Behavioral Biases and Legal Compliance: A Field Experiment

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Abstract

Many defendants fail to appear (FTA) for court despite the prospect of legal consequences. In a field experiment, we compare the effectiveness of text message reminders to an intervention that combines reminders with personalized assistance. The treatments are equally effective, reducing FTA by 8 percentage points from a 21 percent baseline rate. However, personalized assistance facilitates greater take-up of court accommodations such as rescheduling and payment plans. For more serious cases, the treatments reduce arrests by two percentage points, implying FTAs have a large effect on arrests. For the least serious cases, an FTA has small effects on fines.

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Many defendants fail to appear for their court dates despite considerable consequences. Between 5 and 40 percent of defendants across various jurisdictions fail to appear (FTA) for their arraignments (McGinty, 2000; Helland and Tabarrok, 2004; Davis, 2005; Fishbane et al., 2019). A defendant who FTAs can face additional fines and fees, a driver's license suspension, and a warrant. FTAs also increase operational costs for the government (Bornstein et al., 2013).

A growing body of work has developed nudges to reduce FTAs and other forms of legal noncompliance (Bornstein et al., 2013; Haynes et al., 2013; Lowenkamp et al., 2018; Fishbane et al., 2019). However, these nudges do not address time constraints or difficulties navigating court bureaucracy, which may make noncompliance optimal for some defendants.

We conduct a randomized controlled trial in a large county's traffic, criminal misdemeanor and municipal courts, comparing a nudge treatment—text messages—to an intervention that combines a nudge and personalized assistance. The text messages remind the defendant of their court date and provide information about compliance. The personalized assistance intervention adds an invitation to text questions to court staff. Two-way texting provides an opportunity to ask questions and obtain personalized information about how to resolve one's case and access court accommodations, such as rescheduling and childcare. We measure the effect of these interventions on FTA rates, case outcomes, fines and fees paid, and future criminal justice contact.

We find that both interventions are effective, reducing FTA 8.3 to 8.5 percentage point reductions off a base of 21.3 percent (39 to 40 percent). The personalized assistance intervention is no more effective than simple reminders, which suggests that difficulty navigating court bureaucracy is not the key driver of FTA.

Although the interventions have similar reductions in FTA, they induce different compliance behaviors. The reminder-only intervention is better at improving criminal justice outcomes; it slightly increases case dismissals and not guilty findings (0.8 percentage points over a base of 7.3 percent) among all cases, suggesting that on the margin, physically appearing in court leads to favorable case outcomes for the defendant. In contrast, the personalized assistance intervention increases court date rescheduling more than reminders. Both interventions reduce fines and fees paid for cases in which FTAs leads to automatic convictions.[1] Both interventions also reduce warrants issued and arrests.

[1] In some low-level traffic cases, the defendant who is absent may be automatically convicted and sentenced to fines and fees. Most cases, however, will be postponed until the defendant is arrested or otherwise comes to court.

Since resolving even a low-level case can involve several hours and hassle, it is possible that FTAs reflect reasonable decisions rather than behavioral biases. We explore this trade off by estimating the effect of FTA on fines and fees paid and future criminal justice contact, instrumenting for FTA with the reminder-only treatment. FTAing may be reasonable for defendants with particular types of cases. On some types of cases, an FTA increases fines and fees charged by $91, a sum that may be worth paying to avoid the inconvenience and time costs of appearing in court. In contrast, defendants for cases that can be paid online face steeper costs from FTAing than from complying. Likewise defendants for cases that trigger a warrant who FTA see increased arrests in the study county by over 500 percent (39.2 percentage points over baseline of 7.6 percent). Heterogeneity in the consequences faced by the marginal person who FTAs highlights the importance of targeting nudges at those with larger behavioral biases rather than those who may be weighing the trade offs and coming to a reasonable decision.

Our study relates to an existing literature on low cost interventions to increase court case compliance, as well as a broader literature applying RCTs to legal issues (Greiner and Matthews, 2016). Previous RCTs have shown that reminders reduced FTA by 23 to 26 percent (Bornstein et al., 2013; Lowenkamp et al., 2018; Fishbane et al., 2019). These studies also find that emphasizing the consequences of FTA may be particularly effective, as defendants may be unaware or misinformed. However, these interventions might make consequences over-salient (Richburg-Hayes et al., 2017). If defendants are already making intentional decisions, it may be better to make compliance easier for defendants. Prescott (2018) did so by disseminating information about an online warrant resolution service.

Using personalized assistance to increase social benefit take-up has been explored in prior work. While Finkelstein and Notowidigdo (2018) and (Bergman et al., 2019) find that personalized assistance improve individuals' outcomes, we find that two-way texting with court staff increases use of court accommodations, but it is no more effective than reminders alone in reducing FTA.

Our study is the first to rigorously estimate the downstream effects of FTA. We add to the growing literature finding that low-level infractions or legal noncompliance can lead to more serious consequences (Mello, 2018).

1. STUDY DESIGN

1.1. STUDY SITE AND CONTEXT

Our research partner is a county court whose jurisdiction has over 700,000 residents and hears traffic violation, municipal violation, and low-level criminal cases. Our study sample is limited to traffic, municipal, and criminal misdemeanor cases. Overall, 80 percent of cases heard are traffic cases, which include speeding and driving with an expired license.[2] Municipal violations (6 percent of all cases) include offenses such as trespassing, loitering, and marijuana possession. Criminal misdemeanor cases (14 percent of all cases) include intentional property damage, driving under the influence, and low-level assault.

Defendants have been issued a ticket and instructed to return to court for an arraignment. For some lower-level cases (e.g. speeding), a defendant can plead guilty and pay online or by mail, therefore obviating the need to show up at the first arraignment. This is not an option for more serious cases (e.g. driving without insurance). About 35 percent of traffic cases in our sample and 5 percent of municipal and criminal cases allow defendants to prepay. Some cases that can be paid ahead are designated as unable to prepay due to a glitch. To pay online for these cases, defendants must contact the court to override the glitch.

When a defendant shows up for their first arraignment, they check in with the court clerk and wait for their case to be called. When called, the judge can dismiss or amend any of the case's charges.[3] If the case is not dismissed, a defendant may plead guilty or not guilty. If they plead not guilty, a new court date is set. If a defendant pleads guilty, their fines and fees are due immediately. If fines and fees surpass $99, they can apply for a payment plan, which costs $25. Payment plans must be applied for in person and are only approved for defendants with limited means.

A defendant has FTA'd if they do not pay in advance of their court date, mail in a guilty plea ahead of time, reschedule,[4] or show up at the arraignment. The consequences of an FTA vary by case type. In general, an FTA for a less serious traffic violation results in a driver's license suspension and automatic conviction and sentence. About two-thirds

[2]These statistics include all cases that occurred during our sample period, regardless of whether they were eligible for our study. As such, the numbers do not match the descriptive statistics of our sample in Table 1.

[3]For example, defendants charged with driving without insurance may bring proof of newly purchased insurance, prompting the judge to reduce the fine.

[4]Defendants can FTA on the rescheduled hearing, which leads to the same outcomes as FTAing on the original hearing.

of these cases can be resolved by paying the fine before the court date. An FTA for a municipal, criminal, or more serious traffic violation results in a bench warrant for the defendants' arrest[5], but not an automatic conviction and sentence. The vast majority of these cases (about 97 percent) cannot be resolved by paying the fine before the court date. About 35 percent of the sample receives an automatic conviction for an FTA, while 65 percent receives a warrant for an FTA.

FTAs can also result in additional fines and fees: there is a $30 FTA fine, a $25-50 warrant issuing fee, and a $100 warrant cancellation fee, on top of any fees the original infraction incurs. On the other hand, showing up to court incurs a fee of $26, even when attendance is mandatory.

There are several parts of the hearing process that may be unknown to defendants. Defendants may not know that a case's first arraignment can be rescheduled once to another date within two weeks of the first assigned date. Defendants may not know that they can apply for a payment plan. Finally, defendants may be unaware that the court provides free childcare during the period of one's hearing from 7:30 am to 5 pm, Mondays through Fridays.

The population of defendants is not representative of the county as a whole. In the court at large, 37 percent of defendants during our time period are female. Relative to the proportion of the county as a whole, black individuals are 79% overrepresented in our sample, Hispanic individuals are underrepresented by 74%. The median age of our sample is 31 years old, a few years younger than the median age in the county (US Census Bureau, 2017). The average income in defendants' zipcodes is 10 percent higher than the median income in the county.

1.2. INTERVENTIONS

In the reminder-only text messaging treatment arm, the defendant receives reminders 14, 7 and 1 day in advance of their court date. The messages include information about the case itself (such as the case number, the time and location of the court date, and whether it can be paid online), information about the consequences of not showing up (a warrant, a driver's license suspension, or a fine, as applicable), and court services they can access (such as payment plans, court date rescheduling, or free childcare). Table A.1 displays an example set of texts.

Texts on each day are divided into two messages to accommodate character limits. Per

[5] A bench warrant is generally not actively pursued, but will show up on the individual's record.

federal regulations, defendants had the option of opting out of text message reminders at any point. Thus, defendants receive up to 3 doses with two messages each, for a total of up to 6 text messages per case.

In the personalized assistance treatment arm, the defendant receives text messages with the same information at the same intervals, along with an invitation to text back with questions to a court staff-person. Court staff monitor the messaging software for incoming messages and respond to defendant texts similarly to how they respond to defendants' phone queries.[6]

Both interventions nudge defendants to comply with the court by reminding and providing generic information, while the personalized assistance intervention also makes it easier to navigate the court's bureaucracy.

1.3. Experimental Design and Methodology

Between March 7, 2018 and July 15, 2019, 31,339 eligible individuals were randomized into a control group or one of two treatment groups: a reminder-only intervention or an intervention composed of reminders with an offer of personalized assistance via two-way texting.

The randomization algorithm ran each morning, to check for cases that met the following criteria:

- The arraignment is in two weeks, one week, or one day.
- The arraignment has not already been resolved by paying online, pleading guilty by mail, rescheduling, or other pre-arraignment action.
- The person has not already received a treatment assignment. Previously randomized individuals (as identified by name and date of birth match) receive the same treatment assignment.
- The person's address is not listed as "transient" or "homeless" [7]
- The person has a phone number in the database [8]

[6]The personalized assistance intervention is in line with emerging court practices. As part of the broader attempt to make courts more accessible, criminal justice practitioners have explored the provision of personalized assistance through texting to encourage defendants to show up. Indeed several services have emerged to help courts administer these two-way texting programs, such as eCourtDate, Uptrust, and Stanford's Court Messaging Project.

[7]A pre-study sample of all cases heard during a two-month interval suggests that no more than 6 percent of cases consist of homeless and transient defendants.

