# Steering Towards Safety

An Impact Evaluation of the Driver Accountability Program

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# **Executive Summary**

Each year in New York City, traffic crashes injure tens of thousands of people, killing hundreds. But traditional responses to driving offenses fail to address the underlying issues that lead to unsafe driving. Moreover, these responses have been shown to have negative life consequences, and fines and fees disproportionately impact low-income individuals charged with driving offenses. The Driver Accountability Program (DAP), an initiative developed and facilitated by the Center for Justice Innovation, aims to address both challenges: improving traffic safety while reducing the harms and injustices of the traditional criminal legal system. Based on a model of personal accountability, discussion, and reflection, DAP is a 90-minute group session that strives to change participants' underlying beliefs and behaviors around driving, therefore making streets safer.

This study answers two research questions:

- **1. Impact on Recidivism** Do DAP participants have a lower rate of recidivism than individuals not mandated to DAP?
- 2. Impact on Case Outcomes Do DAP participants receive different case outcomes than individuals not mandated to DAP?

Individuals who participated in DAP in the New York City boroughs of Brooklyn and Staten Island between 2017 and 2019 were matched to a comparison population of similar individuals not mandated to DAP. To examine differences in recidivism, we ran bivariate regression models to estimate whether DAP participants in each borough were more or less likely to recidivate on specific driving charges than the comparison group at four time periods. To investigate case outcome differences, we utilized chi-square tests to examine differences in disposition and top sentence within each borough.

### **Major Findings**

DAP participants in both Brooklyn and Staten Island were less likely to recidivate on selected DAP charges within six months than the comparison group. In Brooklyn, the recidivism effect remained consistent across all periods analyzed, up to two years post-disposition. Participation in DAP was also associated with different case outcomes: DAP participants in Brooklyn were more likely to have their case dismissed and less likely to receive a fine than individuals not mandated to DAP.

# Conclusions and Recommendations

Overall, findings point to success in both of the Driver Accountability Program's primary aims in Brooklyn, and partial success in Staten Island. While the findings in Brooklyn point to success in both improving NYC street safety and reducing the reach and harm of traditional criminal legal system outcomes, findings in Staten Island suggest an improvement in street safety at the six-month period only. In particular, DAP's effect on recidivism suggests that humane and restorative approaches to traffic offenses can be more effective at limiting re-offense than traditional punitive responses. For this reason, we recommend that DAP sustain and expand the scale of its work. In light of reduced recidivism and low case dismissal rates in both boroughs, we further recommend that prosecutors and judges consider more widely dismissing cases upon DAP completion, in an effort to minimize collateral consequences of system involvement without jeopardizing public safety.

# Chapter 1 Introduction

Ten years after the start of Vision Zero in New York City, an initiative aimed at improving traffic safety throughout the city, traffic violence continues to injure tens of thousands of people on NYC streets each vear, killing hundreds (NYC Vision Zero). In 2023 alone, 38,107 crashes led to 51,641 injuries and 260 deaths, up from 37,036 crashes in 2022 (NYC Crash Mapper). Although traffic-related fatalities have declined overall since 2014, when Vision Zero began, driver and cyclist fatalities have risen, especially in low-income, Black, and Latino neighborhoodsrevealing traffic safety as a serious public health problem in New York (Transportation Alternatives).

Traffic crashes are driven by several factors, including street design and infrastructure, as well as unsafe driving practices. Punitive responses to unsafe driving and traffic offenses, including increased policing, punishment-oriented legislation, and harsh sentencing, fail to address the underlying problems that lead to unsafe driving. Further, interaction with the criminal legal system can negatively affect an individual's health, economic well-being, employment, and housing, among other areas (Harding, Morenoff, and Herbert 2013; Harris and Smith 2022; Sundaresh et al. 2018; Western 2002). Additionally, fines and fees disproportionately impact those who cannot pay and can lead to license suspension, which may have consequences for mobility, employment, and childcare (Fines & Fees <u>Justice Center</u>). Compounding these

justice concerns, communities of color tend to bear the most significant burden of both traffic crashes and criminal legal system involvement (Morencey et al. 2012; Pierson et al. 2020).

