Can Transportation Subsidies Reduce Failures to Appear in Criminal Court? Evidence from a Randomized Controlled Trial

Rebecca Brough, Matthew Freedman, Daniel E. Ho, and David C. Phillips*

April 2021

Abstract

The failure to appear (FTA) for a scheduled court hearing can have serious consequences for a criminal defendant. Many have speculated that transportation is a material barrier to court appearance. We provide evidence from the first randomized controlled trial of transportation subsidies to reduce FTAs, conducted jointly with public defenders and the transportation authority in Seattle, Washington. The most intensive intervention was a transit card providing 2-3 months of free public transportation. We find little evidence that transportation subsidies reduce FTAs. The treatment group had a similar FTA rate as the control group, and we can rule out with 95% confidence that transit subsidies reduced the FTA rate by more than six percentage points. While transportation subsidies might be more effective in reducing FTAs if combined with other supportive services or outreach, our results suggest that transportation subsidies alone have limited benefits for this aspect of criminal justice.

JEL Codes: K41, K42, R41, R48

Keywords: failure to appear, criminal justice, public defense, transportation subsidies, public transit

^{*}Brough: University of Notre Dame (e-mail: rbrough@nd.edu). Freedman: University of California, Irvine (e-mail: matthew.freedman@uci.edu). Ho: Stanford University (e-mail: dho@law.stanford.edu). Phillips: University of Notre Dame (e-mail: david.phillips.184@nd.edu). This research was supported by Arnold Ventures and the University of Notre Dame's Wilson Sheehan Lab for Economic Opportunities (LEO). This study was pre-registered as "A Randomized-Controlled Trial of Transportation Subsidies to Reduce Failure to Appear for Pretrial Release" (AEARCTR-0005040). We thank Joshua Andrews, Katherine Hurley, and Stephen Weidlich at the King County Department of Public Defense; Carrie Cihak, Maria Jimenez-Zepeda, Mark Konecny, and Lori Mimms at King County Metro; and Darren Stewart at the King County Department of Adult and Juvenile Detention for their invaluable support and assistance with this study. We thank Anne McDonough, Charlie Hanzel, and Kit Fugate for research assistance. The views expressed here are those of the authors and do not necessarily represent the views of Arnold Ventures or King County. Any remaining errors are the responsibility of the authors.

1 Introduction

Failure to appear (FTA) at scheduled court appointments is both costly to the judicial system and can have detrimental effects on defendants. FTA rates vary across jurisdictions and offense types, but can range from 10% to as high as 50% (Cohen and Reaves, 2007; Herian and Bornstein, 2010; Fishbane, Ouss and Shah, 2020; Emanuel and Ho, 2020). When defendants fail to appear, their defense lawyers must devote time to locating their clients, and the court frequently must reschedule hearings. Defendants who fail to appear may be given a default judgment or an FTA violation, each of which can bring additional fines and potentially an arrest warrant. As a result, penalties associated with what might have originally been a minor offense can quickly mount, with an FTA leading to burdensome fines and even detention. Fines and detention, in turn, can have substantial negative repercussions for defendants and their families (Gupta, Hansman and Frenchman, 2016; Dobbie, Goldin and Yang, 2018; Stevenson, 2018; Holsinger and Holsinger, 2018; Menendez et al., 2019; Didwania, 2020; Slavinski and Spencer-Suarez, 2021).

Researchers have identified several factors that are associated with a higher likelihood of failing to appear, including age, socioeconomic status, criminal history, education and employment, alcohol/drug use, offense type, family characteristics, housing stability, prior FTAs, and transportation challenges (Clarke, Freeman and Koch, 1976; Myers, 1981; Belenko, Maria-Drita and McElroy, 1992; Bornstein et al., 2013; Johnson, Kierkus and Yalda, 2014; Zettler and Morris, 2015; Kleinberg et al., 2017; Monaghan, van Holm and Surprenant, 2020; NeMoyer et al., 2020). However, outside of work on the effectiveness of court date reminders, there are few studies that document and evaluate interventions aimed at reducing the prevalence of FTAs.

In this paper, we explore whether transportation subsidies can be an effective way to reduce the probability that defendants fail to appear in court. Lack of transportation is a well-documented problem for individuals involved in the criminal justice system (Poulin, 2004; Christian, 2005; Bernal, 2017). Indeed, limited transportation options are often de-

scribed as an impediment to attending court appointments (Mahoney et al., 2001; Goldcamp and White, 2006; Pruitt and Showman, 2014; Saunders et al., 2016). Yet to our knowledge, no studies have identified whether or not transportation assistance is effective in a criminal justice setting.

To test the importance of transportation costs in affecting court appearances, we conducted a randomized controlled trial (RCT) in Seattle, Washington. Specifically, we distributed transit subsidies to the pre-adjudicated population represented by public defenders in Seattle Municipal Court (SMC), which is located in downtown Seattle. Individuals in the treatment group received a transit card with either a \$15 credit or 2-3 months of free rides; individuals in the control group received no transit subsidy. Enrollment in the study terminated early due to the COVID-19 pandemic, so our study is insufficiently powered to make definitive statements about the exact magnitude of the impact of transit subsidies on FTA rates. However, we find little evidence that transit subsidies affect defendants' likelihood of appearing in court for scheduled hearings. Those who received transit subsidies (either the \$15 credit or 2-3 months of free rides) had an FTA rate at their first pretrial hearing that was a statistically insignificant 4 percentage points higher than the control group's FTA rate of 42%. We can rule out with 95% confidence that the treatment decreased the pretrial FTA rate by more than 6 percentage points; optimistically assuming a reduction in the FTA rate that large, it would still cost at least \$900 to avert one FTA with transit subsidies. Providing even fare-free public transit bracketing the time of defendants' hearings had little discernible impact on the likelihood of an FTA; for the deeper 2-3 month subsidy, pretrial FTA rates are identical between treatment and control groups, and we can rule out with 95% confidence that the treatment reduced the pretrial FTA rate by more than 15 percentage points.

