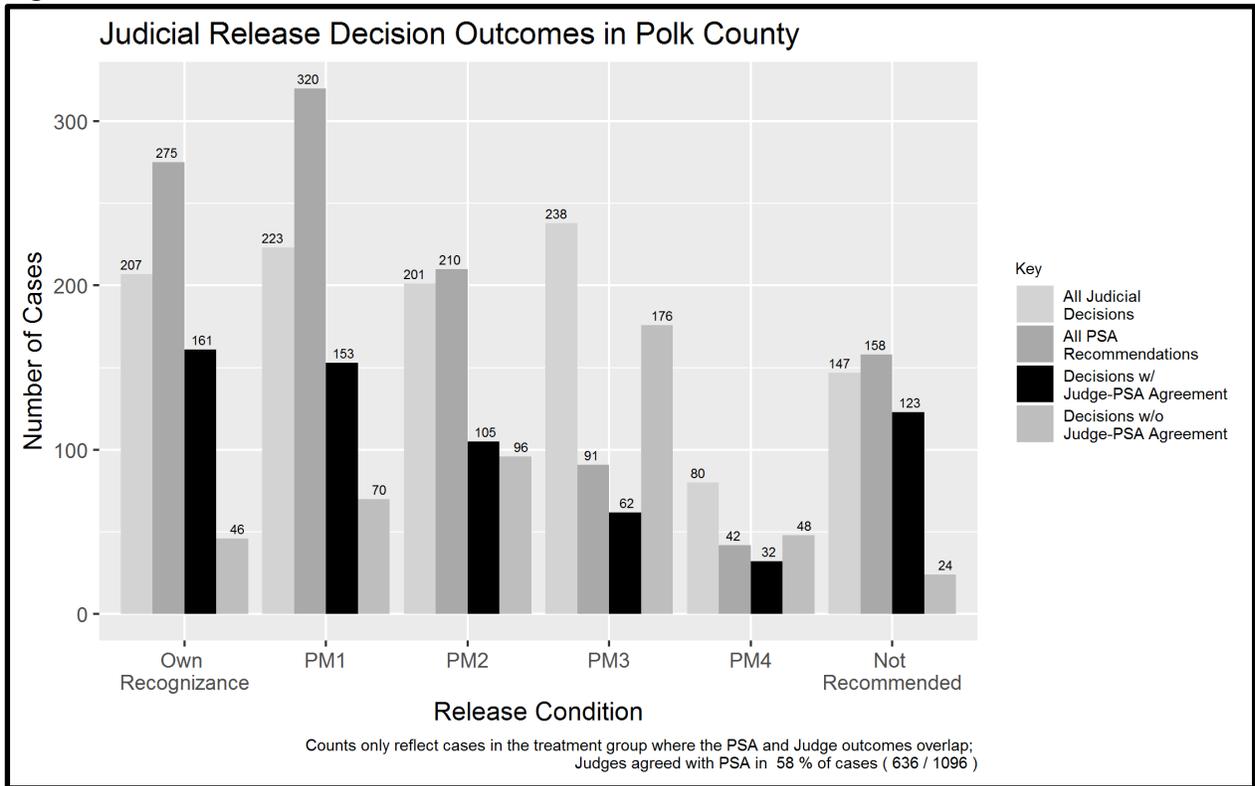
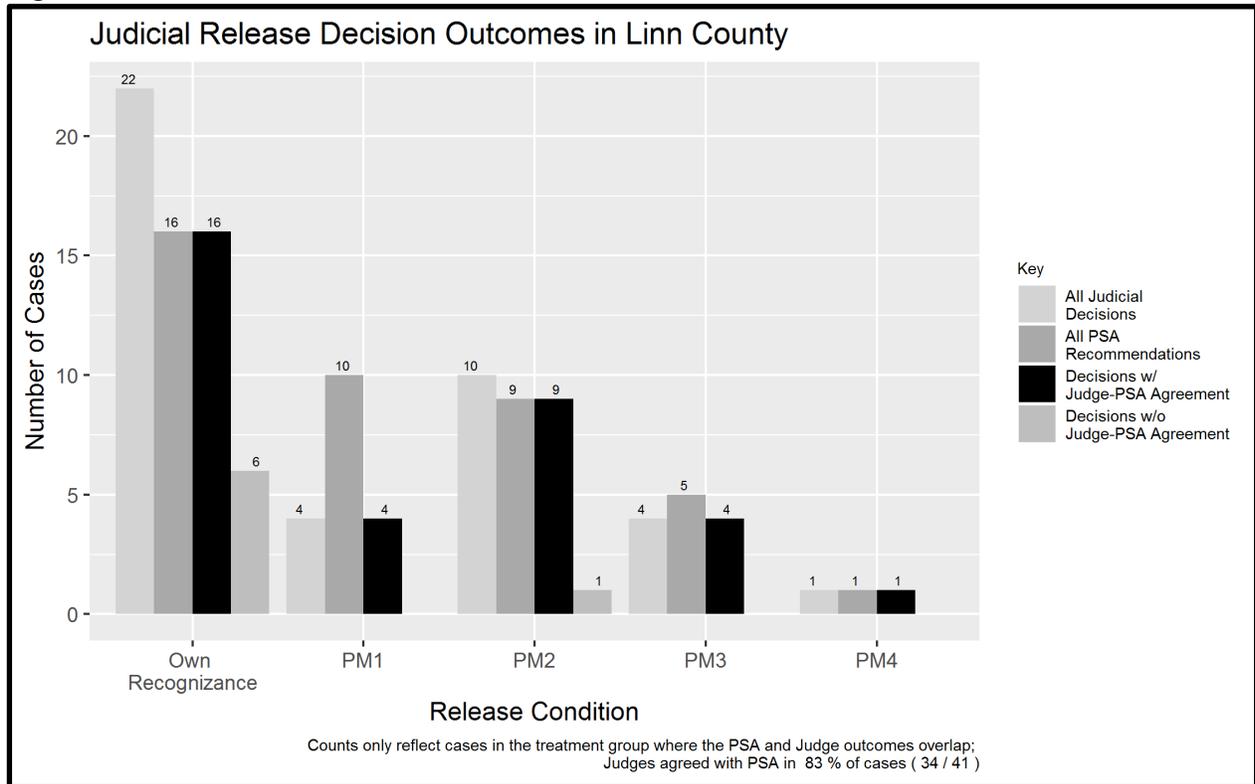