[8]Defendants are not legally obligated to share their phone numbers with police officers or court personnel. About 40 percent of cases that were not resolved two weeks prior to the arraignment had phone numbers on file. In New York City, only 13 percent of defendants have available phone numbers on file

This list of eligible cases was then sorted by random number and treatment was assigned in a rotating manner, resulting in a 50-25-25 proportion split between control, reminder messages and personalized assistance treatments. The treatment assignment was stratified at the courthouse-day level. Criminal and municipal cases, which are seen in the same courthouse, were randomized together while traffic cases were randomized separately.

If a given defendant had multiple cases during the study period, they received the same treatment assignment in subsequent cases, but only the first case was included in our analysis sample. Only 2,301 cases in our time period –7 percent–were subsequent cases for defendants.

Since we do not know whether each defendant received or viewed the intervention, we limit our analysis to an intent-to-treat framework. We estimate the following regressions:

$$Y_i = \alpha + \beta T_i + \Gamma \mathbf{X}_i + \delta \mathbf{S_i} + \epsilon_i \tag{1}$$

where Y_i is the outcome of interest, such as FTAing on the first arraignment;[9] T_i is the treatment assignment; X_i represents a vector of baseline individual characteristics including age as a quartic, race, sex, average income in their zipcode of residence, case characteristics, such as the court division, whether the case can be paid before the court date, whether an FTA triggers a warrant or a driver's license suspension, the number of charges faced and the time of day of the hearing, and finally a vector of criminal history binary variables such as a prior conviction, prior incarceration and prior FTA; and S_i is a vector of indicators for courthouse-day strata. We include X_i to improve precision. Our analysis excludes 503 individuals missing zip code information and therefore missing income data. [10]. Standard errors are robust to heterogeneity. We test whether treatment coefficients are statistically significantly different from each other to compare the efficacy of the reminder intervention relative to the personalized assistance intervention on the outcomes of interest.

(Fishbane et al., 2019). Defendants without phones but with address information were randomly assigned to a postcard reminder or control condition. Postcards reduce FTA by 5 percentage points off a baseline 24 percent FTA rate. The effect is statistically significant at the 1 percent level.

[9]Rescheduling is an outcome that was not included in our preregistered analysis. We likewise added not guilty plea/case dismissal and future criminal contact outcomes. The two-stage least squares analysis was also not initially included in our preanalysis plan thought it was included in a grant application from the preceding year.

[10]Our results are robust to including people missing zip code data. We also present results from regressions that do not control for covariates in Appendix . The full sample results are robust the exclusion of covariates. Non-robust results for subsample analyses are discussed in section 3.2

To estimate the effect of FTA on subsequent criminal justice involvement, we use assignment to the reminder-only treatment as an instrument for FTA. We use the nudge intervention as the instrument rather than both interventions because the nudge intervention more plausibly satisfies the exclusion restriction. The reminder only intervention only affects future criminal justice contact by reducing FTA; in contrast, the personalized assistance intervention might improve the defendant's view of the criminal justice system, thereby affecting future compliance. The first stage is

$$F_i = \mu + \sigma T_i + \phi \mathbf{X}_i + \psi S_i + \eta_i \tag{2}$$

where F_i is a binary indicator for FTA on the randomized arraignment. We analyze the effects of FTA on fines and fees charged and paid as well as subsequent criminal justice involvement.

2. DESCRIPTIVE STATISTICS & TAKE UP

Individuals with cases in our sample tend to be male (64 percent), white (71 percent) or black (18 percent), fairly young (on average, 35 years old), and living in zipcodes with an average income of over $66,000 per year (see Table 1). Traffic court sees two thirds of cases, with the remainder split between municipal and criminal courts (9 and 22 percent, respectively). Only 26 percent of cases may be paid ahead of time. On average, each case has 2.28 charges on it. Almost half of the individuals with cases in our sample had a prior case and almost 21 percent have previously failed to appear.

While some criminal history and case characteristic variables are out of balance between some of the treatment arms, they are not jointly significant (Table 1), suggesting that there was not systematic bias in the randomization process.

The SMS software suggests that the delivery rate of the treatments was high. Of treated cases, only 3.27 percent had an undeliverable message/number. An additional 0.96 percent of treated cases had a person reply saying it was the wrong number. Only 2.32 percent of treated defendants opted out of receiving additional reminders.

In the personalized assistance arm, the defendants who initiated a conversation were more likely to be black, older, initially ineligible to pay their fine ahead of time, and were more likely to have a prior FTA. Appendix Table A.7 compares the characteristics of defendants in the personalized assistance treatment arm who initiated a conversation with court staff to those who did not.

3. INTERVENTION RESULTS

3.1. MAIN TREATMENT EFFECTS

The FTA rate in the control group is 21.3 percent. The interventions reduce FTA rates at the first arraignment by 39 percent (8.4 percentage points). We see minimal differences between the two treatments in the overall FTA reductions (see Figure 1).

While the two treatment arms are equally effective in reducing FTA, they induce defendants to resolve their arraignments in different ways. The reminder text messages result in more defendants showing up for their court date, increasing attendance by 4.4 percentage points on a base of 47.3 percent relative to personalized assistance's increase of only 1.9 percentage points (see Figure 1). In contrast, personalized assistance is more effective in encouraging defendants to reschedule their initial court date.[11] The personalized assistance treatment increases rescheduling by 4.1 percentage points off a base of 3.7 percent, reflecting an increase of 111 percent, while reminder texts only increase rescheduling by 1.8 percentage points (a 49 percent increase). Both interventions are statistically equally effective at boosting the number of defendants who prepay, showing a 13.5 percent increase over a base of 20 percent. Finally, the personalized assistance intervention statistically significantly increases the use of payment plans while the reminder intervention does not, but we cannot rule out that the two treatments have equal effects.

The personalized assistance intervention's effect on rescheduling and use of payment plans is consistent with the content of the text conversations. 22.2 percent of individuals who replied inquired about rescheduling options. Additionally, 17.8 percent of respondents asked about payment plans. Less than one percent of respondents discussed childcare. As a point of reference, only 1.5 percent of those who replied asked about legal representation or the presence of a lawyer at their hearing.

Defendants in the personalized assistance treatment arm who initiated a conversation with court staff had different case resolution behavior compared to defendants in the same treatment arm who did not communicate with court staff (see Appendix Table A.7).

[11] Rescheduling could be welfare-improving in allowing defendants to gather evidence, save money for payments, or schedule their court date around important obligations. However, we are unable to provide clear evidence of whether rescheduling leads to positive outcomes for defendants at this time. Prior to May 2019, both interventions limited the number of doses a defendant received to three. If a defendant rescheduled after three doses, they received no doses for their rescheduled court date. Defendants in the treatment arms who rescheduled may have been expecting reminders for their rescheduled case, leading to FTAs on the rescheduled case. We are currently implementing an improved intervention that provides full doses for rescheduled cases.

Relative to defendants who did not reply, those who replied were 8 percentage points less likely to appear in person (off a base of 51.6 percent), 7.2 percentage points less likely to prepay (off a base of 25.7 percent), and 13.6 percentage points more likely to reschedule their hearing (off a base of 2.5 percent). The FTA rates were similar between those who did and did not reply.

Because the two treatments have different mechanisms for reducing FTA rates, they also produce different impacts on case outcomes. In particular, the reminder messages increase the likelihood of being found not guilty or having one's case dismissed by 0.8 percentage points, off a base of 7.3 percent (see Figure 2). Since defendants must plead not guilty or make their case in-person it makes sense that the treatment that increases the likelihood of showing up for a hearing also increases the likelihood of being found not guilty or case dismissal.[12]

Both treatments reduce the likelihood of getting a warrant on the randomized case and therefore both reduce the likelihood of being arrested (Figure 2). About 19 percent of our control group received a warrant and 5 percent are arrested within 6 months. The treatments reduce bench warrants by about 3 percentage points (16 percent) and arrests by 0.8 to 1.6 percentage points (16 to 32 percent). The arrest results are driven entirely by arrests on the randomized case (see Appendix Table A.8).[13]

Reducing arrests is an important effect. As Hagar (2019) notes, "getting arrested or tossed in jail, even for a short time, can inflict lasting damage, putting a person at risk of losing a job, home, or kids." Moreover, many criminal records note arrests in addition to convictions. So an arrest could cause a person to have a criminal record if they did not have one beforehand.

In the full sample, the treatment does not reduce fines and fees paid (Figure 3).[14] However, a large proportion of these cases are FTA warrant cases, which can only be resolved with a court appearance. Thus, the treatment leads to the realization of sentences for this subsample, producing a noisy null effect on fines and fees. For the automatic

[12]As mentioned in a previous footnote, we are unable to examine the effect of rescheduling on case outcomes. In the full-dosage treatments, it may be possible that rescheduling (and then appearing at the rescheduled date) also leads to more case dismissals or not guilty findings.

[13]Our arrest results could be overstated if many defendants are arrested for charges in other counties since the cases are transfered to counties where there is an active warrant. Since the treatment reduces warrants issued, we would observe an inflated measure of the number of subsequent arrests for the control group relative to the treatment group. To bound the importance of this measurement issue, we estimate the treatment effects on out-of-county transfers (see Appendix Table A.8). Very few defendants in our sample experience an out-of-county transfer compared to total arrests.

[14]We windsorize the top and bottom percentile of fine and fee values to reduce noise.

conviction cases, the treatments reduce fines and fees paid by about $7, 4.5 percent of the $154 control mean. The reduction in fines and fees can stem from a combination of case dismissal, the avoidance of FTA-related fines, and/or lower fines and fees resulting from appearing in person.

3.2. Effect of Failure to Appear and Behavioral Biases

FTA may prompt defendants to have more subsequent contact with the criminal justice system. We quantify this relationship in a two-stage least squares (2SLS) analysis, using the reminder-only treatment as an instrument for FTA. The 2SLS estimates scale the effects of the treatment on future criminal justice contact by the effect of the treatment on FTA.

Calculating the effect of an FTA on fines/fees and future arrests allows us to consider whether an FTA reflects reasonable decision-making or is the result of a mistake. The costs of resolving a case are non-negligible. Awaiting one's arraignment and the arraignment itself may take 4 hours[15], not including transit time. There are also hassle costs from rescheduling work and rearranging one's day. Additionally, there may be psychological costs associated with appearing before a judge. As such, it is possible that FTA could be the result of a mistake for some defendants and may reflect a reasonable choice given the trade-offs for other defendants. This is an important analysis since the survey conducted by Fishbane et al. (2019) finds that many individuals think FTAs result from intentional avoidance rather than inattention or accidents.