Our results suggest that there are limits to the ability of low-cost interventions in the transportation domain to reduce FTAs. In contrast, other non-transportation interventions, such as personalized court date notifications, have been shown to be effective in reducing FTAs. For example, Fishbane, Ouss and Shah (2020) find that text message reminders

about scheduled hearings in New York City reduce the FTA rate by 8 percentage points. Several other studies similarly find evidence that text message, phone, or postcard reminders help to reduce FTAs (White, 2006; VanNostrand, Rose and Weibrecht, 2011; Rosenbaum et al., 2012; Bechtel et al., 2017; Cook et al., 2018; Ferri, 2020). While it is possible that transportation subsidies would be more effective in reducing FTAs if they were combined with other supportive services or outreach, our results suggest that transportation subsidies alone have limited benefits for this aspect of criminal justice.

Our results also add to the growing body of evidence on the effects of transportation subsidies. Research outside of the criminal justice context suggests that public transit subsidies can be effective in both increasing mobility and improving downstream economic outcomes. For example, Brough, Freedman and Phillips (2020) and Bull, Muñoz and Silva (2021) provide experimental evidence indicating that free public transit has meaningful effects on transit use and mobility more generally. Additionally, Phillips (2014) and Franklin (2018) show that transit subsidies can facilitate job search and increase access to employment. Similarly, Tierney et al. (2000) and Starbird et al. (2019) find that transportation assistance improves access to health care. We find that criminal defendants who receive transit subsidies use public transportation at least as much as other low-income individuals in King County, which suggests that the subsidies may help to improve defendants' mobility and access to resources generally. However, we do not find evidence that transit subsidies reduce the likelihood of an FTA, indicating that transportation costs are not likely to be the most substantial barrier to appearing in court for scheduled hearings.

Our findings highlight the need to continue to expand the set of tools for decreasing the frequency of FTAs. FTA rates remain quite high, even after implementing successful nudges such as text message reminders. These FTAs place high costs on the individuals who live with the consequences of additional fines and eventually imprisonment. While pretrial detention reduces FTAs, it has also been found to be causally linked to worse case dispositions and worse employment outcomes (Dobbie, Goldin and Yang, 2018) and to have disparate racial

impacts (McIntyre and Baradaran, 2013). Detention prior to trial also imposes heavy costs on the criminal justice system; pretrial detention is responsible for approximately 95% of the growth in the prison population since 2000, and the pre-adjudicated population now makes up close to two-thirds of the local jail population (Zeng, 2018). Baughman (2017) estimates that the social benefits of releasing as opposed to detaining low-risk defendants prior to trial in the U.S. could amount to \$78 billion annually. Thus, there remains a great need to identify effective strategies to facilitate pretrial release.

2 Context and Experimental Design

2.1 Context

In July 2019, we partnered with the King County Department of Public Defense (DPD), the King County Metro Transit Department (Metro), and the Seattle Municipal Court (SMC) to administer an RCT designed to study the effect of transit subsidies on court appearance. Enrollment in the study occurred at SMC, which is located in downtown Seattle and is accessible by bus and light rail. At the time of the study, SMC handled all misdemeanor crimes, civil infractions, and civil offenses in the City of Seattle. By case volume, SMC is the largest limited jurisdiction court in Washington State. The court has seven elected judges.

2.2 Experimental Design

In our study, DPD clients appearing at in-custody arraignment hearings at SMC were randomly selected to receive Metro transit cards with subsidized fares. Due to logistical constraints and the fast-paced environment of the courtroom, randomization occurred at the day-level, meaning that our treatment group includes eligible individuals appearing in court

¹The introduction of a community court option in late 2020, discussed further below, diverted some low-level misdemeanors away from SMC.

²For more information about SMC, see https://www.seattle.gov/courts/about.

for arraignment on treatment days, whereas our control group includes eligible individuals appearing in court for arraignment on control days.

Before the study began, we randomized each weekday for the subsequent three years to either treatment or control. At the start of each workweek, the research team sent DPD attorneys a schedule of the treatment and control days for that week. Reminder emails were also sent to attorneys the night before a treatment day.

During each treatment day, DPD attorneys identified and wrote down the names of all defendants eligible to participate in the study. Defendants were eligible if they were being arraigned on the in-custody courtroom calendar, were represented by a DPD public defender, and had an arraignment outcome that meant they would be released (i.e., on personal recognizance or for day reporting).³ Defendants were ineligible if they did not satisfy these conditions or if they had outstanding jail transport orders to other jurisdictions.⁴ Once a treatment day's court calendar was completed (typically in the late morning or early afternoon), attorneys shared the list of eligible individuals with corrections staff; these staff were located in an office one floor above the courtroom and adjoining the jail. The corrections staff then attached transit cards to those individuals' property and distributed this property to them at their discharge (typically in the afternoon that same day).

On control days, attorneys did not keep track of eligible participants and no transit cards were distributed. However, based on the court calendar, we were able to identify defendants that would have been eligible on those days. Therefore, we were able to construct a comparison group for those who received transit cards on treatment days.