Figure 4



### C. Outcomes and Analysis

For each of the primary outcomes, comparisons are made between the average rate (or length of time) for the treated (PSA-provided) and the control (no-PSA-provided) groups. These comparisons allow researchers to estimate the causal effect that the treatment policy has on the outcomes of interest. The analysis uses the total number of study-eligible cases, partly defined as having reached disposition, not the overall number of cases during the study period. Below, two distinct statistical metrics are reported for each outcome. The first represents whether we can confidently say that any observed difference likely reflects an underlying true difference, as opposed to random chance. This figure is referred to as the *p*-value. The reported *p*-values do not correct for multiple hypothesis testing on the same data, so the true *p*-values are likely to be higher once the inherent connection among outcome variables is taken into account. The second metric reported is a measurement of the policy’s effect size, what statisticians call a confidence interval. The confidence interval here tells us the range in which the PSA effect would fall 95% of the time if we were to repeat the same experiment many times.<sup>7</sup>

Figures 5 and 6 show the distribution of NCA rates across treated groups and by county. Of the roughly 2100 cases in Polk County in which a PSA report was available, about 20.5% had at least one recorded NCA prior to their case disposition. Compare this to the 17.9% of cases where no PSA report was available. If the data analyzed were representative of all cases in Polk

<sup>7</sup> For NCA, NVCA, and FTA, *p*-values measuring the statistical significance of the difference between the control and treated group are calculated using a permutation, or Fisher’s exact, test. See Lynne M. Connelly, *Fisher’s Exact Test*, 25 MEDSURG NURSING 58 (2016). For total time served, the Wilcoxon rank sum statistic is used. See Frank Wilcoxon, *Individual Comparisons by Ranking Methods*, 1 BIOMETRICS BULL. 80 (1945).

County, this difference would be observed with a  $p$ -value of 0.03. But, as noted above, the analyzed cases are not representative of all cases in Polk County, and there has been no correction for multiple testing. The estimated effect size of the PSA exists on an interval from 0.2% to 5%. This range—between roughly a fifth of a percent increase and a 5% increase in the NCA rate—is fairly large and reflective of the low power and high uncertainty from which the study suffers. Note, however, that the 20.5% NCA rate is below the 2016 baseline of 22.8%. It is likely that over time, however, more individuals will be arrested for NCA, bringing both control and treated group rates closer to the prior baseline. The PSA effects on NCA point in the opposite direction for Linn County with a  $p$ -value of 0.435. The associated confidence interval for the effect size ranges from -5.6% to 2.5%.