If the intervention only impacts outcomes via FTA, then our analysis represents the causal impact of FTA on criminal justice outcomes for low-level offenders on the margin of FTA. We use the reminder-only intervention to instrument for an FTA rather than using the personalized assistance treatment, since the latter could affect future criminal justice outcomes by means other than FTA. For example, personalized assistance could create a more positive view of the criminal justice system.[16] While the reminder-only intervention could violate the exclusion restriction, our data suggests it does not. First, the treatment might cause defendants to pay more simply by reminding them of their legal obligations. However, we find that the percent of fines and fees paid does not change. This suggests that the reminder-only effect on fines and fees paid is driven by the changes in the amount charged, not by reminding people to pay (see Tables A.9 and A.10). Second, the exclusion

[15]Estimate provided by court clerks.

[16]See Table B.6 for 2SLS results with the full sample, using assignment to either treatment as an instrument.

restriction could be violated if the treatments induce defendants to set up payment plans, which incur an additional $25 charge. But the reminder treatment only weakly changes payment plan behavior, if at all. As such, we believe the exclusion restriction is plausible in this context.

For the analysis of how FTA affects fines and fees, we limit the sample to cases where FTAs prompt automatic convictions, typically low-level traffic cases.[17] FTA increases fines and fees paid by almost 59 percent ($91 over a $154 control mean). Paying the increased fines and fees that result from an FTA may be reasonable for some defendants. A person earning $12 per hour must work 8 hours to pay the increase in fines and fees from an FTA. Restrictive work scheduling or higher wages would increase the cost of appearing.

When allowed, pleading guilty and paying the ticket online may be a better outcome. The 2SLS estimates for fines and fees paid for cases that can be prepaid are even larger: $134 over a $157 baseline. Extremely credit constrained individuals may still find it optimal to FTA, but for other defendants, incurring the extra $134 from an FTA is a large price to pay to avoid the inconvenience of paying online.

The 2SLS estimates for fines and fees paid for cases that cannot be prepaid are considerably smaller, though noisy. The point estimate is an increase of $36, representing 3 work hours for someone earning $12 per hour. Moreover, once a defendant FTAs on these cases, they can pay their fines and fees online. Thus, for marginal defendants with these types of cases, FTAing may be a reasonable choice.

An FTA increases the probability of arrest within six months of randomization by 524 percent (39.8 percentage points over a baseline mean of 7.6 percentage points). These arrests generally result from the randomized case rather than new cases. An arrest can result in a loss of freedom and create a criminal record for those without prior records. Since the extra bookings we observe represent additional time in custody, which we assume is more unpleasant than attending court, these defendants are likely not optimizing.[18]

Since we do not measure the effect of FTA on driver's license suspensions, we may understate the costs of FTA. A suspended driver's license can limit a person's ability to find formal employment or travel to work. Driving with a suspended license is also a

[17] If a defendant FTAs on a case without automatic convictions, monetary sanctions may not be realized until the case is closed.

[18] One limitation to these results is we cannot observe if a person is arrested outside the study county or for a felony offense. This suggests our estimates are an upper bound, unless the treatments reduce felony cases.

traffic violation. Defendants with an active driver's license may face an added incentive to resolve their case while those with already suspended licenses have nothing to lose.

Most of the results are robust to the exclusion of controls. The exception is the effect of FTA on fines paid for the automatic conviction and prepay subsample (see Table B.5. In this sample, excluding controls produces a larger reminder treatment effect on FTA and a smaller treatment effect on fines and fees paid (see Tables B.1 and B.2). With a larger first stage and a smaller reduced form, the estimated effect of FTA on fines paid is much smaller at $48. With this estimate, we would conclude that the marginal person who FTAs in the automatic conviction and prepay sample is likely making a reasonable choice because of the small FTA consequence.

3.3. Cost-Benefit Analysis

Given the similar effects on FTA between the two treatments, considering cost and cost-effectiveness of each matters for policy-makers. The interventions are fairly cheap since delivering a text message costs about a cent per text.[19]

Overall, the reminder-only treatment saves the court $1.14 per defendant while the personalized assistance treatment costs the court $2.11 per defendant. Over the course of a year, the reminder-only treatment would save the court $23,420 while the personalized assistance treatment would cost $43,348.

4. Discussion

The interventions reduce FTA by 39 percent at a large county court system. We find that the two treatments tested—a nudge intervention in the form of reminder text messages and an intervention that combines the nudge with personalized assistance for defendants—have similar effects on FTA, but arrive there by different means. The reminder-only treatment induces defendants to show up for court, which in turn causes more not guilty findings and case dismissals. In contrast, personalized assistance helps defendants utilize court accommodations such as payment plans and hearing rescheduling.

Nudges and other behaviorally-informed interventions presume that individuals are misoptimizing in their decisions. We test this important assumption about defendants

[19]The costs underpinning this exercise may be found in Appendix . The personalized assistance intervention had slightly higher costs since texting back and forth involved the time of court clerks and also incurred additional costs from the texts and the software used for two-way texting. While there was some lost revenue from lower amounts of fines and fees imposed, this was offset by savings from the reduced costs of issuing an FTA and warrant, and avoiding arresting and holding defendants.

who FTA by using our reminder-only treatment as an instrument to look at the effects of an FTA on court fines and fees and future criminal justice contact. For cases where missing a hearing automatically prompts a warrant, we find that an FTA causes considerably more arrests within the next six months. For cases that can be paid online and where missing a hearing results in an automatic conviction, an FTA causes an increase in fines of $134. Furthermore, a recent study suggests that even small income shocks in the form of fines and fees can impose a large burden on individuals (Mello, 2018). Thus, the marginal defendants in these cases (except for those with extreme credit constraints) are likely not intentionally violating court requirements.

We find evidence that FTA could be reasonable for some defendants. For cases that cannot initially be paid online and where missing a hearing results in an automatic conviction, an FTA does not have a very large effect on fines and fees or arrests. Given the time and hassle costs associated with attending a hearing, these individuals could be making a reasonable decision given the trade offs in failing to appear. These results highlight the importance of targeting nudges to those with larger behavioral biases to improve social welfare.

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Table 1: Descriptive Statistics and Covariate Balance Between Treatment Arms

					Adjusted Differences		
	All	Control	Remind.-Only	Personal. Assist.	Control vs. Remind.-Only	Control vs. Personal. Text	Rem.-Only vs. Personal. Text
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
			Demographics and Income				
Female	0.365	0.361	0.372	0.367	0.005	0.003	-0.008
	[0.482]	[0.480]	[0.483]	[0.482]	(0.007)	(0.007)	(0.008)
White	0.707	0.702	0.710	0.710	0.003	0.002	-0.003
	[0.455]	[0.457]	[0.454]	[0.454]	(0.007)	(0.007)	(0.007)
Black	0.175	0.180	0.167	0.173	-0.008	-0.004	0.008
	[0.380]	[0.384]	[0.373]	[0.378]	(0.005)	(0.005)	(0.006)
Hispanic	0.078	0.079	0.080	0.076	-0.000	-0.002	-0.002
	[0.269]	[0.270]	[0.271]	[0.264]	(0.004)	(0.004)	(0.004)
Other Race	0.034	0.032	0.035	0.036	0.002	0.004	0.000
	[0.181]	[0.177]	[0.184]	[0.185]	(0.003)	(0.003)	(0.003)
Age	35.050	34.874	35.267	35.150	0.418	0.168	-0.071
	[13.881]	[13.748]	[13.968]	[14.025]	(0.202)	(0.199)	(0.225)
Avg Inc. of Zip Code	66.295	65.983	66.733	66.423	0.369	0.440	-0.256
	[34.797]	[34.749]	[35.207]	[34.481]	(0.510)	(0.496)	(0.556)
			Case Characteristics				
Municipal	0.094	0.091	0.094	0.099	0.002	0.005	0.006
	[0.292]	[0.288]	[0.292]	[0.299]	(0.004)	(0.004)	(0.004)
Traffic	0.685	0.686	0.684	0.684	0.000	0.000	-0.000
	[0.465]	[0.464]	[0.465]	[0.465]	(0.000)	(0.000)	(0.000)
Criminal	0.221	0.223	0.222	0.217	-0.002	-0.005	-0.006
	[0.415]	[0.417]	[0.415]	[0.413]	(0.004)	(0.004)	(0.004)
Can Pay Ahead	0.254	0.252	0.251	0.263	0.002	0.007	0.007
	[0.436]	[0.434]	[0.434]	[0.440]	(0.006)	(0.006)	(0.007)
FTA Bench Warrant	0.647	0.651	0.653	0.633	0.002	-0.014	-0.017
	[0.478]	[0.477]	[0.476]	[0.482]	(0.006)	(0.006)	(0.007)
Num Charges on Case	2.279	2.280	2.294	2.261	0.036	-0.001	-0.032
	[1.261]	[1.303]	[1.332]	[1.106]	(0.019)	(0.017)	(0.019)
			Prior Court Contact				
Prior Case	0.497	0.498	0.497	0.497	0.010	0.003	0.001
	[0.500]	[0.500]	[0.500]	[0.500]	(0.007)	(0.007)	(0.008)
Prior FTA	0.209	0.213	0.208	0.201	0.003	-0.009	-0.007
	[0.406]	[0.410]	[0.406]	[0.401]	(0.006)	(0.006)	(0.006)
P-value					0.413	0.162	0.438
Observations	30818	14584	7961	8273	22545	22857	16234

Notes: This table presents baseline summary statistics for defendants in the analysis sample. Dummies for court times were omitted from this table for brevity. Columns 5 through 7 display coefficients from balance tests that control for day and court building strata. The p-value row displays the p-value from a joint test of significance for all of the covariates listed in the table and binaries for court times. Standard deviations are displayed in square brackets. Standard errors are displayed in parentheses and are robust to heterogeneity.

Table 2: Effect of Failure to Appear on Criminal Justice Outcomes

		Arrest w/in 6 mos.		Fines and Fees Paid	
	First Stage	Control Mean	2SLS FTA Effect	Control Mean	2SLS FTA Effect
	(1)	(2)	(3)	(4)	(5)
		Panel A: Full Sample			
	-0.082	0.049	0.179	132.579	33.282
	(0.005)	[0.216]	(0.036)	[126.185]	(20.988)
Observations	22536	11555	16938	14579	22536
		Panel B: FTA Warrant Sample			
	-0.061	0.075	0.373	121.170	13.901
	(0.007)	[0.263]	(0.077)	[147.102]	(42.018)
Observations	14686	7611	11144	9490	14686
		Panel C: Automatic Conviction Sample			
	-0.083	0.000		154.205	90.794
	(0.007)	[0.000]		[67.350]	(17.257)
Observations	7811	3931		5069	7811
		Panel D: Automatic Conviction, Can Pay Ahead Sample			
	-0.060	0.000		157.375	130.063
	(0.008)	[0.000]		[61.865]	(29.867)
Observations	5162	2535		3344	5162
		Panel E: Automatic Conviction, Cannot Pay Ahead Sample			
	-0.110	0.000		147.909	39.948
	(0.013)	[0.000]		[76.650]	(23.845)
Observations	2630	1390		1714	2630

Notes: This table shows the effect of an FTA on future criminal justice outcomes for various types of cases using assignment to the reminder-only intervention as an instrument for FTA. The coefficient is the reduced form effect of the treatment on criminal justice outcomes scaled by the effect of the treatment on FTA. The sample is limited to the control and reminder-only treatment arms. The samples for the arrest analysis are limited to cases with 6 months of follow-up time. We find that for cases in which an FTA legally implies a warrant, an FTA causes an increase in arrests within six months of the initial arraignments. For cases in which an FTA triggers an automatic conviction, an FTA causes an increase in fines and fees paid, which is driven by the cases in which defendants can pay ahead of time. Standard deviations are displayed in square brackets. Standard errors are displayed in parentheses and are robust to heterogeneity.