³Defendants assigned day reporting are required to report to a center located at SMC on a regular basis to participate in certain activities, such as counseling, drug testing, employment training, or other training or treatment services. Only 16% of defendants in our sample were assigned day reporting; records of day reporting compliance are also maintained by a different office and not consistently available. This precludes using day reporting compliance as an outcome. Also notably, prior to October 14, 2019, clients with bail set to below \$3,000 were eligible for our study, as a local nonprofit posted bail for clients with bail under that amount.

⁴Defendants' initial treatment status was preserved for 2.5 months after enrolling, meaning that those appearing in the same court multiple times during our study period were only re-randomized on arraignment dates 2.5 months after their initial arraignment. In these instances, we treat two cases for the same person as separate observations. This ultimately affected three defendants (whose six observations represent 1.3% of our study sample).

Metro provided two sets of subsidized transit cards for this intervention. The first batch included transit cards pre-loaded with \$15 worth of public transit. Eligible individuals who appeared in court on a treatment day between July 1, 2019 and November 22, 2019 received the \$15 card. However, due to high usage of the distributed cards and the often rapid exhaustion of the available \$15 in credit, we began distributing transit cards pre-loaded with monthly passes that provided free public transit for a fixed period of time. The monthly passes expired two full calendar months after the card was distributed. For instance, if someone received a card on any day in January, be it the beginning or end of the month, the monthly pass providing free transit would expire at the end of March. As nearly all (98%) of individuals' first scheduled pretrial hearings are scheduled within six weeks of the arraignment hearing, this ensured free public transit was an option during the period in which their hearing occurred. Eligible individuals who appeared in court on a treatment day between November 22, 2019 and the conclusion of the study received a transit card with the two-month fare-free pass.

Notably, all transit cards distributed in the study were reduced-fare transit cards (so-called ORCA LIFT cards) available to King County residents with income below 200% of the federal poverty line. By virtue of qualifying for a public defender, those eligible for the treatment in this study also qualify for an ORCA LIFT card. When either the \$15 in credit was exhausted or the monthly pass expired, the card could still be used to access local public transit at a discounted rate (e.g., \$1.50 per bus ride as opposed to the regular \$2.75 for adults). However, in order to get the discounted rate, individuals must load additional money on to the card. We observe all card usage on King County's public transit system regardless of whether the trips were free for the defendant or not.

Study enrollment ended on March 13, 2020 due to changes in the criminal justice system in King County brought on by the COVID-19 pandemic. Subsequent policy changes in Seattle, including the introduction of community court as an alternative for low-level misdemeanors as well as an adjustment to court appearance requirements to allow attorneys to appear on

behalf of their clients at previously mandated hearings, precluded resuming enrollment in the study. As a result, we enrolled only 541 of the originally planned 4,000 defendants in the study; our final sample after excluding those whose pretrial hearing dates were after the pandemic started is 468. While this smaller sample size leaves us underpowered relative to the original design, our findings provide important evidence on the likely direction and magnitude of the impacts of transit subsidies on court appearances.⁵

3 Study Sample

SMC records rich information on its publicly accessible court portal.⁶ This portal contains information on cases scheduled to be heard in the in-custody arraignment courtroom each day. Additionally, for every case, the portal reports information on charges, representing attorney, and major case events occurring in each hearing; the latter include defendant appearance at court, bench warrant issuance, entered pleas, bail determinations, future hearing schedules, and case dispositions. Each event is associated with a date of occurrence.⁷ This portal is updated dynamically as cases proceed through the criminal justice system. The portal also contains personal and demographic information about defendants, including gender, race, home address, and telephone number.

We use these court portal data to identify defendants who are eligible to be part of the study; i.e., those listed on the in-custody courtroom calendar, whose arraignment hearing event lists a DPD public defender,⁸ and whose pretrial release status indicates release on personal recognizance or day reporting.⁹ Finally, we limit the sample to those whose pretrial

⁵We planned for a larger sample in the original design in part because we intended to look at downstream outcomes related to, for example, final case dispositions, re-arrest rates, medical care visits, public assistance receipt, employment and earnings, and residential mobility.

⁶See https://web6.seattle.gov/courts/ECFPortal/default.aspx.

⁷Information is gathered from the Courtroom Calendar (KCJ2) page. Each case has an "Events" section that reports case updates written by Court Clerks.

⁸There are four public defense divisions within DPD. Prior to October 14, 2019, the intervention only involved clients associated with the Northwest Defender Division (NDD) of DPD, and therefore the attorney listed was required to be employed by NDD. Subsequently, clients represented by attorneys in The Defenders Association Division (TDAD) and Associated Counsel for the Accused Division (ACAD) were also eligible.

⁹Key terms used to identify personal recognizance include "PR Granted" and "Release Granted"; key

hearings were scheduled before March 1, 2020.

During the study, attorneys kept track of the number of transit cards that were offered to clients on treatment days. These records were then recorded on a shared spreadsheet with the research team. Attorneys were instructed to follow all eligibility criteria as outlined above, while we determined eligibility based on available court records. This leaves room for some discrepancy between those defendants whom attorneys deemed eligible and those whom we deemed eligible based on available court records. However, our count of treated defendants and that of DPD match exactly on 60% of treatment days and differ by no more than one on 86% of treatment days.¹⁰ Thus, we are able to replicate DPD records with the public court data.