Figure 5

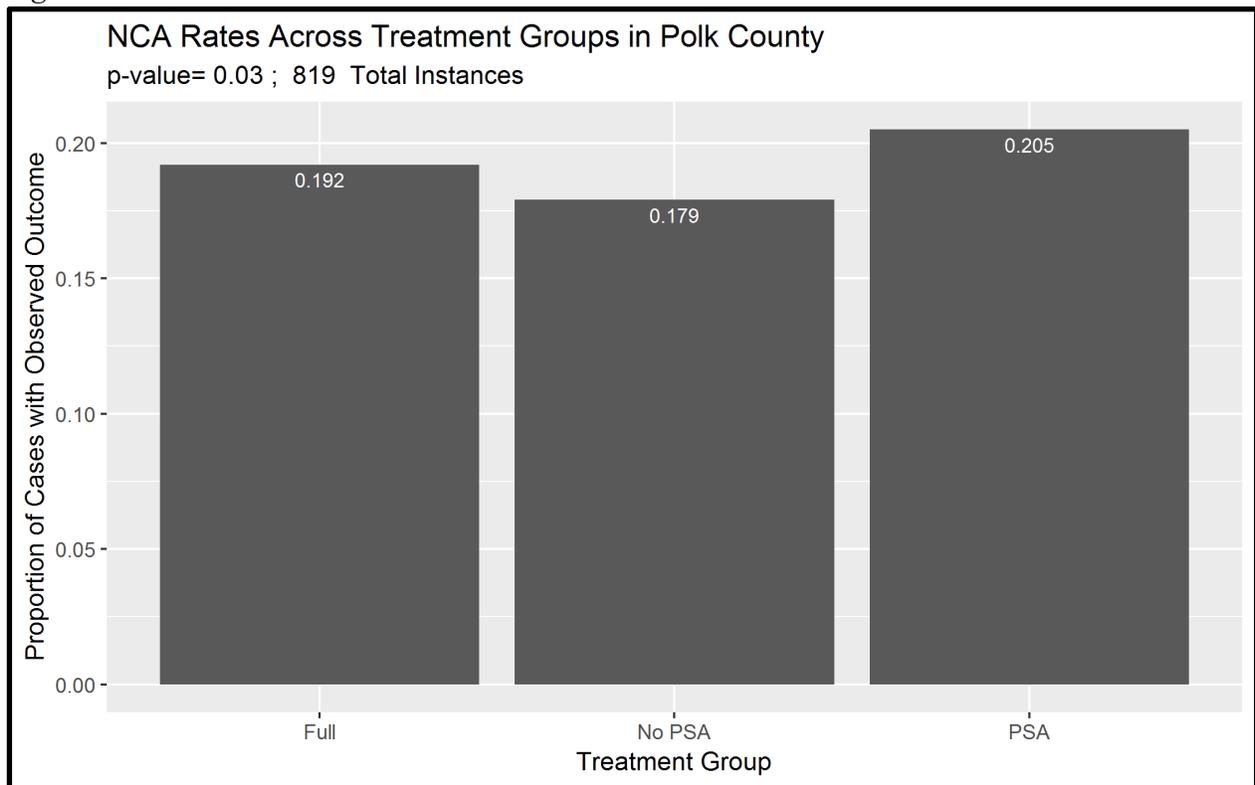
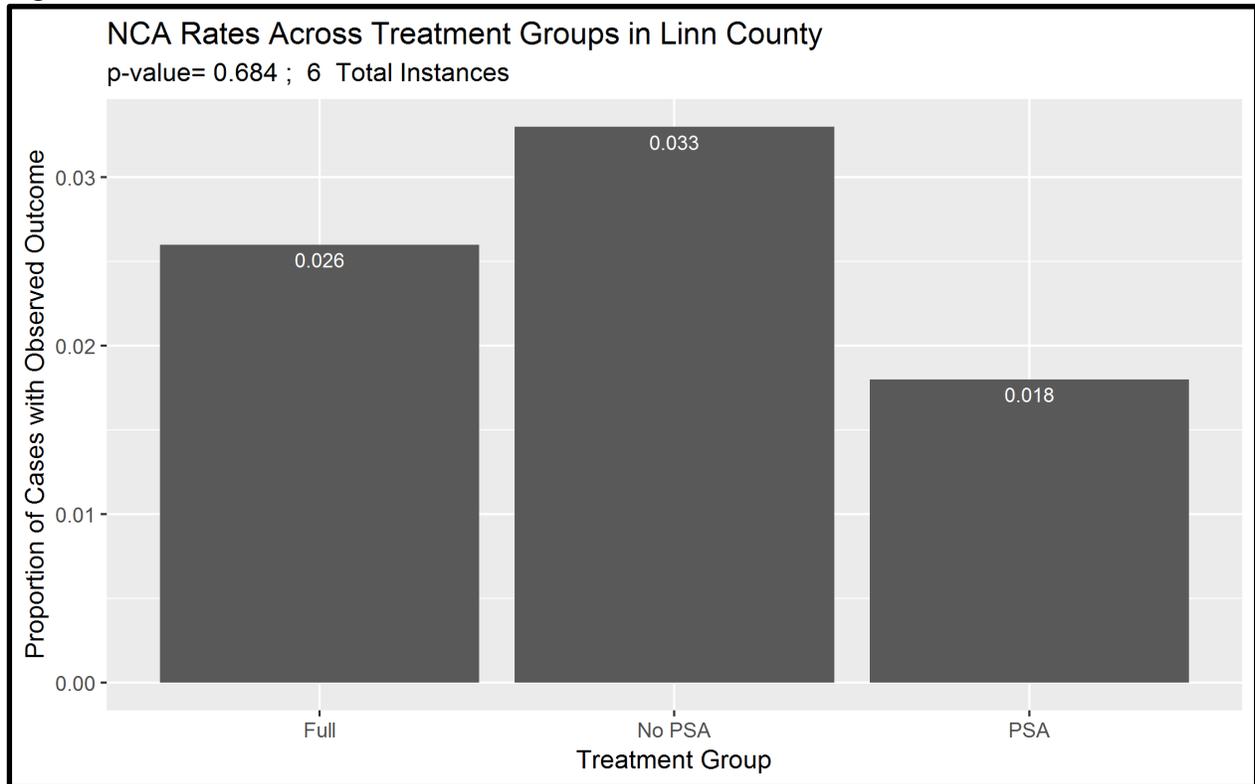


Figure 6



Figures 7 and 8 perform the same calculations but for the subset of NCA that are classified as violent crimes, or NVCA. NVCA is a considerably rarer occurrence, with only about 1% of arrestees in Polk County (52 total) being arrested for at least one NVCA charge. The interval for the effect size of the PSA on NVCA occurrences is between a 0.2 % and 1.6% increase, with a  $p$ -value of .016; again, the data are not representative of all Polk County cases, and there has been no correction for multiple testing. The corresponding interval in Linn County is -2.5% to 0.8%,  $p = 1$ ; again, the data are not representative of all cases in Linn County (as evidenced by the fact that the data appear to show no NVCA incidence in the Linn County treated group).