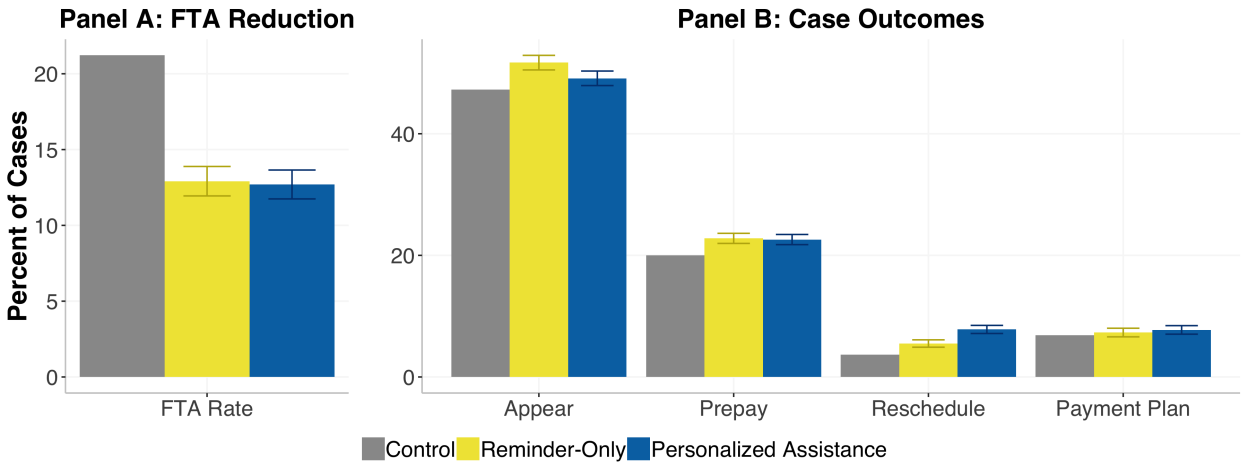

Figure 1: We find both treatments are effective at reducing FTA (Panel A), but induce different methods of compliance. As Panel B shows, the reminder-only treatment is more effective at boosting appearance in court whereas the personalized assistance intervention increases rescheduling. The analysis controls for the variables shown in Table 1 as well as court time and court date and court building strata. 95% confidence intervals are displayed and the control mean is displayed in parentheses. The sample includes 30,818 cases.

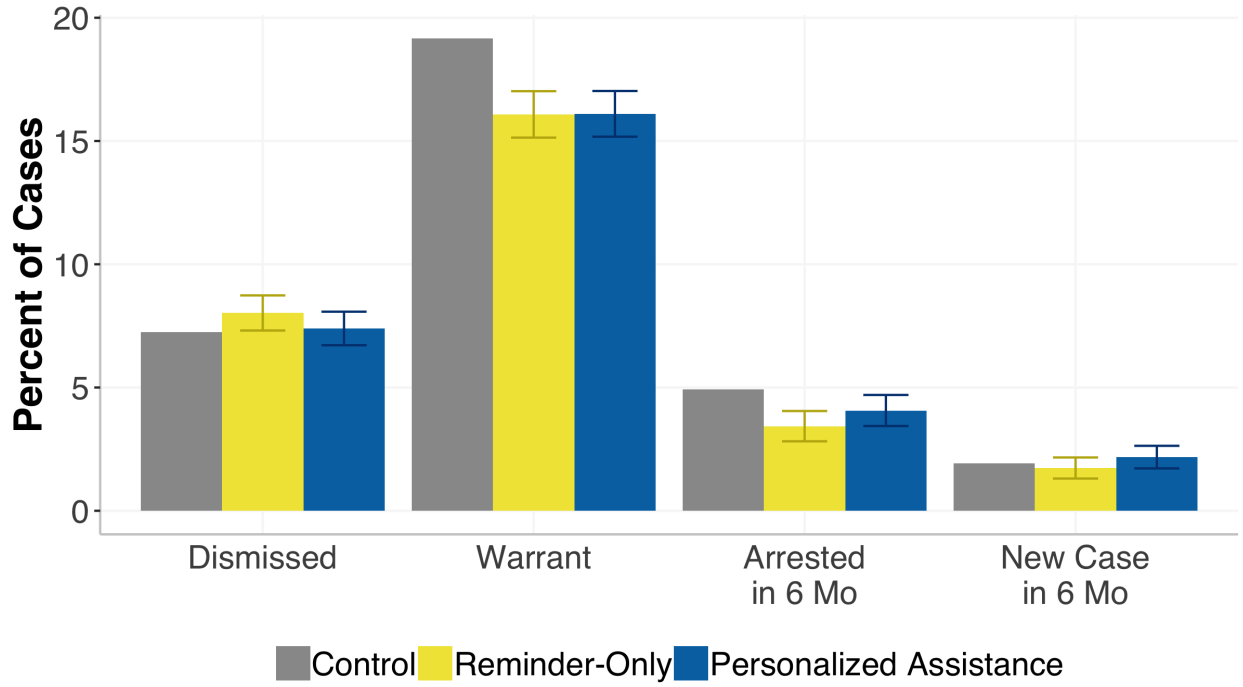

Figure 2: We find that the reminder-only treatment is more effective in having cases dismissed or found not guilty, which is consistent with the treatment inducing appearance at court. Both treatments reduce warrant issuance. Both treatments reduce arrests within six months of the initial arraignment, which is driven by a reduction in arrests on the randomization case rather than a reduction in new cases. The samples are limited to cases with 6 months of follow-up time when considering arrests and new cases. While the sample sizes for the other outcomes are as noted in Figure 1, for these outcomes, the sample includes 22,606 cases.

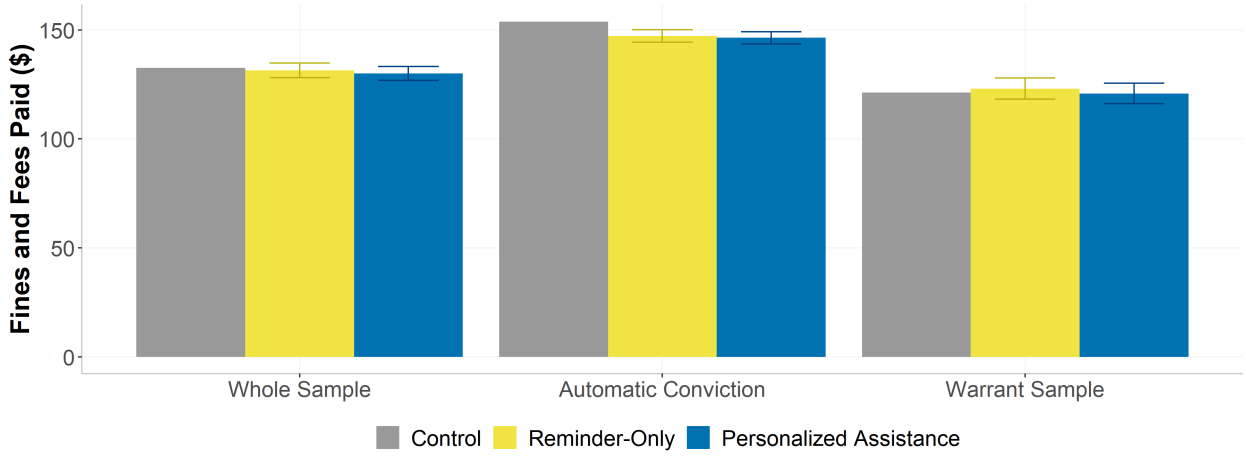

Figure 3: We find that the treatments do not reduce fines and fees paid for the whole sample. Both treatments reduce fines and fees paid in the automatic conviction sample, where an FTA triggers a sentence. The treatments do not reduce fines and fees paid for the FTA warrant sample, where an FTA prevents a sentence from being realized. The whole sample includes 30,818 cases; the automatic conviction sample includes 10,836 cases; and the warrant sample includes 19,932 cases.

Behavioral Biases and Legal Compliance: A Field Experiment Appendix

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APPENDIX A

Table A.1: Sample texts in the two treatment arms for a traffic case.

	Reminder Texts	Personalized Assistance Texts
2 weeks ahead	Hi NAME, Go to court on MMM DD at HH:MM PM or pay online to avoid license cancellation. Case# XXXXXXXXXX. [court website URL here]. Reply STOP to end texts Would you like information about rescheduling court dates, payment plans, or other topics? Please visit us online.	Hi NAME, Go to court on MMM DD at HH:MM PM or pay online to avoid license cancellation. Case# XXXXXXXXXX. [court website URL here]. Reply STOP to end texts Would you like information about rescheduling court dates, payment plans, or other topics? Just text back. We will reply during business hours with more info.
1 week ahead	Hi NAME, You have court on DOW MMM DD at HH:MM PM at ADDRESS. We have childcare, payment plans, and rescheduling options. Reply STOP to end texts. Your case # in STUDY SITE is XXXXXXXXXX	Hi NAME, You have court on DOW MMM DD at HH:MM PM at ADDRESS. We have childcare, payment plans, and rescheduling options. Reply STOP to end texts. Need help? Just text back! We will respond during business hours. Your case # in STUDY SITE is XXXXXXXXXX.
1 day ahead	You can resolve your case tomorrow at HH:MM PM at ADDRESS, Rm #. Show up or pay online to avoid a canceled license & fees. Your case # is XXXXXXXXXX	You can resolve your case tomorrow at HH:MM PM at ADDRESS, Rm #. Show up or pay online to avoid a cancelled license & fees. Questions? Just text back! We will respond during business hours. Your case # is XXXXXXXXXX.

Note: SMS messages that were sent to the two treatment arms are displayed above. Each set of text messages was formatted with information specific to the defendant who received them. Only 3.27 percent of treated cases had an undeliverable message/number and 0.96 percent had a person reply saying it was the wrong number.