Table 1 summarizes characteristics of the enrolled population. Our population is 78% male, 54% white, and averages 37 years of age at the time of their arraignment hearing. The most common charges in our context include theft, assault, and trespass. Approximately 85% of individuals remain with public defenders beyond their arraignment hearing, meaning that at least this fraction is indigent and qualifies for public defense. These characteristics are generally balanced across treatment and control groups. Out of 24 baseline characteristics, only one is statistically different between the treatment and control groups at the 5% level. ¹¹

4 Results

4.1 Transit Use

Using data on transit card "taps" on King County Metro's fleet of vehicles, we tracked public transit boardings for all transit cards distributed in this study. The data from King

terms used to identify day reporting include "Conditions of Day Reporting Set to".

¹⁰According to the public court data, the average volume of eligible clients per treatment day was 4.0 with a standard deviation of 2.9.

¹¹By chance, the treatment group is somewhat larger than the control group, particularly during the period with the larger subsidy. Since we draw the treatment assignment by day, the fraction treated can vary somewhat even with several hundred participants.

County Metro include information on all boardings on King County buses, ferries, and light rail lines. However, to preserve the privacy of individuals in this study, transit cards were not registered to individual names. This means that we only observe who was eligible to receive a transit card on treatment days and which transit cards were distributed on each day. Therefore, we can explore transit usage relative to card distribution day, but we are unable to link transit records to specific demographic or case information at the defendant level.

Between July 2019 and late November 2019, all distributed cards contained \$15 worth of transit. Boardings using these cards are shown in Panel (a) of Figure 1 and are summarized in the first column of Table 2. Over the 30-day period after distribution, defendants who received \$15 transit cards averaged 0.29 boardings per day. Notably, as Figure 1 makes clear, most of these boardings happened soon after card receipt; the \$15 in transit funds were exhausted for 25% of defendants within 8 days of card receipt and for 50% of defendants within 22 days of card receipt. Given that pretrial hearings were scheduled 27 days after card distribution on average, many defendants who received ORCA LIFT cards pre-loaded with \$15 did not have any subsidy remaining on their cards at the time of their pretrial hearings (although they could have put their own money on the card in order to receive discounted fares).

Panel (b) of Figure 1 and the second column of Table 2 show boardings for the population who received transit cards with unlimited funds for 2-3 months. Ridership for this group over the 30 days following card distribution averaged 0.91 boardings per day, about three times greater than for the group who received the \$15 card. Boardings were also distributed more evenly over time, including during the period in which their pretrial hearings were likely to have occurred.¹²

When transit was free, defendants participating in the study used transit at a rate comparable to or higher than that of low-income transit riders enrolling in King County's subsidized

¹²Since we cannot link transit card usage to specific defendants, we cannot measure whether transit ridership changed differentially on the exact date of a defendant's scheduled court hearing.

fare program. Table 2 compares transit usage for our two subsidy groups to all people who enrolled in Metro's low-income ORCA LIFT program between July 1, 2019 and February 7, 2020.¹³ Including those who never used their cards, defendants with the \$15 card made an average of 0.56 boardings per day in the first 8 days after card receipt, roughly the same as all low-income transit riders. However, their usage of the card diminished in subsequent weeks. Meanwhile, defendants who received cards with unlimited funds for 2-3 months averaged 0.99 boardings per day in the first 8 days after card receipt; this is 83% more than the general population of low-income riders and statistically different at the 1% level. As also reflected in Figure 1, their card usage remained persistently high up to two months after card distribution. Panels B and C of Table 2 split ridership into the extensive and intensive margins. Conditional on using the card at least once with 60 days of receipt, the difference in transit usage between the 2-3 month subsidy group and low-income riders in general is even starker.

These results are notable given that participants in this study did not actively indicate a need for transportation assistance. Unlike ORCA LIFT cardholders, who must enroll in the ORCA LIFT program at a participating agency, individuals in this study simply received a transit card at the time of their being released from custody. This suggests that the pretrial population may be disproportionately dependent on public transportation.

4.2 Court Appearance

We use SMC's court portal to measure court appearance outcomes. We measure FTA at (i) the first scheduled pretrial hearing, (ii) the first scheduled pretrial hearing resulting in the issuance of a warrant, (iii) any hearing, and (iv) any hearing resulting in the issuance of a warrant. We identify FTA at a hearing if a defendant's event history includes any variation of the phrase "Defendant not Present" on the day of a scheduled hearing. We identify FTA resulting in a warrant if any variant of the phrase "Bench Warrant Issued" is listed in the

¹³We limit our sample to individuals enrolling in ORCA LIFT before February 7, 2020 because this is the last arraignment date that corresponds to pretrial hearing dates before March 2020.

event history on the same day as an FTA for a scheduled hearing. Using these definitions, we create indicators for FTA at the first pretrial hearing and FTA resulting in a bench warrant at the first pretrial hearing. We also create indicators for any FTA and any FTA resulting in a bench warrant over the course of the case. Our analysis is restricted to FTAs associated with cases at SMC; we do not observe FTAs associated with cases outside SMC.

We find no evidence that transit subsidies had large effects on court appearance rates for defendants in our study. In Table 3, we show FTA rates for our control and treatment groups. In Panel A, we pool defendants who received the \$15 transit card and 2-3 month free-fare card. Overall, FTA rates for defendants assigned to receive transit subsidies are equal to or greater than those not receiving subsidies. For example, the FTA rate at the first pretrial hearing is 47% for those assigned to receive the subsidy, compared to 42% for those not.