The Center for Justice Innovation (the Center) developed a Driver Accountability Program (DAP) to address three critical challenges related to traffic violence: 1) dangerous driving that leads to traffic crashes and injuries, 2) fines and other punitive responses to dangerous driving behaviors that perpetuate racial and income-based disparities, and 3) fines and strict sentences that fail to address the underlying driving behaviors that lead to dangerous streets. DAP offers a way to target change through individual behavior modification and accountability. It serves as one piece of a holistic system of solutions to address the complex and multifaceted factors that contribute to street safety.

### The Driver Accountability Program

DAP is a 90-minute group session available to individuals charged with drivingrelated offenses in New York City. The program draws upon principles of restorative justice, self-reflection, and self-empowerment, to improve traffic safety while providing an alternative to fines or jail. The curriculum emphasizes education, awareness, and reflection on participants' driving habits and beliefs to improve driving behaviors (<u>Center for</u> <u>Justice Innovation</u>). First implemented at the Red Hook Community Justice Center in 2015, DAP currently operates at six sites across all five NYC boroughs.

The DAP curriculum is offered in both English and Spanish, and has three primary components:

- 1. A *driving reflection survey* that directs participants to reflect on their driving beliefs and habits and share these responses during the group session.
- 2. A video, titled "*Drive Like Your Family Lives Here,*" which includes testimonials from people in New York City who have lost loved ones to traffic crashes.
- 3. *A self-reflection activity* that asks participants to identify their own unsafe driving behaviors and action steps to correct those behaviors moving forward.

DAP serves individuals charged in criminal court with traffic-related offenses or facing charges stemming from a drivingrelated incident.<sup>1</sup> While the program does not have strict charge-based eligibility criteria, it targets individuals arraigned on one of six charges: failure to yield (AC 19-190), aggravated unlicensed operation (VTL 511), driving without a valid license (VTL 509), leaving the scene of an accident (VTL 600), reckless driving (VTL 1212), and driving under the influence (VTL 1192).<sup>2</sup> In 2023, three-fourths of DAP participants had one of these charges as the top charge at arraignment (Table 1.1).

#### Table 1.1. Most DAP participants enter on one of the selected DAP charges

#### NUMBER OF PARTICIPANTS IN 2023 1,750

Top Arraignment Charge	
Aggravated unlicensed operation (VTL 511)	44%
Driving under the influence (VTL 1192)	12%
Possession of a forged instrument (PL 170)	8%
Reckless endangerment (PL 120)	7%
Drive without license (VTL 509)	5%

Participants are mandated to the program either as a condition of a guilty plea or Adjournment in Contemplation of Dismissal (ACD), or as a precondition for getting their charges reduced or dismissed. In 2023, the program served over 1,700 participants (Figure 1.1); more than 6,500 participants have participated since the program began in 2015.

<sup>&</sup>lt;sup>1</sup> Raise the Age legislation increased the age of prosecution to 18 years in criminal cases in New York State. Prior to this change, 16-year-olds were held criminally responsible. This legislation began in October 2018 and was slowly phased in, completed by October 2019, during our study period. Therefore, our study sample

contains 16- and 17-year-olds as well as adults aged 18 and older.

 $<sup>^{\</sup>rm 2}$  AC = Administrative Code, VTL = Vehicle and Traffic Law, PL = Penal Law.



#### Figure 1.1 DAP Operates in All Five Boroughs: Majority of Participants in Brooklyn (2023)

### **Prior Research**

Studies examining the impact of traffic safety programs are limited, although a few studies cautiously report promising results. Sexton and Sharlein (2022) explored DAP participants' perceptions of the program and its impact. The study suggested a positive program impact based on responses to pre- and post-program surveys and interviews. Responding participants' scores improved across selfreported measures of driving beliefs, habits, and practices. The evaluation cited participants' reports of improved driving following participation in the program. Participants also reported positive program feedback experiences during interviews (Sexton and Sharlein 2022).

A 2008 study of a trauma-based program designed to reduce traffic violations among adolescents reported reduced recidivism six months post-program compared to a comparison group of adolescents not referred to the program. However, this effect was diminished at 12 months post-completion (Ekeh et al. 2008). In 2023, the NYC Department of Transportation evaluated its Dangerous Vehicle Abatement Program (DVAP).