Table A.2: Effect of Interventions on Defendant Case Resolution Behavior, All Cases and FTA Warrant Sample

	FTA at Randomized Arraignment (1)	FTA at Any Arraignment (2)	Appeared at Arraignment (3)	Paid Ahead (4)	Rescheduled Court Date (5)	Made Payment Plan (6)
			Panel A: Full Sample			
Control Mean	0.212	0.230	0.473	0.200	0.037	0.069
	[0.409]	[0.421]	[0.499]	[0.400]	[0.189]	[0.253]
Reminder-Only	-0.083	-0.078	0.045	0.027	0.018	0.004
	(0.005)	(0.005)	(0.006)	(0.004)	(0.003)	(0.004)
Personalized Assistance	-0.085	-0.075	0.019	0.026	0.041	0.009
	(0.005)	(0.005)	(0.006)	(0.004)	(0.003)	(0.004)
P-value for coeff. equality	0.673	0.614	0.000	0.697	0.000	0.288
Observations	30818	30818	30818	30818	30818	30818
			Panel B: FTA Warrant Sample			
Control Mean	0.214	0.237	0.635	0.019	0.041	0.098
	[0.410]	[0.425]	[0.481]	[0.138]	[0.197]	[0.298]
Reminder-Only	-0.061	-0.056	0.055	-0.002	0.021	0.004
	(0.006)	(0.007)	(0.008)	(0.002)	(0.004)	(0.005)
Personalized Assistance	-0.063	-0.053	0.016	0.001	0.050	0.011
	(0.006)	(0.007)	(0.008)	(0.002)	(0.005)	(0.005)
P-value for coeff. equality	0.764	0.618	0.000	0.187	0.000	0.300
Observations	19932	19932	19932	19932	19932	19932

Notes: This table reports treatment effects for case resolution. We find both treatments are effective at reducing FTA, but induce different methods of compliance. The reminder-only treatment is more effective at boosting appearance in court whereas the personalized assistance intervention increases rescheduling. The analysis controls for the variables shown in Table **??** as well as court time and court date and court building strata. The p-value line displays p-values from tests of equality between the Reminder-Only and Personalized Assistance treatment coefficients. Standard deviations are displayed in square brackets. Standard errors are displayed in parentheses and are robust to heterogeneity.

Table A.3: Effect of Interventions on Defendant Case Resolution Behavior, Automatic Conviction Cases

	FTA at Randomized Arraignment (1)	FTA at Any Arraignment (2)	Appeared at Arraignment (3)	Paid Ahead (4)	Rescheduled Court Date (5)	Made Payment Plan (6)
Panel A: Automatic Conviction Sample						
Control Mean	0.208	0.218	0.168	0.538	0.030	0.014
	[0.406]	[0.413]	[0.374]	[0.499]	[0.171]	[0.118]
Reminder-Only	-0.088	-0.081	0.020	0.050	0.013	0.006
	(0.007)	(0.007)	(0.009)	(0.011)	(0.005)	(0.003)
Personalized Assistance	-0.088	-0.077	0.019	0.038	0.028	0.006
	(0.007)	(0.007)	(0.009)	(0.010)	(0.005)	(0.003)
P-value for coeff. equality	0.976	0.570	0.886	0.304	0.009	0.993
Observations	10836	10836	10836	10836	10836	10836
Panel B: Automatic Conviction, Can Pay Ahead Sample						
Control Mean	0.215	0.225	0.089	0.628	0.023	0.014
	[0.411]	[0.418]	[0.285]	[0.484]	[0.151]	[0.116]
Reminder-Only	-0.064	-0.057	0.012	0.030	0.020	0.005
	(0.008)	(0.008)	(0.009)	(0.012)	(0.006)	(0.004)
Personalized Assistance	-0.076	-0.063	0.018	0.024	0.033	0.007
	(0.008)	(0.008)	(0.009)	(0.011)	(0.006)	(0.004)
P-value for coeff. equality	0.114	0.464	0.490	0.663	0.055	0.656
Observations	7161	7161	7161	7161	7161	7161
Panel C: Automatic Conviction, Cannot Pay Ahead Sample						
Control Mean	0.195	0.204	0.323	0.363	0.043	0.015
	[0.396]	[0.403]	[0.468]	[0.481]	[0.203]	[0.122]
Reminder-Only	-0.114	-0.101	0.049	0.050	0.002	0.008
	(0.012)	(0.013)	(0.020)	(0.020)	(0.009)	(0.006)
Personalized Assistance	-0.100	-0.089	0.031	0.043	0.018	0.002
	(0.012)	(0.013)	(0.019)	(0.020)	(0.010)	(0.005)
P-value for coeff. equality	0.243	0.361	0.419	0.765	0.137	0.353
Observations	3662	3662	3662	3662	3662	3662

Notes: This table reports treatment effects for case resolution. We find both treatments are effective at reducing FTA, but induce different methods of compliance. The reminder-only treatment is more effective at boosting appearance in court whereas the personalized assistance intervention increases rescheduling. We note that some cases are marked as unable to pay before the arraignment due to a glitch. These cases can be paid ahead by contacting the court to override the restriction. This may be because we did not emphasize the potential glitch in the preset text messages. The analysis controls for the variables shown in Table **??** as well as court time and court date and court building strata. The p-value line displays p-values from tests of equality between the Reminder-Only and Personalized Assistance treatment coefficients. Standard deviations are displayed in square brackets. Standard errors are displayed in parentheses and are robust to heterogeneity.

Table A.4: Effect of Interventions on Criminal Justice Contact, All Cases and FTA Warrant Sample

	Dismissed or Found Not Guilty (1)	Fines and Fees Paid (2)	Warrant Issued (3)	Arrested w/in 6 Months (4)	New Case w/in 6 Months (5)
			Panel A: All Cases		
Control Mean	0.072	132.643	0.192	0.049	0.019
	[0.259]	[126.259]	[0.394]	[0.216]	[0.138]
Reminder-Only	0.008	-1.176	-0.031	-0.015	-0.002
	(0.004)	(1.686)	(0.005)	(0.003)	(0.002)
Personalized Assistance	0.002	-2.619	-0.031	-0.008	0.002
	(0.003)	(1.630)	(0.005)	(0.003)	(0.002)
P-value for coeff. equality	0.115	0.425	0.964	0.072	0.095
Observations	30818	30818	30818	22606	22606
			Panel B: FTA Warrant Sample		
Control Mean	0.100	121.275	0.294	0.075	0.021
	[0.300]	[147.198]	[0.456]	[0.263]	[0.144]
Reminder-Only	0.011	1.809	-0.047	-0.023	-0.003
	(0.005)	(2.467)	(0.007)	(0.005)	(0.003)
Personalized Assistance	-0.000	-0.429	-0.047	-0.013	0.003
	(0.005)	(2.414)	(0.007)	(0.005)	(0.003)
P-value for coeff. equality	0.059	0.404	0.935	0.082	0.139
Observations	19932	19932	19932	14774	14774

Notes: This table shows the effect of the two treatments on criminal justice contact for several subsamples. We find that the reminder-only treatment is more effective in having cases dismissed or found not guilty, which is consistent with the treatment inducing appearance at court. Both treatments reduce warrant issuance. Both treatments reduce arrests within six months of the initial arraignment, which is driven by a reduction in arrests on the randomization case rather than a reduction in new cases. The sample for columns 5 and 6 are limited to cases with 6 months of follow-up time. The p-value line displays p-values from tests of equality between the Reminder-Only and Personalized Assistance treatment coefficients. Standard deviations are displayed in square brackets. Standard errors are displayed in parentheses and are robust to heterogeneity.

Table A.5: Effect of Interventions on Criminal Justice Contact, Automatic Conviction Cases

	Dismissed or Found Not Guilty (1)	Fines and Fees Paid (2)	Warrant Issued (3)	Arrested w/in 6 Months (4)	New Case w/in 6 Months (5)
Panel A: Automatic Conviction Sample					
Control Mean	0.021	153.853	0.000	0.000	0.015
	[0.143]	[67.596]	[0.000]	[0.000]	[0.123]
Reminder-Only	0.003	-6.599	0.001	0.000	-0.000
	(0.003)	(1.487)	(0.001)	(0.000)	(0.003)
Personalized Assistance	0.007	-7.480	0.001	0.001	0.002
	(0.003)	(1.430)	(0.001)	(0.001)	(0.004)
P-value for coeff. equality	0.287	0.575	0.880	0.319	0.561
Observations	10836	10836	10836	7799	7799
Panel B: Automatic Conviction, Can Pay Ahead Sample					
Control Mean	0.017	156.826	0.000	0.000	0.016
	[0.129]	[62.321]	[0.000]	[0.000]	[0.127]
Reminder-Only	0.009	-6.457	0.000	0.000	0.001
	(0.004)	(1.718)	(0.000)	(0.000)	(0.005)
Personalized Assistance	0.010	-7.663	0.000	0.001	-0.001
	(0.004)	(1.676)	(0.000)	(0.001)	(0.004)
P-value for coeff. equality	0.915	0.509	.	0.322	0.664
Observations	7161	7161	7161	5010	5010
Panel C: Automatic Conviction, Cannot Pay Ahead Sample					
Control Mean	0.028	148.052	0.000	0.000	0.014
	[0.166]	[76.543]	[0.000]	[0.000]	[0.116]
Reminder-Only	-0.007	-4.252	0.002	0.000	-0.005
	(0.007)	(2.995)	(0.002)	(0.000)	(0.005)
Personalized Assistance	0.004	-5.808	0.003	0.000	0.008
	(0.007)	(2.719)	(0.002)	(0.000)	(0.006)
P-value for coeff. equality	0.144	0.615	0.741	.	0.102
Observations	3662	3662	3662	2781	2781

Notes: This table shows the effect of the two treatments on criminal justice contact for several subsamples. We find that the reminder-only treatment is more effective in having cases dismissed or found not guilty, which is consistent with the treatment inducing appearance at court. Both treatments reduce warrant issuance. Both treatments reduce arrests within six months of the initial arraignment, which is driven by a reduction in arrests on the randomization case rather than a reduction in new cases. The sample for columns 5 and 6 are limited to cases with 6 months of follow-up time. The p-value line displays p-values from tests of equality between the Reminder-Only and Personalized Assistance treatment coefficients. Standard deviations are displayed in square brackets. Standard errors are displayed in parentheses and are robust to heterogeneity.