We measure the treatment effect as the difference between those two groups conditional on observed characteristics of the defendant and case. Specifically, to estimate the treatment effect, we run the following regression:

$$FTA_i = \alpha + \beta T_i + \mathbf{X}_i \Omega + \epsilon_i \tag{1}$$

where i indexes defendants, FTA is an indicator for failure to appear in court at a scheduled hearing, T is an indicator for being in the treatment (as opposed to the control) group, and \mathbf{X} is a set of defendant and case characteristics including defendant race, gender, age, age squared, public defense division, and release condition.¹⁴ Standard errors are clustered by arraignment date.

As shown in the final column of Table 3, the estimated regression-adjusted difference in pretrial FTA rates between treated and control groups $(\hat{\beta})$ is 3.5 percentage points, which is not statistically significant. We find a similar magnitude, and also statistically insignificant, effect of the treatment on pretrial FTAs resulting in a warrant. The results also indicate,

¹⁴See Table 1 for descriptive statistics for these defendant and case characteristics.

if anything, a positive impact of transit subsidies on the likelihood of any FTA over the duration of a case, though again the effects are not strongly significant.

Results are similar when we look at FTA rates broken down by the level of subsidy that defendants received. As shown in Panel B of Table 3, during the time in which we provided a \$15 transit credit, the FTA rate at pretrial hearings was a statistically insignificant 6 percentage points higher for the treatment group. As shown in Panel C, during the time in which we provided the larger 2-3 month subsidy, both the treatment and control groups had FTA rates of 49% at pretrial hearings.

The point estimates indicate that transit subsidies have no meaningful impact on the likelihood that defendants appear in court at scheduled hearings. While our study is underpowered relative to the original design due to COVID-19 and related disruptions, the estimates are sufficiently precise to reject large declines in the FTA rate resulting from the treatment. Focusing on results from the population with the largest treatment dose (the 2-3 month unlimited transit subsidy), we observe that the FTA rate for the first scheduled pretrial hearing for the treated group is 0.5 percentage points lower than for the control group, with a standard error of 7.7 percentage points. This means that we can rule out with 95% confidence a benefit associated with the transit subsidy in reducing the FTA rate larger than 15 percentage points. This is a meaningful bound given the baseline FTA rate of 49%. For the \$15 transit credit, we can reject with 95% confidence a treatment effect larger than 5 percentage points. For the full sample, we can rule out with 95% confidence that the treatment reduced the FTA rate by more than 6 percentage points. ¹⁵

4.3 Cost Effectiveness

We estimate the cost of the intervention using the transit boardings data. The 2-3 month subsidy group boarded an average of 77 times in the first 60 days, and the \$15 subsidy group boarded an average 12 times over the same time interval. This averages to 45 boardings

¹⁵With our originally planned 4,000 study participants (split evenly between treatment and control), we would expect the standard errors to be about two-thirds smaller.

for the full sample. If we assume that, as in Brough, Freedman and Phillips (2020), riders in King County would have taken half of these rides paying the \$1.50 ORCA LIFT fare, then Metro forgoes \$34 of revenue per card distributed to a defendant. Administrative costs consist of loading the subsidy on the card, screening for eligibility, and delivering the card to the person's property. We estimate these costs at \$10-20. Thus, the overall cost is close to \$50 per defendant. At the most optimistic end of the 95% confidence interval for the treatment effect on FTAs, we would conclude that it costs at least \$900 to eliminate one FTA with transit subsidies. For the 2-3 month pass alone, a similar calculation yields an average program cost near \$75 per card and at least \$500 per FTA averted.

5 Conclusion

We provide evidence from the first RCT of transportation subsidies to reduce FTAs, conducted jointly with public defenders and the transportation authority in Seattle, Washington. While our study was interrupted by COVID-19, and is hence underpowered relative to the original design, we find little evidence of a substantial benefit of transportation subsidies in terms of increasing the likelihood that defendants appear at scheduled court hearings.

It is possible that bundling transit subsidies with other resources and support, such as court date reminders, could help improve their effectiveness in reducing FTAs. It is also possible that providing transit subsidies to those released on their own recognizance or for day reporting could help individuals meet other obligations; indeed, the relatively heavy transit use at least among those with the 2-3 month free transit pass indicates that individuals value the subsidy. However, our results suggest that providing transit subsidies alone to defendants with scheduled court hearings may do little to reduce FTAs. Therefore, a significant need remains for further investigation into potential tools to reduce FTAs and the costs that those FTAs impose on both defendants and the criminal justice system.

References

- Baughman, Shima Baradaran. 2017. "Costs of Pretrial Detention." Boston University Law Review, 97: 1–30.
- Bechtel, Kristin, Alexander Holsinger, Christopher Lowenkamp, and Madeline Warren. 2017. "A Meta-Analytic Review of Pretrial Research: Risk Assessment, Bond Type, and Interventions." *American Journal of Criminal Justice*, 42: 443–467.
- Belenko, Steven, I. Maria-Drita, and J. McElroy. 1992. "Pre-Arraignment Drug Tests in the Pretrial Release Decision: Predicting Defendant Failure to Appear." New York City Criminal Justice Agency Brief Report Series.
- **Bernal, Daniel.** 2017. "Taking Court to the People: Real-World Solutions for Nonappearance." *Arizona Law Review*, 79: 547–571.
- Bornstein, Brian, Alan Tomkins, Elizabeth Neeley, Mitchel Herian, and Joseph Hamm. 2013. "Reducing Courts Failure-to-Appear Rate by Written Reminders." *Psychology, Public Policy, and Law*, 19: 70–80.
- Brough, Rebecca, Matthew Freedman, and David C. Phillips. 2020. "A (Free) Ticket to Ride: Evidence on the Effects of Subsidized Public Transportation." University of Notre Dame, Wilson Sheehan Lab for Economic Opportunities Working Paper.
- Bull, Owen, Juan Carlos Muñoz, and Hugo E. Silva. 2021. "The impact of fare-free public transport on travel behavior: Evidence from a randomized controlled trial." Regional Science and Urban Economics, 86: 103616.
- Christian, Johnna. 2005. "Riding the Bus: Barriers to Prison Visitation and Family Management Strategies." *Journal of Contemporary Criminal Justice*, 21: 31–48.
- Clarke, Stevens, Jean Freeman, and Gary Koch. 1976. "Bail Risk: A Multivariate Analysis." *Journal of Legal Studies*, 5: 341–385.