Figure 7

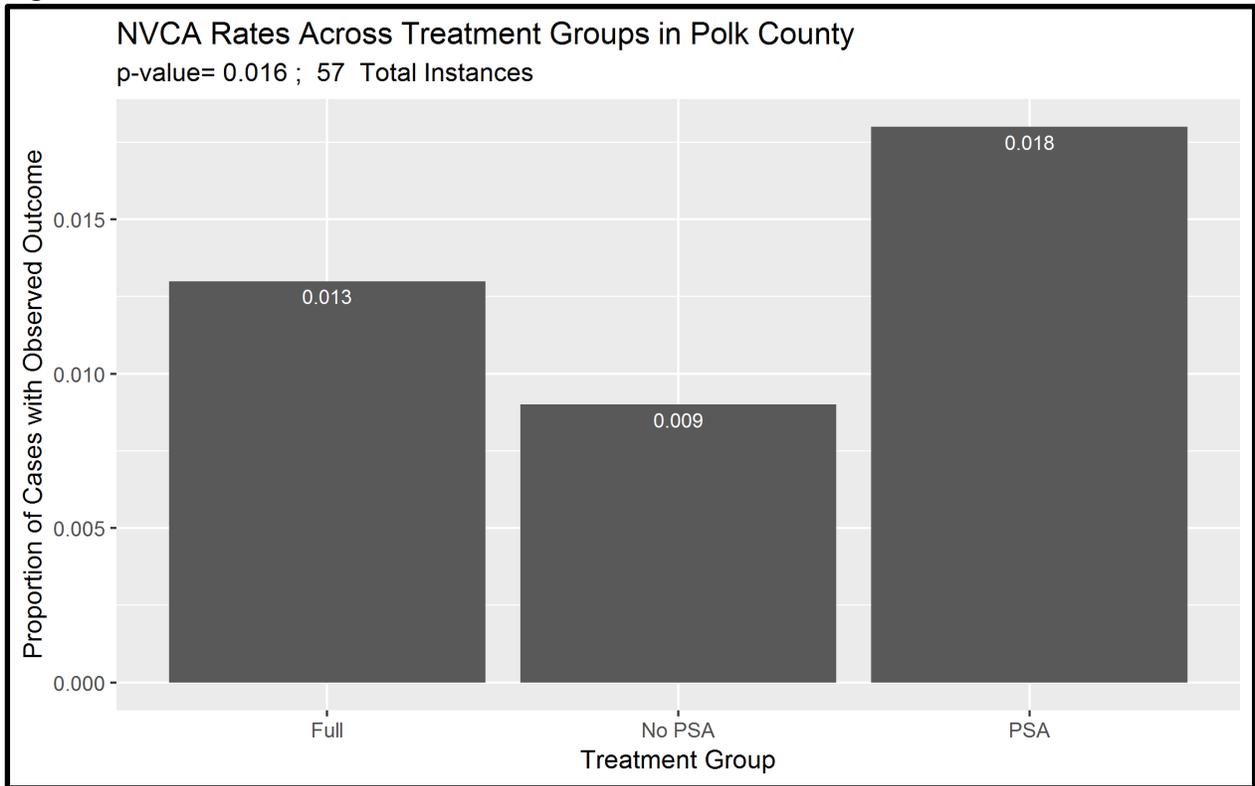
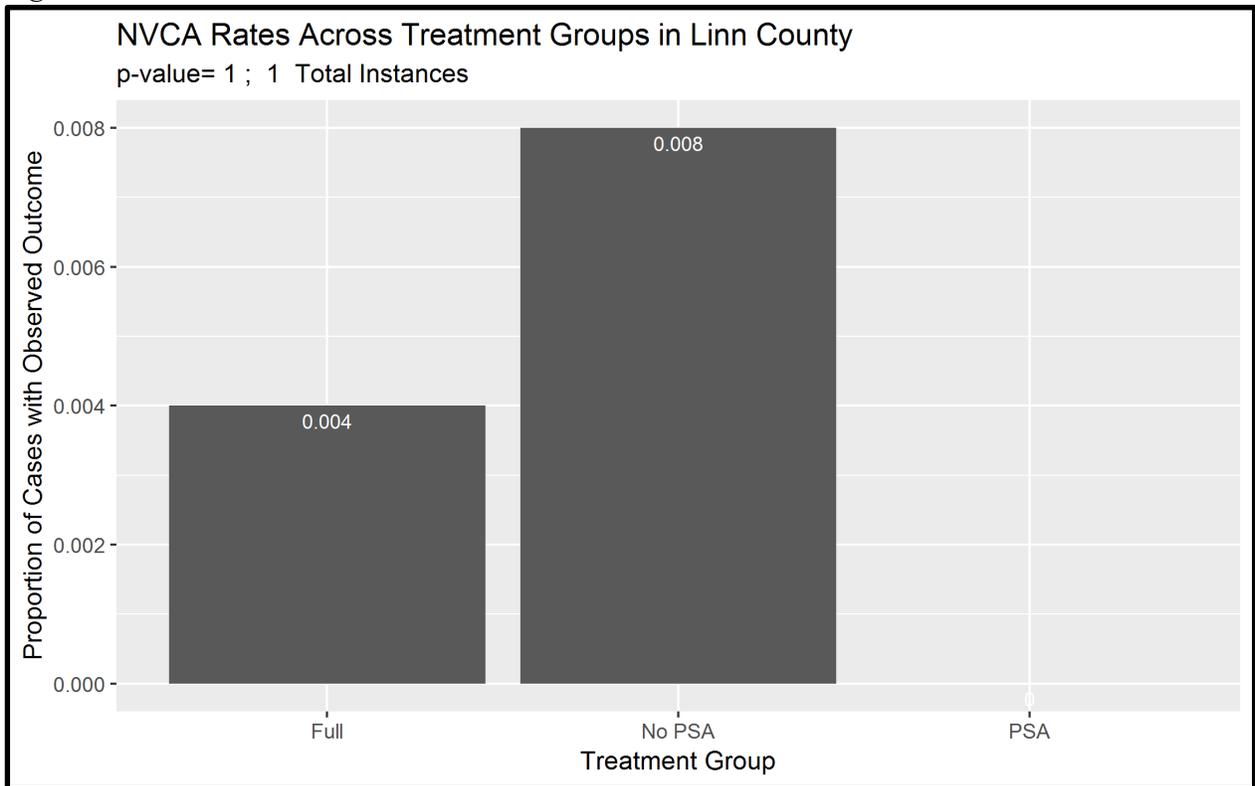