Table A.6: Demographics and Prior Court Contact of Two-Way Text Treatment Arm by Conversation Take-Up

	Did not Initiate Conversation (1)	Initiated Conversation (2)	Adjusted Difference (3)
	Demographics and Income		
Female	0.364	0.371	0.004
	[0.481]	[0.483]	(0.011)
White	0.716	0.701	-0.016
	[0.451]	[0.458]	(0.011)
Black	0.161	0.190	0.029
	[0.368]	[0.392]	(0.009)
Hispanic	0.078	0.072	-0.006
	[0.268]	[0.258]	(0.006)
Other Race	0.037	0.033	-0.004
	[0.189]	[0.179]	(0.004)
Age	34.296	36.484	2.191
	[13.449]	[14.784]	(0.334)
Avg Inc. of Zip Code	66.459	66.367	-0.267
	[34.775]	[34.023]	(0.804)
	Prior Court Contact		
Prior Case	0.490	0.508	0.014
	(0.500)	(0.500)	[0.012]
Prior FTA	0.192	0.216	0.020
	(0.394)	(0.412)	[0.009]
Observations	5044	3229	

Notes: Did not Initiate Conversation indicates a non-response or a response indicating a wrong number or unsubscription. Column 3 displays coefficients from balance tests which control for day and court building strata. Standard deviations displayed in square brackets. Standard errors displayed in parentheses.

Table A.7: Case Characteristics and Outcomes of Two-Way Text Treatment Arm by Conversation Take-Up

	Did not Initiate Conversation (1)	Initiated Conversation (2)	Adjusted Difference (3)
	Case Characteristics		
Municipal	0.099	0.099	-0.002
	(0.299)	(0.298)	[0.006]
Traffic	0.687	0.679	0.000
	(0.464)	(0.467)	[0.000]
Criminal	0.214	0.223	0.002
	(0.410)	(0.416)	[0.006]
Can Pay Ahead	0.288	0.223	-0.061
	(0.453)	(0.416)	[0.010]
FTA Bench Warrant	0.621	0.652	0.021
	(0.485)	(0.476)	[0.010]
Num Charges on Case	2.251	2.277	0.009
	(1.072)	(1.156)	[0.025]
	Case Outcomes		
FTA	0.120	0.127	0.006
	(0.325)	(0.333)	[0.008]
Appeared at Arraignment	0.516	0.437	-0.080
	(0.500)	(0.496)	[0.012]
Paid Ahead	0.257	0.182	-0.072
	(0.437)	(0.386)	[0.009]
Rescheduled Arraignment	0.025	0.159	0.136
	(0.155)	(0.366)	[0.007]
Payment Plan	0.071	0.082	0.009
	(0.257)	(0.275)	[0.006]
Observations	5044	3229	

Notes: Did not Initiate Conversation indicates a non-response or a response indicating a wrong number or unsubscription. Column 3 displays coefficients from balance tests which control for day and court building strata. Standard deviations displayed in square brackets. Standard errors displayed in parentheses.

Table A.8: Effect of Interventions on Arrests within 6 Months of Case

	Arrest (1)	Arrest on Rand. Case (2)	Arrest out of County (3)
Panel A: All Cases			
Control Mean	0.049	0.047	0.009
	[0.216]	[0.211]	[0.093]
Reminder-Only	-0.015	-0.013	-0.002
	(0.003)	(0.003)	(0.001)
Personalized Assistance	-0.008	-0.009	0.002
	(0.003)	(0.003)	(0.002)
P-value for coeff. equality	0.072	0.255	0.036
Observations	22606	22606	22606
Panel B: FTA Warrant Sample			
Control Mean	0.075	0.071	0.013
	[0.263]	[0.256]	[0.114]
Reminder-Only	-0.023	-0.020	-0.003
	(0.005)	(0.005)	(0.002)
Personalized Assistance	-0.013	-0.014	0.003
	(0.005)	(0.005)	(0.002)
P-value for coeff. equality	0.082	0.261	0.033
Observations	14774	14774	14774

Notes: The p-value line displays p-values from tests of equality between the Reminder-Only and Personalized Assistance treatment coefficients. Standard deviations displayed in square brackets. Standard errors displayed in parentheses.

Table A.9: Effect of Interventions on Fines and Fees Outcomes, All Cases and FTA Warrant Cases

	Fines and Fees Charged (1)	Fines and Fees Paid (2)	Pct. Fines and Fees Paid (3)
Panel A: All Cases			
Control Mean	239.988	132.643	0.651
	[235.626]	[126.259]	[0.425]
Reminder-Only	-1.519	-1.176	0.004
	(3.196)	(1.686)	(0.005)
Personalized Assistance	-4.498	-2.619	0.007
	(3.055)	(1.630)	(0.004)
P-value for coeff. equality	0.387	0.425	0.566
Observations	30818	30818	28323
Panel B: FTA Warrant Sample			
Control Mean	276.231	121.275	0.490
	[281.169]	[147.198]	[0.429]
Reminder-Only	4.358	1.809	0.003
	(4.862)	(2.467)	(0.007)
Personalized Assistance	-0.486	-0.429	0.007
	(4.710)	(2.414)	(0.006)
P-value for coeff. equality	0.362	0.404	0.512
Observations	19932	19932	17697

Notes: The p-value line displays p-values from tests of equality between the Reminder-Only and Personalized Assistance treatment coefficients. Standard deviations displayed in square brackets. Standard errors displayed in parentheses.

Table A.10: Effect of Interventions on Fines and Fees Outcomes, Automatic Conviction Cases

	Fines and Fees Charged (1)	Fines and Fees Paid (2)	Pct. Fines and Fees Paid (3)
Panel A: Automatic Conviction Sample			
Control Mean	172.365	153.853	0.928
	[67.726]	[67.596]	[0.233]
Reminder-Only	-5.914	-6.599	-0.003
	(1.649)	(1.487)	(0.005)
Personalized Assistance	-6.845	-7.480	-0.004
	(1.566)	(1.430)	(0.005)
P-value for coeff. equality	0.602	0.575	0.839
Observations	10836	10836	10579
Panel B: Automatic Conviction, Can Pay Ahead Sample			
Control Mean	174.227	156.826	0.936
	[61.050]	[62.321]	[0.227]
Reminder-Only	-4.409	-6.457	-0.010
	(1.806)	(1.718)	(0.006)
Personalized Assistance	-4.260	-7.663	-0.015
	(1.725)	(1.676)	(0.006)
P-value for coeff. equality	0.939	0.509	0.422
Observations	7161	7161	7021
Panel B: Automatic Conviction, Cannot Pay Ahead Sample			
Control Mean	168.731	148.052	0.912
	[79.043]	[76.543]	[0.244]
Reminder-Only	-3.574	-4.252	0.000
	(3.480)	(2.995)	(0.010)
Personalized Assistance	-9.625	-5.808	0.016
	(3.087)	(2.719)	(0.009)
P-value for coeff. equality	0.087	0.615	0.113
Observations	3662	3662	3545

Notes: The p-value line displays p-values from tests of equality between the Reminder-Only and Personalized Assistance treatment coefficients. Standard deviations displayed in square brackets. Standard errors displayed in parentheses.

Table A.11: Effect of Failure to Appear on Criminal Justice Outcomes for the Full Sample

		Arrest w/in 6 mos.		Fines and Fees Paid	
	First Stage	Control Mean	2SLS FTA Effect	Control Mean	2SLS FTA Effect
	(1)	(2)	(3)	(4)	(5)
		Panel A: Full Sample			
	-0.084	0.049	0.131	132.643	39.185
	(0.004)	[0.216]	(0.029)	[126.259]	(16.616)
Observations	30818	11559	22606	14584	30818
		Panel B: FTA Warrant Sample			
	-0.062	0.075	0.268	121.275	20.411
	(0.005)	[0.263]	(0.059)	[147.198]	(32.922)
Observations	19932	7615	14774	9495	19932
		Panel C: Automatic Conviction Sample			
	-0.088	0.000	-0.004	154.173	96.540
	(0.006)	[0.000]	(0.004)	[67.372]	(13.493)
Observations	10836	3932	7799	5071	10836
		Panel D: Automatic Conviction, Can Pay Ahead Sample			
	-0.070	0.000	-0.007	157.324	129.311
	(0.007)	[0.000]	(0.007)	[61.907]	(20.779)
Observations	7161	2536	5010	3346	7161
		Panel E: Automatic Conviction, Cannot Pay Ahead Sample			
	-0.106	0.000		148.077	52.928
	(0.010)	[0.000]		[76.596]	(20.516)
Observations	3662	1393		1721	3662

Notes: This table shows the effect of an FTA on future criminal justice outcomes for various types of cases using assignment to the interventions as an instrument for FTA. The coefficient is the reduced form effect of the treatments on criminal justice outcomes scaled by the effect of the treatment on FTA. The sample includes all treatment arms. The samples for the arrest analysis are limited to cases with 6 months of follow-up time. We find that for cases in which an FTA legally implies a warrant, an FTA causes an increase in arrests within six months of the initial arraignments. For cases in which an FTA triggers an automatic conviction, an FTA causes an increase in fines and fees paid, which is driven by the cases in which defendants can pay ahead of time. Standard deviations are displayed in square brackets. Standard errors are displayed in parentheses and are robust to heterogeneity.

APPENDIX B

This appendix reproduces all of the analyses controlling only for randomization strata. Much of the analysis is robust to this specification change. The main differences pertain to analyses of the default judgment sample.

In the main analyses (displayed in Table **??**), treatment effects are larger for the default judgement sample that can prepay, driven mainly by increases in effects on payment prior to the court date.

In the criminal justice contact analyses (displayed in Table **??**), the treatment effect on fine reductions are smaller for both default judgment samples. For the sample that can prepay, the effect on case dismissals or not guilty findings is not significant. For the sample that cannot prepay, the personalized assistance treatment increases warrant issuance by 0.4 percentage points, a small absolute increase, but large compared to the zero control mean.

The 2SLS estimates of the effect of FTA on fines for the default judgment sample that can prepay are much smaller (see table B.5). This is due to the increased treatment effects on failure to appear combined with a decrease in the treatment effect on fines. This estimate suggests that the marginal person who FTAs in this sample is also optimizing as the consequences of FTA are small.