Under this program, owners of vehicles that accrued several camera violations (i.e., at least 15 speed violations or at least five red light violations) were required to take a driver education course or risk seizure of their vehicle. While the evaluation noted many challenges in both program design and attributing causation to the program, the researchers found that, in the context of an overall reduction in camera violations citywide, vehicles belonging to DVAP course participants saw a more significant decrease in violations than comparison vehicles during the study period (NYC Dept of Transportation). Finally, another recent study evaluated the impact of Vision Zero traffic safety policies on traffic injuries among Medicaid enrollees in New York City. The study reported lower injury rates among Medicaid enrollees in New York City than individuals in neighboring counties without Vision Zero traffic reform programs (Dragan and Glied 2024). These studies suggest the potential benefits of traffic reform programs on several outcomes.

### The Current Study

The current study examines the impact of DAP participation on recidivism and case outcomes, including disposition and sentence. We analyzed individuals with cases arraigned in Brooklyn and Staten Island from 2017-2019 and their subsequent arraignments over two years, noting differences in outcomes for the group who participated in DAP versus a comparison group of individuals matched on several factors but not mandated to DAP. This evaluation examines the following research questions:

- 1. Impact on Recidivism Do DAP participants have a lower rate of recidivism than similarly situated individuals not mandated to DAP?
- **2. Impact on Case Outcomes** Do DAP participants receive different case outcomes than similarly situated individuals not mandated to DAP?

# Chapter 2 Research Design, Data, and Methods

This evaluation compares recidivism and case outcomes for individuals who participated in DAP to those of a matched comparison sample to estimate program impacts. To examine the impact of DAP participation, we employed a quasi-experimental design, using propensity score matching to match DAP participants to similar individuals not mandated to DAP. The final sample included 1,248 DAP participants, each matched with a single comparison case.

The primary independent variable in this evaluation is participation in the Driver Accountability Program. We examined two dependent variables—recidivism and outcome of the initial case.<sup>3</sup> We defined recidivism dichotomously, as whether there was a subsequent arraignment on any of the six DAP charges within two years of the initial disposition date.<sup>4</sup> Case outcome was operationalized as two categorical variables—one indicating the final disposition on the initial case, and the other indicating top sentence for the initial case (for individuals that received a sentence).

### **Data Sources**

The New York State Unified Court System's (UCS) Office of Court Administration provided data for these analyses. Individuals arraigned on one of the six identified DAP-targeted charges in Brooklyn or Staten Island (Kings and Richmond Counties, respectively) between 2017 and 2019 comprised the comparison sample population. Center researchers utilized the Center's case management system to identify individuals mandated to DAP between 2017 and 2019 at Staten Island Justice Center, Red Hook Community Justice Center, and Brooklyn Justice Initiatives (the treatment sample). Individuals in the DAP population were excluded from the comparison pool prior to matching.

UCS then provided recidivism data for the individuals in our final matched sample, which included arraignment, disposition, and sentence information for any new cases arraigned on the six DAP charges between 2017 and 2021 in New York City.

analysis. The rationale for this decision is that we do not know whether such events occurred prior to program completion among those who went on to complete DAP; the mandate alone was not anticipated to have the positive impacts on recidivism that program participation might be hypothesized to have. Of the 203 individuals who had a pre-disposition new arraignment, 53 (26%) went on to have a post-disposition recidivism event.

<sup>&</sup>lt;sup>3</sup> For the purposes of this study, "initial case" refers to the case for which an individual was referred to DAP, or a matched comparison case during the same period (2017-2019).