Figure 8



Figures 9 and 10 show differences between the treated and control groups for FTA rates. In Polk and Linn Counties, the corresponding  $p$ -values are 0.298 and 0.487, respectively. In Linn County, there was no recorded instance of FTA when the PSA was not provided at initial appearance (and only 1 when the PSA was provided), reemphasizing that the cases available for analysis are not representative of the whole. The confidence intervals for the effect size of the PSA on FTA rates is between -0.5% and 1.8 % in Polk County and between -0.9% and 2.6% in Linn County.

Figure 9

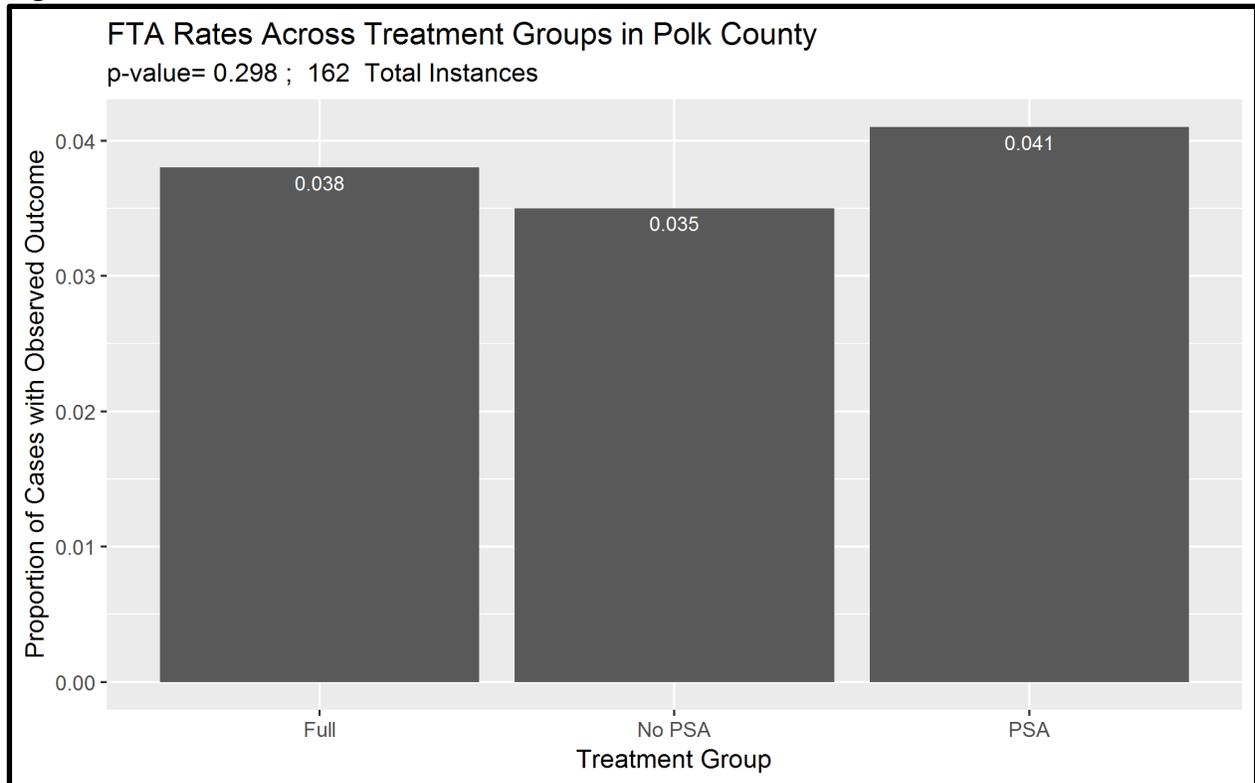
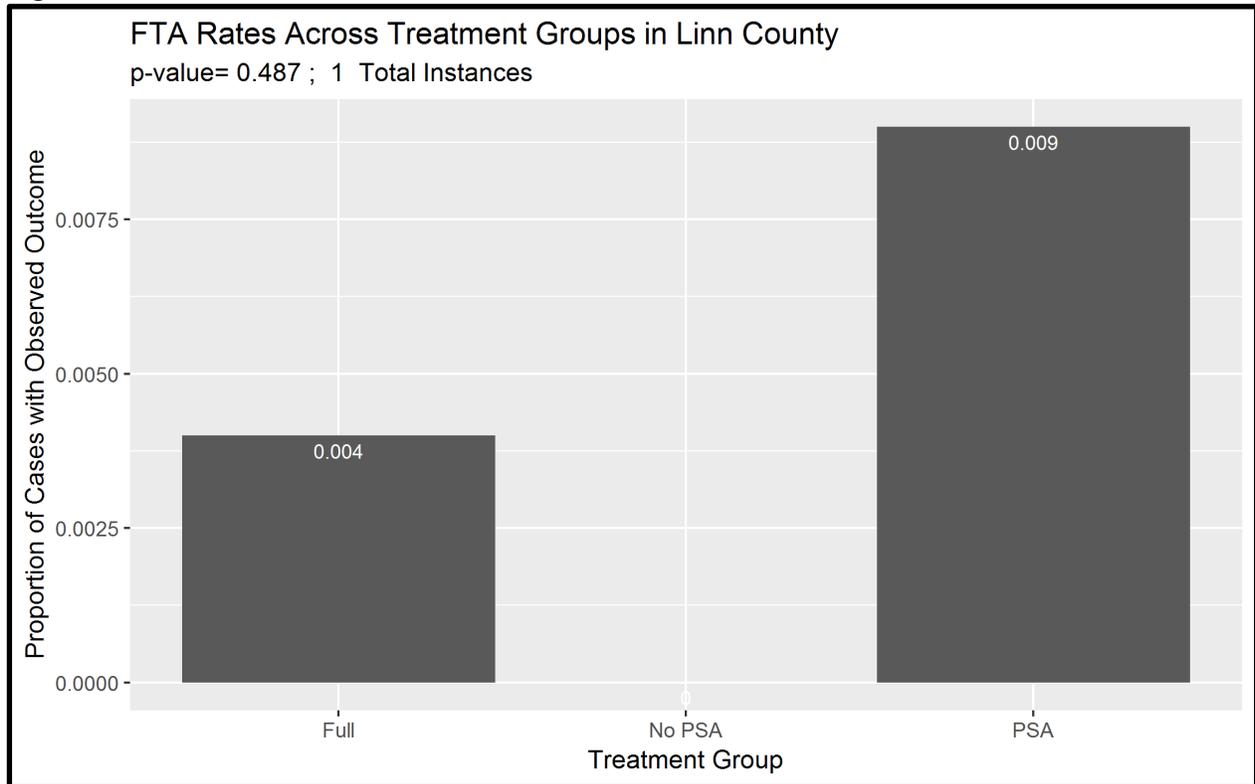


Figure 10



The analysis in Figures 11 and 12 differs from the others in that it shows an average length of time, in days, as opposed to an incident rate of a specific post-release outcome. Arrestees may be incarcerated before disposition for different lengths of time due to any of the following reasons, among others: not being released, inability to post bail, or being arrested on a new criminal charge while released. The pre-disposition incarceration measurement focuses on the total number of days an individual was in the county jail while their case was active. Since active incarceration makes committing NCA, NVCA, or FTA impossible, understanding the relative lengths of incarceration is necessary for interpreting the other outcomes. In Polk County, arrestees in the PSA treated group served 2.2 fewer days on average than their non-PSA counterparts, a decrease of 7.8%, with a  $p$ -value of 0.001, and a confidence interval of -4.5 days to -0.1 days. Again, these cases are not representative of the whole, and there has not been a correction for multiple testing. In Linn County, the results were in the opposite direction, with PSA arrestees serving on average 2.8 days more in pretrial detention, but with a  $p$ -value of 0.279 and a confidence interval between -2.8 days and 8.3 days. These cases likely have incarceration times shorter than those in the whole dataset, given the fact they were among the first to reach disposition.