Table B.1: Effect of Interventions on Defendant Case Resolution Behavior, All Cases and FTA Warrant Sample

	FTA at Randomized Arraignment (1)	FTA at Any Arraignment (2)	Appeared at Arraignment (3)	Paid Ahead (4)	Rescheduled Court Date (5)	Made Payment Plan (6)
			Panel A: All Cases			
Control Mean	0.212	0.230	0.473	0.200	0.037	0.069
	[0.409]	[0.421]	[0.499]	[0.400]	[0.189]	[0.253]
Reminder-Only	-0.085	-0.080	0.045	0.028	0.018	0.005
	(0.005)	(0.005)	(0.007)	(0.006)	(0.003)	(0.004)
Personalized Assistance	-0.087	-0.077	0.013	0.034	0.041	0.007
	(0.005)	(0.005)	(0.007)	(0.005)	(0.003)	(0.004)
P-value for coeff. equality	0.725	0.627	0.000	0.359	0.000	0.571
Observations	30818	30818	30818	30818	30818	30818
			Panel B: FTA Warrant Sample			
Control Mean	0.214	0.237	0.635	0.019	0.041	0.098
	[0.410]	[0.425]	[0.481]	[0.138]	[0.197]	[0.298]
Reminder-Only	-0.061	-0.056	0.054	-0.001	0.021	0.004
	(0.007)	(0.007)	(0.008)	(0.002)	(0.004)	(0.005)
Personalized Assistance	-0.064	-0.053	0.016	0.002	0.050	0.009
	(0.007)	(0.007)	(0.008)	(0.002)	(0.005)	(0.005)
P-value for coeff. equality	0.713	0.685	0.000	0.266	0.000	0.334
Observations	19932	19932	19932	19932	19932	19932

Notes: This table reports treatment effects for case resolution. We find both treatments are effective at reducing FTA, but induce different methods of compliance. The reminder-only treatment is more effective at boosting appearance in court whereas the personalized assistance intervention increases rescheduling. The analysis controls for court date and court building strata. The p-value line displays p-values from tests of equality between the Reminder-Only and Personalized Assistance treatment coefficients. Standard deviations are displayed in square brackets. Standard errors are displayed in parentheses and are robust to heterogeneity.

Table B.2: Effect of Interventions on Defendant Case Resolution Behavior, Default Judgment Cases

	FTA at Randomized Arraignment (1)	FTA at Any Arraignment (2)	Appeared at Arraignment (3)	Paid Ahead (4)	Rescheduled Court Date (5)	Made Payment Plan (6)
			Panel A: Default Judgment Sample			
Control Mean	0.208	0.218	0.168	0.538	0.030	0.014
	[0.406]	[0.413]	[0.374]	[0.499]	[0.171]	[0.118]
Reminder-Only	-0.128	-0.124	0.026	0.084	0.013	0.007
	(0.008)	(0.008)	(0.009)	(0.012)	(0.005)	(0.003)
Personalized Assistance	-0.127	-0.119	0.026	0.069	0.028	0.007
	(0.008)	(0.008)	(0.009)	(0.012)	(0.005)	(0.003)
P-value for coeff. equality	0.846	0.509	0.993	0.244	0.009	0.986
Observations	10836	10836	10836	10836	10836	10836
			Panel B: Default Judgment, Can Pay Ahead Sample			
Control Mean	0.215	0.225	0.089	0.628	0.023	0.014
	[0.411]	[0.418]	[0.285]	[0.484]	[0.151]	[0.116]
Reminder-Only	-0.127	-0.126	0.004	0.101	0.019	0.007
	(0.010)	(0.010)	(0.009)	(0.014)	(0.006)	(0.004)
Personalized Assistance	-0.132	-0.124	0.012	0.087	0.032	0.009
	(0.010)	(0.010)	(0.009)	(0.014)	(0.006)	(0.004)
P-value for coeff. equality	0.597	0.841	0.422	0.347	0.055	0.699
Observations	7161	7161	7161	7161	7161	7161
			Panel C: Default Judgment, Cannot Pay Ahead Sample			
Control Mean	0.195	0.204	0.323	0.363	0.043	0.015
	[0.396]	[0.403]	[0.468]	[0.481]	[0.203]	[0.122]
Reminder-Only	-0.129	-0.117	0.063	0.052	0.002	0.009
	(0.013)	(0.014)	(0.021)	(0.020)	(0.009)	(0.006)
Personalized Assistance	-0.121	-0.112	0.049	0.046	0.018	0.004
	(0.013)	(0.014)	(0.020)	(0.020)	(0.009)	(0.005)
P-value for coeff. equality	0.542	0.706	0.563	0.799	0.114	0.446
Observations	3662	3662	3662	3662	3662	3662

Notes: This table reports treatment effects for case resolution. We find both treatments are effective at reducing FTA, but induce different methods of compliance. The reminder-only treatment is more effective at boosting appearance in court whereas the personalized assistance intervention increases rescheduling. The analysis controls for court date and court building strata. The p-value line displays p-values from tests of equality between the Reminder-Only and Personalized Assistance treatment coefficients. Standard deviations are displayed in square brackets. Standard errors are displayed in parentheses and are robust to heterogeneity.

Table B.3: Effect of Interventions on Criminal Justice Contact, All Cases and FTA Warrant Sample

	Dismissed or Found Not Guilty (1)	Fines and Fees Paid (2)	Warrant Issued (3)	Arrested w/in 6 Months (4)	New Case w/in 6 Months (5)
			Panel A: All Cases		
Control Mean	0.072	132.643	0.192	0.049	0.019
	[0.259]	[126.259]	[0.394]	[0.216]	[0.138]
Reminder-Only	0.006	-0.483	-0.031	-0.015	-0.002
	(0.004)	(1.746)	(0.005)	(0.003)	(0.002)
Personalized Assistance	0.000	-2.287	-0.034	-0.010	0.002
	(0.004)	(1.675)	(0.005)	(0.003)	(0.002)
P-value for coeff. equality	0.142	0.336	0.566	0.103	0.083
Observations	30818	30818	30818	22606	22606
			Panel B: FTA Warrant Sample		
Control Mean	0.100	121.275	0.294	0.075	0.021
	[0.300]	[147.198]	[0.456]	[0.263]	[0.144]
Reminder-Only	0.010	2.095	-0.049	-0.024	-0.003
	(0.005)	(2.567)	(0.008)	(0.005)	(0.003)
Personalized Assistance	0.001	-0.776	-0.048	-0.014	0.003
	(0.005)	(2.497)	(0.008)	(0.005)	(0.003)
P-value for coeff. equality	0.141	0.303	0.912	0.069	0.113
Observations	19932	19932	19932	14774	14774

Notes: This table shows the effect of the two treatments on criminal justice contact for several subsamples. We find that the reminder-only treatment is more effective in having cases dismissed or found not guilty for warrant consequence cases, which is consistent with the treatment inducing appearance at court. Both treatments reduce warrant issuance. Both treatments reduce arrests within six months of the initial arraignment, which is driven by a reduction in arrests on the randomization case rather than a reduction in new cases. The sample for columns 5 and 6 are limited to cases with 6 months of follow-up time. The p-value line displays p-values from tests of equality between the Reminder-Only and Personalized Assistance treatment coefficients. Standard deviations are displayed in square brackets. Standard errors are displayed in parentheses and are robust to heterogeneity.

Table B.4: Effect of Interventions on Criminal Justice Contact, Default Judgment Cases

	Dismissed or Found Not Guilty (1)	Fines and Fees Paid (2)	Warrant Issued (3)	Arrested w/in 6 Months (4)	New Case w/in 6 Months (5)
Panel A: Default Judgment Sample					
Control Mean	0.021	153.853	0.000	0.000	0.015
	[0.143]	[67.596]	[0.000]	[0.000]	[0.123]
Reminder-Only	-0.003	-3.340	0.001	-0.000	-0.001
	(0.003)	(1.565)	(0.001)	(0.000)	(0.003)
Personalized Assistance	0.001	-4.396	0.001	0.000	0.002
	(0.003)	(1.499)	(0.001)	(0.000)	(0.004)
P-value for coeff. equality	0.271	0.528	0.899	0.319	0.535
Observations	10836	10836	10836	7799	7799
Panel B: Default Judgment, Can Pay Ahead Sample					
Control Mean	0.017	156.826	0.000	0.000	0.016
	[0.129]	[62.321]	[0.000]	[0.000]	[0.127]
Reminder-Only	0.001	-4.158	0.000	-0.000	0.000
	(0.004)	(1.742)	(0.000)	(0.000)	(0.004)
Personalized Assistance	0.002	-5.640	0.000	0.001	-0.002
	(0.004)	(1.701)	(0.000)	(0.001)	(0.004)
P-value for coeff. equality	0.778	0.430	0.168	0.322	0.688
Observations	7161	7161	7161	5010	5010
Panel C: Default Judgment, Cannot Pay Ahead Sample					
Control Mean	0.028	148.052	0.000	0.000	0.014
	[0.166]	[76.543]	[0.000]	[0.000]	[0.116]
Reminder-Only	-0.011	-1.210	0.002	0.000	-0.004
	(0.007)	(3.265)	(0.002)	(0.000)	(0.005)
Personalized Assistance	-0.000	-1.638	0.004	0.000	0.008
	(0.007)	(2.958)	(0.002)	(0.000)	(0.006)
P-value for coeff. equality	0.181	0.901	0.673	.	0.102
Observations	3662	3662	3662	2781	2781

Notes: This table shows the effect of the two treatments on criminal justice contact for several subsamples. We find that the reminder-only treatment is more effective in having cases dismissed or found not guilty for warrant consequence cases, which is consistent with the treatment inducing appearance at court. Both treatments reduce warrant issuance. Both treatments reduce arrests within six months of the initial arraignment, which is driven by a reduction in arrests on the randomization case rather than a reduction in new cases. The sample for columns 5 and 6 are limited to cases with 6 months of follow-up time. The p-value line displays p-values from tests of equality between the Reminder-Only and Personalized Assistance treatment coefficients. Standard deviations are displayed in square brackets. Standard errors are displayed in parentheses and are robust to heterogeneity.

Table B.5: Effect of Failure to Appear on Criminal Justice Outcomes

		Arrest w/in 6 mos.		Fines and Fees Paid	
	First Stage	Control Mean	2SLS FTA Effect	Control Mean	2SLS FTA Effect
	(1)	(2)	(3)	(4)	(5)
		Panel A: All Cases			
	-0.084	0.049	0.178	132.579	33.745
	(0.005)	[0.216]	(0.036)	[126.185]	(22.246)
Observations	22536	11555	16938	14579	22536
		Panel B: FTA Warrant Sample			
	-0.060	0.075	0.379	121.170	18.278
	(0.007)	[0.263]	(0.078)	[147.102]	(44.953)
Observations	14686	7611	11144	9490	14686
		Panel C: Default Judgment Sample			
	-0.126	0.000		154.205	39.116
	(0.008)	[0.000]		[67.350]	(12.506)
Observations	7811	3931		5069	7811
		Panel D: Default Judgment, Can Pay Ahead Sample			
	-0.125	0.000		157.375	47.344
	(0.010)	[0.000]		[61.865]	(13.930)
Observations	5162	2535		3344	5162
		Panel E: Default Judgment, Cannot Pay Ahead Sample			
	-0.126	0.000		147.909	21.934
	(0.014)	[0.000]		[76.650]	(24.712)
Observations	2630	1390		1714	2630

Notes: This table shows the effect of an FTA on future criminal justice outcomes for various types of cases using assignment to the reminder-only intervention as an instrument for FTA. The coefficient is the reduced form effect of the treatment on criminal justice outcomes scaled by the effect of the treatment on FTA. The sample is limited to the control and reminder-only treatment arms. The samples for the arrest analysis are limited to cases with 6 months of follow-up time. We find that for cases in which an FTA legally implies a warrant, an FTA causes an increase in arrests within six months of the initial arraignments. For cases in which an FTA legally implies a default judgement, an FTA causes an increase in fines and fees paid, which is driven by the cases in which defendants can pay ahead of time. Standard deviations are displayed in square brackets. Standard errors are displayed in parentheses and are robust to heterogeneity.