<sup>&</sup>lt;sup>4</sup> A total of 203 individuals had a subsequent arraignment *prior to* the disposition on the initial case (61% DAP, 39% comparison). These pre-disposition new arraignments are not included as recidivism events in the

### Sample

For the first step in sample construction, the treatment (i.e., DAP) population was comprised of people who were mandated to DAP as part of their alternative to incarceration mandate in Brooklyn and Staten Island between 2017 and 2019. The DAP sample was then limited to individuals with at least one of the six DAP charges on the docket, either as the top or an underlying charge. Since DAP is not a general diversion program but rather is focused on unsafe driving, limiting study inclusion to certain driving-related charges was essential to identify comparison cases that plausibly could have been mandated to DAP. The program advertises these charges as its target population, representing 81.3% of all cases in the original DAP study population. The comparison population includes individuals arraigned on one of these charges during the same period, but not mandated to DAP.

Due to substantive interest in the impact of the program itself, our primary analyses estimated the impact of DAP among program participants (treatment on the treated model or TOT), rather than the full set of those mandated to the program (intent-to-treat or ITT model; 69 individuals mandated to the program during the study period did not attend the program). As DAP is a one-session intervention, individuals who begin the program complete it, and completion rates are very high (95% in our sample); researchers felt that biased attrition was therefore unlikely.<sup>5</sup> Still, as a robustness check, a full sample including all mandated individuals (both those who did and did not complete DAP) was also constructed (see Appendix D for more discussion on TOT or ITT analyses).

#### **Propensity Score Matching**

We employed propensity score matching (PSM) to reduce observable differences between the treatment and comparison samples and better isolate the impact of the treatment variable (i.e., DAP mandate/participation).<sup>6</sup> PSM is considered a robust methodological alternative when random assignment is impossible (Rosenbaum and Rubin 1983). The approach takes specific observable characteristics that could plausibly impact group selection (i.e., DAP mandate) and creates a single summary measure (the propensity score) for each case in both the treatment and comparison groups. This measure is a single number from 0 to 1, representing the probability of an individual being assigned to the treatment (in this case, DAP). We included the following variables in PSM models, guided by research indicating factors associated with program selection: age at arraignment, gender, race, ethnicity, top charge category, top charge severity, number of prior arraignments, number of prior arraignments on DAP charges, number of prior convictions, number of prior convictions

<sup>&</sup>lt;sup>5</sup> We were unable to identify any meaningful differences in baseline characteristics between the DAP mandate and DAP participant treatment samples.

<sup>&</sup>lt;sup>6</sup> To allow for ITT analyses looking at the effect of DAP mandate–including the 69 individuals mandated to the program who did not participate—we constructed the

original sample, including propensity score matching, around all DAP mandates. For our main analyses, looking at the effect of participation, we excluded mandated non-participants and their matches in the comparison sample (approx. 5% of the mandated/comparison sample).

on DAP charges, and total number of charges on the docket (Painter-Davis and Ulmer 2020).<sup>7</sup>

Using the same statistical model, we conducted propensity score matching separately for each borough. Prior to matching, the DAP and comparison samples in both boroughs were significantly different in their distribution of demographic, charge, and criminal history variables. Before matching, the comparison sample had more Black individuals and fewer prior arraignments and convictions on DAP charges. Once scores were assigned, treatment cases were matched with comparison cases having similar or identical scores, resulting in final matches that were comparable in their distribution of background characteristics. That is, after matching, the two samples were similar on all included variables (see Appendix A for unadjusted and adjusted sample characteristics).

### **Analytic Approach**

We examined the impact of DAP participation on recidivism and case outcomes separately by borough. We performed bivariate logistic regression to analyze differences between the DAP and comparison groups on recidivism and assessed this bivariate relationship at four time points: six months, one year, eighteen months, and two years, respectively. We calculated relative risk to estimate the effect of DAP participation on recidivism. We also performed multivariate logistic regression at all time periods to test for robustness of bivariate findings.8 To investigate the impact of DAP on case outcomes, we utilized chi-square tests to examine differences in disposition and top sentence among the DAP and comparison groups. Due to the complexity of the factors that contribute to case outcomes, it was difficult to tease out causal relationships. Therefore, we note differences that reach statistical significance but do not estimate the effect of DAP participation on specific case outcomes.

Finally, as a check on the robustness of our findings, we repeated all analyses with the ITT sample—that is, including those mandated to DAP who did not participate (and their comparison sample matches). We also looked at trends in the subsample of individuals mandated to DAP who did not participate to the extent that it was statistically appropriate given the small subsample size (n=69 in DAP sample).