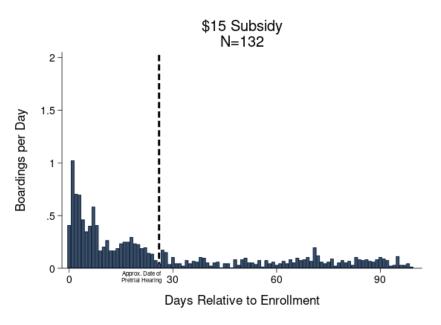
- Cohen, Thomas, and Brian Reaves. 2007. "Pretrial Release of Felony Defendants in State Courts: State Court Processing Statistics, 1990-2004." U.S. Department of Justice 214994.
- Cook, Brice, Binta Zahra Diop, Alissa Fishbane, Jonathan Hayes, Aurelie Ouss, and Anuj Shah. 2018. "Using Behavioral Science to Improve Criminal Justice Outcomes: Preventing Failures to Appear in Court." University of Chicago Crime Lab Report.
- **Didwania, Stephanie Holmes.** 2020. "The Immediate Consequences of Federal Pretrial Detention." *American Law and Economics Review*, 22: 24–74.
- **Dobbie, Will, Jacob Goldin, and Crystal Yang.** 2018. "The Effects of Pretrial Detention on Conviction, Future Crime, and Employment: Evidence from Randomly Assigned Judges." *American Economic Review*, 108(2): 201–40.
- Emanuel, Natalia, and Helen Ho. 2020. "Behavioral Biases and Legal Compliance: A Field Experiment." Harvard University Working Paper, Cambridge, MA.
- Ferri, Russell. 2020. "The Benefits of Live Court Date Reminder Phone Calls during Pretrial Case Processing." *Journal of Experimental Criminology*, forthcoming.
- Fishbane, Alissa, Aurelie Ouss, and Anuj K Shah. 2020. "Behavioral Nudges Reduce Failure to Appear for Court." *Science*, 370(6517).
- **Franklin, Simon.** 2018. "Location, Search Costs and Youth Unemployment: Experimental Evidence from Transport Subsidies." *Economic Journal*, 128: 2353–2379.
- Goldcamp, John, and Michael White. 2006. "Restoring Accountability in Pretrial Release: The Philadelphia Pretrial Release Supervision Experiments." Journal of Experimental Criminology, 2: 143–181.

- Gupta, Arpita, Christopher Hansman, and Ethan Frenchman. 2016. "The Heavy Costs of High Bail: Evidence from Judge Randomization." *Journal of Legal Studies*, 45: 471–505.
- Herian, Michael, and Brian Bornstein. 2010. "Reducing Failure to Appear in Nebraska: A Field Study." The Nebraska Lawyer, 11–14.
- Holsinger, Alexander, and Kristi Holsinger. 2018. "Analyzing Bond Supervision Survey Data: The Effects of Pretrial Detention on Self-Reported Outcomes." Federal Probation, 82: 39–45.
- Johnson, Brian, Christopher Kierkus, and Christine Yalda. 2014. "Who Skips? An Analysis of Bail Bond Failure to Appear." *Journal of Applied Security Research*, 9: 1–16.
- Kleinberg, Jon, Himabindu Lakkaraju, Jure Leskovec, Jens Ludwig, and Sendhil Mullainathan. 2017. "Human Decisions and Machine Predictions." *The Quarterly Journal of Economics*, 133(1): 237–293.
- Mahoney, Barry, Bruce Beaudin, John Carver, Daniel Ryan, and Richard Hoffman. 2001. Pretrial Services Programs: Responsibilities and Potential. National Institute of Justice.
- McIntyre, Frank, and Shima Baradaran. 2013. "Race, Prediction, and Pretrial Detention." *Journal of Empirical Legal Studies*, 10: 741–770.
- Menendez, Matthew, Michael Crowley, Lauren-Brooke Eisen, and Noah Atchison. 2019. "The Steep Costs of Criminal Justice Fees and Fines." Brennan Center for Justice Research Report.
- Monaghan, Jake, Eric Joseph van Holm, and Chris Surprenant. 2020. "Get Jailed, Jump Bail? The Impacts of Cash Bail on Failure to Appear and Re-Arrest in Orleans Parish." American Journal of Criminal Justice, forthcoming.