Figure 11

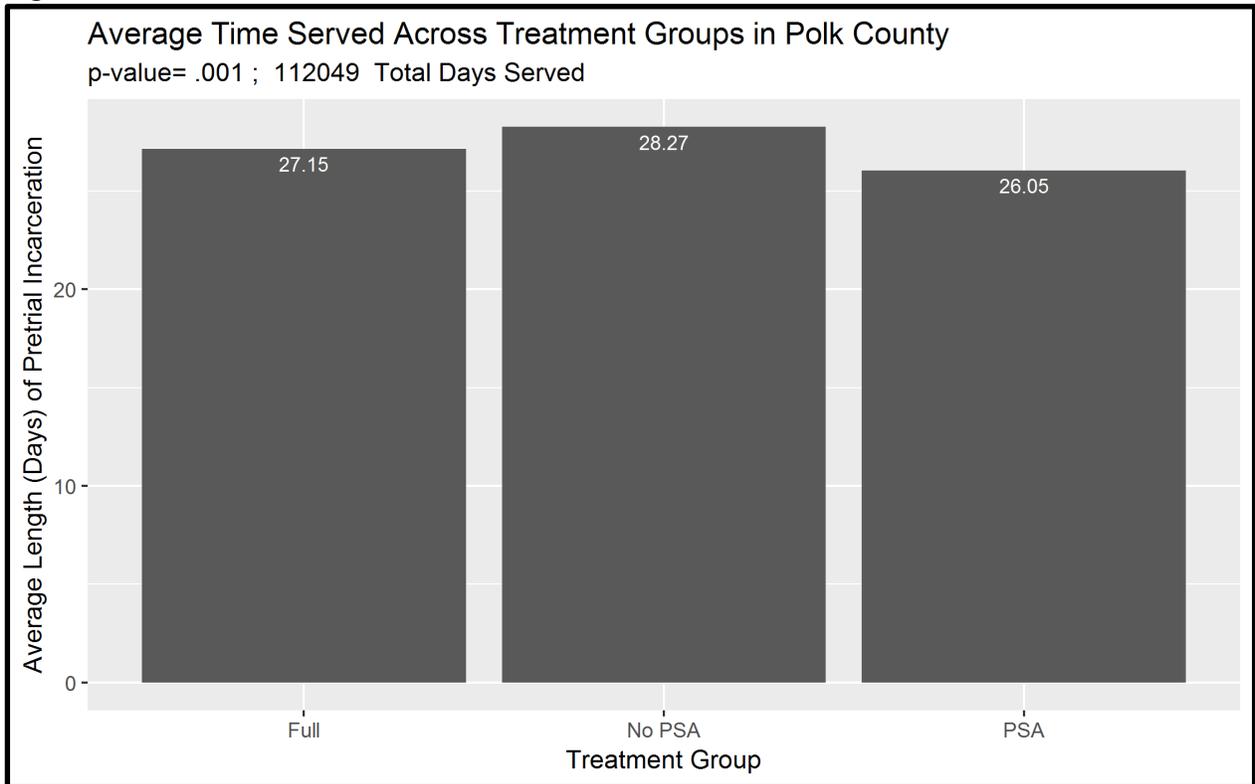
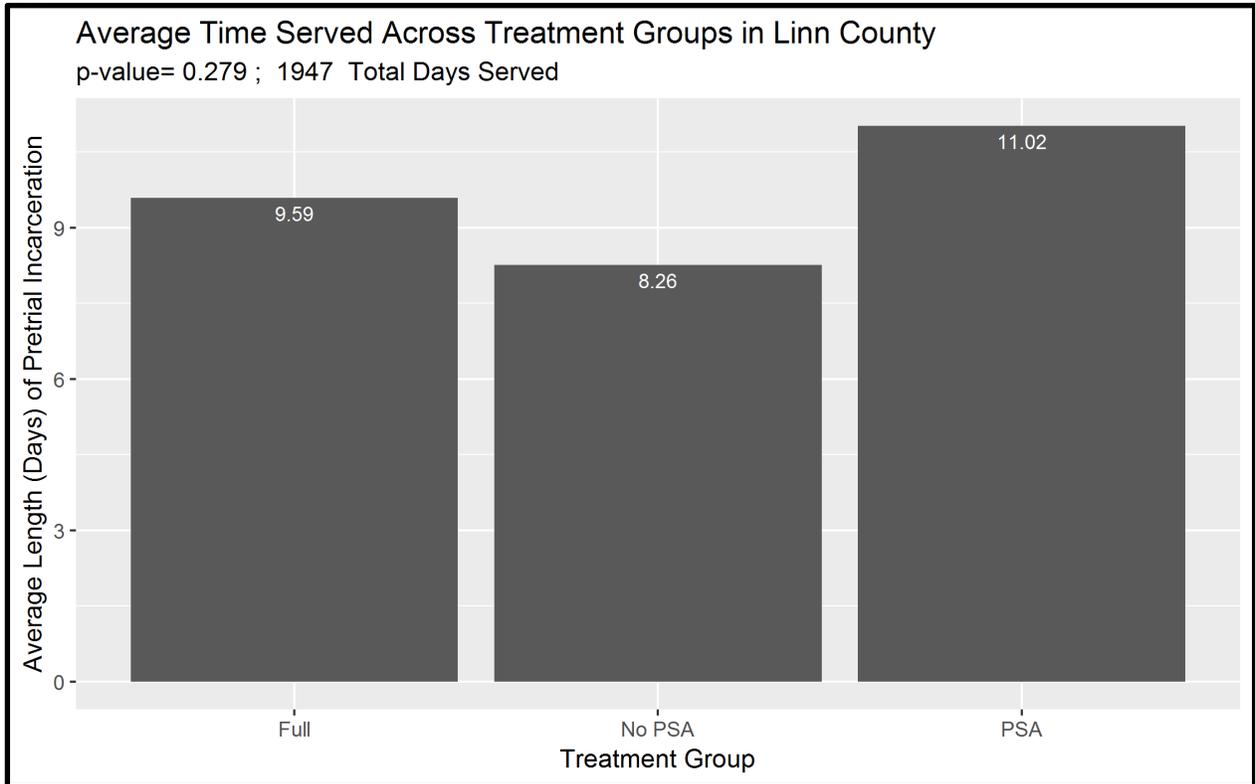