Table B.6: Effect of Failure to Appear on Criminal Justice Outcomes for the Full Sample

		Arrest w/in 6 mos.		Fines and Fees Paid	
	First Stage	Control Mean	2SLS FTA Effect	Control Mean	2SLS FTA Effect
	(1)	(2)	(3)	(4)	(5)
		Panel A: Full Sample			
	-0.086	0.049	0.131	132.773	39.096
	(0.004)	[0.216]	(0.029)	[126.498]	(16.628)
Observations	31321	11732	22607	14813	30819
		Panel B: FTA Warrant Sample			
	-0.063	0.074	0.268	121.538	20.189
	(0.006)	[0.262]	(0.059)	[147.499]	(32.970)
Observations	20263	7736	14775	9649	19933
		Panel C: Default Judgment Sample			
	-0.128	0.000	-0.004	154.049	96.428
	(0.007)	[0.000]	(0.004)	[67.450]	(13.507)
Observations	11007	3984	7799	5147	10837
		Panel D: Default Judgment, Can Pay Ahead Sample			
	-0.130	0.000	-0.007	157.236	129.168
	(0.009)	[0.000]	(0.007)	[62.020]	(20.822)
Observations	7275	2569	5010	3397	7162
		Panel E: Default Judgment, Cannot Pay Ahead Sample			
	-0.125	0.000		147.878	52.473
	(0.012)	[0.000]		[76.619]	(20.594)
Observations	3721	1412		1746	3664

Notes: This table shows the effect of an FTA on future criminal justice outcomes for various types of cases using assignment to the interventions as an instrument for FTA. The coefficient is the reduced form effect of the treatments on criminal justice outcomes scaled by the effect of the treatment on FTA. The sample includes all treatment arms. The samples for the arrest analysis are limited to cases with 6 months of follow-up time. We find that for cases in which an FTA legally implies a warrant, an FTA causes an increase in arrests within six months of the initial arraignments. For cases in which an FTA legally implies a default judgement, an FTA causes an increase in fines and fees paid, which is driven by the cases in which defendants can pay ahead of time. Standard deviations are displayed in square brackets. Standard errors are displayed in parentheses and are robust to heterogeneity.

Table B.7: Demographics and Prior Court Contact of Two-Way Text Treatment Arm by Conversation Take-Up

	Did not Initiate Conversation (1)	Initiated Conversation (2)	Adjusted Difference (3)
	Demographics and Income		
Female	0.364	0.371	0.004
	[0.481]	[0.483]	(0.011)
White	0.716	0.701	-0.016
	[0.451]	[0.458]	(0.011)
Black	0.161	0.190	0.029
	[0.368]	[0.392]	(0.009)
Hispanic	0.078	0.072	-0.006
	[0.268]	[0.258]	(0.006)
Other Race	0.037	0.033	-0.004
	[0.189]	[0.179]	(0.004)
Age	34.296	36.484	2.191
	[13.449]	[14.784]	(0.334)
Avg Inc. of Zip Code	66.459	66.367	-0.267
	[34.775]	[34.023]	(0.804)
	Prior Court Contact		
Prior Case	0.490	0.508	0.014
	(0.500)	(0.500)	[0.012]
Prior FTA	0.192	0.216	0.020
	(0.394)	(0.412)	[0.009]
Observations	5044	3229	

Notes: Did not Initiate Conversation indicates a non-response or a response indicating a wrong number or unsubscription. Column 3 displays coefficients from balance tests which control for day and court building strata. Standard deviations displayed in square brackets. Standard errors displayed in parentheses.

Table B.8: Case Characteristics and Outcomes of Two-Way Text Treatment Arm by Conversation Take-Up

	Did not Initiate Conversation (1)	Initiated Conversation (2)	Adjusted Difference (3)
	Case Characteristics		
Municipal	0.099	0.099	-0.002
	(0.299)	(0.298)	[0.006]
Traffic	0.687	0.679	0.000
	(0.464)	(0.467)	[0.000]
Criminal	0.214	0.223	0.002
	(0.410)	(0.416)	[0.006]
Can Pay Ahead	0.288	0.223	-0.061
	(0.453)	(0.416)	[0.010]
FTA Bench Warrant	0.621	0.652	0.021
	(0.485)	(0.476)	[0.010]
Num Charges on Case	2.251	2.277	0.009
	(1.072)	(1.156)	[0.025]
	Case Outcomes		
FTA	0.120	0.127	0.006
	(0.325)	(0.333)	[0.008]
Appeared at Arraignment	0.516	0.437	-0.080
	(0.500)	(0.496)	[0.012]
Paid Ahead	0.257	0.182	-0.072
	(0.437)	(0.386)	[0.009]
Rescheduled Arraignment	0.025	0.159	0.136
	(0.155)	(0.366)	[0.007]
Payment Plan	0.071	0.082	0.009
	(0.257)	(0.275)	[0.006]
Observations	5044	3229	

Notes: Did not Initiate Conversation indicates a non-response or a response indicating a wrong number or unsubscription. Column 3 displays coefficients from balance tests which control for day and court building strata. Standard deviations displayed in square brackets. Standard errors displayed in parentheses.

Table B.9: Effect of Interventions on Arrests within 6 Months of Case

	Arrest (1)	Arrest on Rand. Case (2)	Arrest out of County (3)
Panel A: All Cases			
Control Mean	0.049	0.046	0.009
	[0.216]	[0.210]	[0.093]
Reminder-Only	-0.015	-0.013	-0.002
	(0.003)	(0.003)	(0.001)
Personalized Assistance	-0.009	-0.010	0.001
	(0.003)	(0.003)	(0.002)
P-value for coeff. equality	0.090	0.302	0.050
Observations	22962	22962	22962
Panel B: FTA Warrant Sample			
Control Mean	0.074	0.070	0.013
	[0.262]	[0.256]	[0.114]
Reminder-Only	-0.023	-0.021	-0.003
	(0.005)	(0.005)	(0.002)
Personalized Assistance	-0.013	-0.014	0.002
	(0.005)	(0.005)	(0.002)
P-value for coeff. equality	0.062	0.214	0.038
Observations	15010	15010	15010

Notes: The p-value line displays p-values from tests of equality between the Reminder-Only and Personalized Assistance treatment coefficients. Standard deviations displayed in square brackets. Standard errors displayed in parentheses.

Table B.10: Effect of Interventions on Fines and Fees Outcomes, All Cases and FTA Warrant Sample

	Fines and Fees Charged (1)	Fines and Fees Paid (2)	Pct. Fines and Fees Paid (3)
Panel A: All Cases			
Control Mean	239.988	132.643	0.651
	[235.626]	[126.259]	[0.425]
Reminder-Only	-0.246	-0.483	0.006
	(3.320)	(1.746)	(0.005)
Personalized Assistance	-5.250	-2.287	0.011
	(3.167)	(1.675)	(0.005)
P-value for coeff. equality	0.163	0.336	0.304
Observations	30818	30818	28323
Panel B: FTA Warrant Sample			
Control Mean	276.231	121.275	0.490
	[281.169]	[147.198]	[0.429]
Reminder-Only	3.686	2.095	0.004
	(5.039)	(2.567)	(0.007)
Personalized Assistance	-2.509	-0.776	0.008
	(4.876)	(2.497)	(0.007)
P-value for coeff. equality	0.262	0.303	0.618
Observations	19932	19932	17697

Notes: The p-value line displays p-values from tests of equality between the Reminder-Only and Personalized Assistance treatment coefficients. Standard deviations displayed in square brackets. Standard errors displayed in parentheses.

Table B.11: Effect of Interventions on Fines and Fees Outcomes, Default Judgment Samples

	Fines and Fees Charged (1)	Fines and Fees Paid (2)	Pct. Fines and Fees Paid (3)
Control Mean	172.365	153.853	0.928
	[67.726]	[67.596]	[0.233]
Reminder-Only	-5.580	-3.340	0.009
	(1.683)	(1.565)	(0.005)
Personalized Assistance	-6.538	-4.396	0.007
	(1.573)	(1.499)	(0.005)
P-value for coeff. equality	0.594	0.528	0.813
Observations	10836	10836	10579
	Panel		
Control Mean	174.227	156.826	0.936
	[61.050]	[62.321]	[0.227]
Reminder-Only	-7.266	-4.158	0.011
	(1.820)	(1.742)	(0.006)
Personalized Assistance	-6.779	-5.640	0.003
	(1.732)	(1.701)	(0.006)
P-value for coeff. equality	0.804	0.430	0.286
Observations	7161	7161	7021
	A:		
Control Mean	168.731	148.052	0.912
	[79.043]	[76.543]	[0.244]
Reminder-Only	-1.068	-1.210	0.003
	(3.676)	(3.265)	(0.010)
Personalized Assistance	-6.311	-1.638	0.021
	(3.181)	(2.958)	(0.009)
P-value for coeff. equality	0.160	0.901	0.075
Observations	3662	3662	3545

Notes: The p-value line displays p-values from tests of equality between the Reminder-Only and Personalized Assistance treatment coefficients. Standard deviations displayed in square brackets. Standard errors displayed in parentheses.

APPENDIX C

We detail the costs that were included in our costing exercise.

Text messaging costs averaged $0.0516 per person in the reminder-only treatment and $0.0684 per person in the personalized assistance treatment. The software license costs averaged $0.05 per defendant for the reminder-only treatment and $0.10 per defendant for the personalized assistance treatment since the latter required additional users' licenses for each clerk who responded to text inquiries. The personalized assistance treatment incurs additional labor costs of court clerks. Hourly pay and fringe benefits total $392 per month, implying an average labor cost of $0.85 per month for defendants in the personalized assistance arm.

Lost revenue from avoided FTA, warrant costs, and reduced fines amounts to $1.17 per defendant in the reminder only treatment and $2.62 per defendant for the personalized assistance treatment.

The interventions reduced the costs from FTA for the court due to decreased workload for clerks and judges. The reminder-only and personalized assistance treatments reduced FTA issuance costs by $0.30 and $0.33 per defendant, respectively. Reducing warrants saves $21 per warrant in staff- and judge-time. A night in jail costs around $110 (Henrichson, et al., 2015). The reminder-only treatment reduces arrest costs by $1.94 per defendant while the personalized assistance treatment reduces arrest costs by $1.04 per defendant.