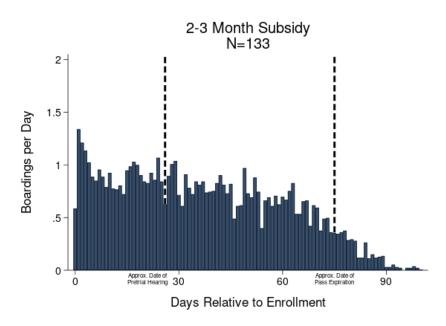
- Myers, Samuel. 1981. "The Economics of Bail Jumping." *Journal of Legal Studies*, 10: 381–396.
- NeMoyer, Amanda, Elizabeth Gale-Bentz, Kelley Durham, Suraji Wagage, and Naomi Goldstein. 2020. "Adverse Juvenile Probation Supervision Outcomes: Noncompliance, Revocation, and Failure to Appear at Review Hearings." Criminal Justice and Behavior, 47: 145–165.
- **Phillips, David C.** 2014. "Getting to Work: Experimental Evidence on Job Search and Transportation Costs." *Labour Economics*, 29: 72–82.
- **Poulin, Anne Bowen.** 2004. "Criminal Justice and Videoconferencing Technology: The Remote Defendant." *Tulane Law Review*, 78: 1089–1167.
- Pruitt, Lisa R., and Bradley E. Showman. 2014. "Law Stretched Thin: Access to Justice in Rural America." South Dakota Law Review, 59: 466–528.
- Rosenbaum, David, Nicole Hutsell, Alan Tomkins, Brian Bornstein, Mitchel Herian, and Elizabeth Neeley. 2012. "Court Date Reminder Postcards." *Judicature*, 95: 177–187.
- Saunders, Jessica, Meagan Cahill, Andrew Morral, Kristin Leuschner, Gregory Midgette, John Hollywood, Mauri Matsuda, Lisa Wagner, and Jirka Taylor. 2016. "The Justice Innovation Center: Identifying the Needs and Challenges of Criminal Justice Agencies in Small, Rural, Tribal, and Border Areas." RAND Corporation.
- Slavinski, Ilya, and Kimberly Spencer-Suarez. 2021. "The Price of Poverty: Policy Implications of the Unequal Effects of Monetary Sanctions on the Poor." *Journal of Contemporary Criminal Justice*, 37: 45–65.

- Starbird, Laura, Caitlin DiMaina, Chun-An Sun, and Hae-Ra Han. 2019. "A Systematic Review of Interventions to Minimize Transportation Barriers Among People with Chronic Diseases." *Journal of Community Health*, 44: 400–411.
- **Stevenson, Megan T.** 2018. "Distortion of Justice: How the Inability to Pay Bail Affects Case Outcomes." *Journal of Law, Economics, and Organization*, 34(4): 511–542.
- Tierney, William, Lisa Harris, Denise Gaskins, Xiao-Hua Zhou, George Eckert, Ann Bates, and Fredric Wolinsky. 2000. "Restricting Medicaid Payments for Transportation: Effects on Inner-City Patients' Health Care." American Journal of the Medical Sciences, 319: 326–333.
- VanNostrand, Marie, Kenneth Rose, and Kimberly A. Weibrecht. 2011. "State of the Science of Pretrial Release Recommendations and Supervision." National Institute of Correction, Pretrial Justice Institute 025078.
- White, Wendy. 2006. "Court Hearing Call Reminder Project." Criminal Justice Coordinating Council and Flagstaff Justice Court Report.
- Zeng, Zhen. 2018. "Jail Inmates in 2016." U.S. Department of Justice 251210.
- **Zettler, Haley, and Robert Morris.** 2015. "An Exploratory Assessment of Race and Gender-Specific Predictors of Failure to Appear in Court Among Defendants Released via a Pretrial Services Agency." *Criminal Justice Review*, 40: 417–430.

Figures and Tables



(a) Ridership on Cards with \$15 Worth of Transit



(b) Ridership on Cards with Unlimited Transit for 2-3 Months

Figure 1: Ridership on Transit Cards Distributed in the Study

Notes: The figures show boardings per day using transit cards with \$15 credit (Panel (a)) and transit cards with 2-3 months of free rides (Panel (b)). Data derived from King County Metro's ORCA LIFT boardings data and include zeroes (those who never used their cards).

Table 1: Sample Descriptive Statistics

	(1)		(2)		(3)
	Control		Treatment		Difference
	N	Mean	N	Mean	(Std. Error)
Age at Hearing	203	37.84	265	37.00	-1.133
					(0.955)
Female	203	0.24	265	0.20	-0.038
					(0.042)
Black	203	0.29	265	0.33	0.046
XXII * 1	200	0.55	005	0.51	(0.041)
White	203	0.57	265	0.51	-0.058
Α :	000	0.05	005	0.00	(0.043)
Asian	203	0.05	265	0.06	0.006
A T 1: A 11 N-4:	202	0.02	2005	0.04	(0.022)
American Indian or Alaskan Native	203	0.03	265	0.04	0.003
Unknown Race	203	0.05	265	0.06	$(0.016) \\ 0.002$
Offknown Race	203	0.05	200	0.00	(0.002)
Seattle Address on Court Docket	203	0.70	265	0.65	-0.047
Seattle Address on Court Docket	203	0.70	200	0.05	(0.044)
Listed Phone Number on Court Docket	203	0.86	265	0.82	-0.038
Listed I holle Ivalliber on Court Docket	200	0.00	200	0.02	(0.034)
Days Until First Scheduled Pretrial Hearing	203	25.32	265	28.00	2.261*
Days Onth Thist beneduled Treating	200	20.02	200	20.00	(1.153)
Number of Charges	203	1.35	265	1.40	0.073
Trumber of Charges	200	1.00	200	1.10	(0.051)
Number of Theft Charges	203	0.28	265	0.31	0.032
Trains of the Charges	-00	0.20	_00	0.01	(0.039)
Number of Harassment Charges	203	0.04	265	0.07	0.032
Ü					(0.021)
Number of Assault Charges	203	0.26	265	0.22	-0.046
G					(0.044)
Number of Trespass Charges	203	0.20	265	0.23	0.024
					(0.044)
Number of Property Destruction Charges	203	0.09	265	0.09	0.006
					(0.027)
Number of Other Charges	203	0.48	265	0.50	0.024
					(0.063)
Representing DPD Agency: NDD	203	0.46	265	0.37	-0.092
					(0.091)
Representing DPD Agency: ACA	203	0.28	265	0.28	0.007
					(0.057)
Representing DPD Agency: TDA	203	0.07	265	0.06	-0.014
					(0.036)
Release Condition: Day Reporting Requirements	203	0.13	265	0.18	0.049
					(0.037)
Release Condition: Personal Recognizance	203	0.68	265	0.74	0.060
					(0.053)
Release Condition: Any Bail	203	0.13	265	0.06	-0.071**
	0.0	0.17.05	0.0	0.10.00	(0.034)
Release Condition: Bail Amount if > 0	39	641.03	22	648.00	6.702
					(189.562)