Figure 12



## **VI. ADDENDUM**

The Access to Justice Lab produced its original report under conditions of unusual haste. The problem of rapid turnaround was compounded when the data the A2J Lab received to generate the report was formatted differently from the test data the A2J Lab had received several weeks earlier. These formatting differences resulted in lost hours spent reprogramming the analysis software. As a result, the A2J Lab could not complete data integrity checks that it would ordinarily have implemented before the report was issued; the report included a warning regarding data quality and institutional comprehension of the data in its initial report. Subsequent to issuing the initial report, the A2J Lab continued verifying the data and performing integrity checks, and it discovered four issues, detailed below.

None of these issues, or the corrections implemented, alter the central conclusion of the A2J Lab's report: there are insufficient data at this time to conclude that use of the PSA in either Polk or Linn County affects the four key outcomes of (1) days spent incarcerated before case disposition; (2) new criminal activity; (3) new violent criminal activity; (4) or failure to appear. Corrections resulted in changes to the figures and significance levels in the original report, but not to the overall conclusions. Only additional time will allow credible inferences as to the effects of the PSA on key outcomes.

This addendum details the remaining data issues, the relative number of cases affected by such issues, and what efforts have been made (and will be done) to address them. The data relied upon to produce the original report implicate four separate issues: (1) PSA cases that could not be matched to the Iowa Courts Online Database; (2) the presence of individuals who pleaded guilty during their initial appearance; (3) the presence of individuals who posted bail prior to their initial appearances; and (4) multiple dates associated with a single case ID. Each of these problems, their relative size, and what attempts have been and will be taken to address them is detailed briefly below.

### **1) PSA eligible cases that could not be matched to Iowa's state court database**

During the period for which cases were collected (January 16, 2018 - October 3, 2018), Polk County produced roughly 9000 unique cases for which a PSA was generated (across both control and treated groups). One should be able to locate each of these 9000 cases, along with all other cases associated with the arrestee for which a PSA was generated, to data stored within Iowa Courts Online/the Justice Data Warehouse. Only 7700 of the 9000 cases were matched; roughly 1300 cases did not produce a match and thus were excluded from the analysis due to incomplete information. A secondary round of matching was able to recover roughly 1200 of the missing cases, with 100 having corrupted/non-standardized case IDs.

### **2) Individuals pleading guilty during initial appearance**

An individual booked on a PSA-eligible charge can plead guilty during their initial appearance. Pleading guilty at this stage results in the disposition date and initial appearance date occurring on the same day. Arrestees who plead guilty on the day of their initial appearance have a total pretrial period of zero days. Analysis of the PSA's impact relies on observing individuals released on bail during this pretrial phase. By including individuals who never had a chance to commit an NCA or FTA during their pretrial period, the instances of zero counts (zero NCA,

zero NVCA, zero FTA, and zero time spent incarcerated) increase at the expense of providing meaningful information. The A2J Lab addressed this problem by removing all individuals with a pretrial period of zero days, dropping roughly 1100 cases from the analysis.

### **3) Individuals bonding out prior to initial appearance**

Iowa allows individuals booked on certain charges (many of which are PSA-eligible) to post a preset amount of bail, set by state statute, prior to an initial appearance. In these instances, an individual becomes ineligible for the study, since a judge had no opportunity to set release conditions (with or without PSA input). These cases can be identified directly by observing the outcome of an initial appearance hearing. But this information is, at this point, only collected for individuals in the treated group. There are currently 54 instances of bonding out prior to initial appearance within the treated group data. Assuming roughly the same number of instances occurred for the control group, there are potentially around 100 cases within the data subject to ineligibility on this ground. The A2J Lab continues to work with Iowa data managers to address this problem.

### **4) Multiple dates associated with a single case ID**

Initial data checks indicated that case IDs could be associated with multiple incident dates within Iowa Courts Online. In the original report's data, incident dates associated with a case ID are always reported with a single date. But multiple dates could be associated with a single case, specifically when a contempt charge in the current case was appended to an older, inactive case. There are nine recorded instances of this occurring in the data. Additional random sampling has not identified other cases where multiple incident dates on a single case ID have produced a misleading NCA count. The A2J Lab continues to work with Iowa data managers to address this problem.