Notes: Data derived from Seattle Municipal Court Portal. Standard errors (in parentheses in column (3)) are clustered by arraignment date. Statistical significance at the 10, 5, and 1 percent levels are denoted respectively by *, ***, and ****.

Table 2: Public Transportation Usage

	(1)	(2)	(3)	(4)	(5)		
	\$15	2-3 Month	Non-Study	Diff. (1) - (3)	Diff. (2) - (3)		
	Subsidy	Subsidy	Participants	(Std. Error)	(Std. Error)		
Panel A: Ridership							
Avg. Usage over 8 Days Since Card Receipt	0.56	0.99	0.54	0.02	0.45***		
				(0.04)	(0.04)		
Avg. Usage over 30 Days Since Card Receipt	0.29	0.91	0.55	-0.26***	0.36***		
				(0.02)	(0.02)		
Avg. Usage over 60 Days Since Card Receipt	0.17	0.82	0.52	-0.35***	0.30***		
				(0.02)	(0.02)		
Panel B: Takeup				, ,	, ,		
Share That Used Card within 60 Days of Receipt	0.82	0.63	0.70	0.12**	-0.07		
				(0.04)	(0.04)		
Panel C: Ridership Conditional on Using Card within 60 Days							
Avg. Usage over 8 Days Since Card Receipt	0.66	1.54	0.74	-0.08	0.80***		
				(0.05)	(0.06)		
Avg. Usage over 30 Days Since Card Receipt	0.34	1.42	0.75	-0.41***	0.67***		
·				(0.03)	(0.03)		
Avg. Usage over 60 Days Since Card Receipt	0.20	1.29	0.72	-0.51***	0.57***		
				(0.02)	(0.02)		

Notes: Data derived from King County Metro's ORCA LIFT boardings data. The table reports the mean number of public transit boardings per day for each group (\$15 subsidy, 2-3 month subsidy, and non-study ORCA LIFT users) over different time intervals relative to card receipt. Columns (4) and (5) are the results of simple t-tests and report differences in ridership between each study group (\$15 and 2-3 month subsidies) and non-study participants; the standard errors of these differences appear in parentheses. Non-study participants are comprised of participants in Metro's low-income fares program, ORCA LIFT, enrolling in the program between July 1, 2019 and February 7, 2020. Panel A includes all study participants and ORCA LIFT registrants who received transit cards between July 1, 2019 and February 7, 2020, Panel B displays the share of study participants and ORCA LIFT registrants who used their transit card at least once within 60 days of receipt, and Panel C reports ridership conditional on using one's transit card within 60 days of receipt. Statistical significance at the 10, 5, and 1 percent levels are denoted respectively by *, **, and ****.

Table 3: Failure to Appear (FTA) at Court

	(1)		(2)		(3)
	Co	$_{ m ntrol}$	Trea	atment	Regression-Adj. Diff.
	N	Mean	N	Mean	(Std. Error)
Panel A: Any Transit Subsidy					
Pretrial FTA	203	0.42	265	0.47	0.035
					(0.047)
Pretrial FTA Resulting in Warrant	203	0.26	265	0.31	0.035
					(0.041)
Any FTA	203	0.73	265	0.80	0.050
					(0.042)
Any FTA Resulting in Warrant	203	0.40	265	0.51	0.101**
					(0.048)
Panel B: \$15 Transit Subsidy					
Pretrial FTA	119	0.38	132	0.45	0.059
					(0.057)
Pretrial FTA Resulting in Warrant	119	0.24	132	0.30	0.035
					(0.055)
Any FTA	119	0.72	132	0.85	0.101*
					(0.056)
Any FTA Resulting in Warrant	119	0.39	132	0.52	0.084
					(0.058)
Panel C: 2-3 Month Transit Subsidy					
Pretrial FTA	84	0.49	133	0.49	-0.005
					(0.077)
Pretrial FTA Resulting in Warrant	84	0.29	133	0.32	0.025
					(0.060)
Any FTA	84	0.75	133	0.74	-0.022
					(0.060)
Any FTA Resulting in Warrant	84	0.40	133	0.51	0.092
					(0.071)

Notes: Data derived from Seattle Municipal Court Portal. Differences displayed in column 3 are the result of OLS regressions controlling for race, gender, age, representing public defender division, and release condition. Standard errors are clustered by arraignment date and are in parentheses. Statistical significance at the 10, 5, and 1 percent levels are denoted respectively by *, ***, and ****.