<sup>&</sup>lt;sup>7</sup> Prior arraignments and convictions were limited to <u>fingerprintable offenses</u>, in accordance with UCS procedure. (See <u>https://www.criminaljustice.ny.gov/crim-</u> net/ccman/codedlawsnonfp.pdf for excluded charges.)

<sup>&</sup>lt;sup>8</sup> Covariates in multivariate models included gender, race, ethnicity, age at arraignment, number of prior arraignments on DAP charges, number of prior convictions on DAP charges, and specific DAP charges on the docket.

# Chapter 3 Results

### **Sample Description**

The final sample included 1,112 individuals arraigned in Brooklyn and 1,384 in Staten Island. Table 3.1 displays the characteristics of the DAP participant and comparison samples by borough. In both boroughs, the DAP samples appeared similar to their matched comparison samples across nearly all characteristics. Comparing between boroughs, the Brooklyn sample contained a larger percentage of Black and Hispanic individuals compared to Staten Island, while Staten Island's sample had a larger proportion of

#### Table 3.1. Characteristics of final samples, by borough

BOROUGH	E	BROOKLYN	STA	TEN ISLAND
Ν	DAP 556	COMPARISON 556	DAP 692	COMPARISON 692
Demographics				
Black Hispanic Male Mean age at arraignment	46.0% 47.7% 91.9% 34.3	42.3% 49.3% 90.8% 34.0	34.1% 28.8% 81.8% 33.8	34.0% 29.8% 81.9% 33·5
DAP Charges <sup>9</sup>				
Aggravated unlicensed operation (VTL 511) Drive without license (VTL 509) Reckless driving (VTL 1212) Driving under the influence (VTL 1192) Leave scene of incident (VTL 600) Failure to yield (AC 19-190)	71.8% 78.2% 19.2% 10.3% 2.7% 0.4%	68.2% 75.4% 22.8% 11.5% 2.9% 0.4%	94.1% 57.8% 1.0% 6.6% 1.0% 0.1%	93.5% 59.7% 1.6% 6.9% 0.7% 0.3%
Top Charge Severity <sup>10</sup>				
Infraction Violation Misdemeanor Felony	1.8% 0% 96.0% 2.2%	1.8% 0.2% 92.3% 5.8%	0.1% 0% 97.5% 2.3%	0.7% 0% 95.9% 3.5%
Mean number prior arraignments (DAP charges)	1.0	1.0	0.7	0.8
Mean number prior convictions (DAP charges)	0.8	0.8	0.6	0.7
Mean number of charges on docket	4.0	4.3	2.2	2.2

\* p < .05, \*\* p < .01, \*\*\* p < .001

<sup>9</sup> Sample members often have more than one DAP charge on the docket, so percentages sum to greater than 100%.

<sup>10</sup> The top charge on the docket may or may not be a DAP-related charge.

women than Brooklyn. Individuals in the Staten Island samples also tended to have fewer charges on the initial docket compared to the Brooklyn samples. By far, driving without a license and aggravated unlicensed operation were the most common DAP charges in our sample. Reckless driving and DUI charges were more common in Brooklyn than Staten Island.<sup>11</sup>

### Recidivism

Recidivism on DAP charges was relatively rare across both groups in both boroughs. In Brooklyn, 12% of individuals overall (both DAP and comparison) experienced a recidivism event within two years of their initial case disposition. In Staten Island, recidivism on DAP charges was similarly uncommon, with 8% of individuals overall experiencing a recidivism event within two years.

#### **Brooklyn**

In the Brooklyn sample, DAP participants had a lower rate of recidivism compared to individuals in the comparison group (8% and 16% two years post-disposition, respectively).

This finding is consistent and statistically significant across all four periods analyzed. That is, DAP participants in Brooklyn were 47% less likely to recidivate on the selected DAP charges within two years of their initial case's disposition compared to individuals not mandated to DAP, with similar effect sizes at the other three time points (Table 3.2).

# Table 3.2. Brooklyn DAP group has significantly lower recidivism rates across all four time periods

	DAP	СОМР	PERCENT	
N	556	556	12	
6 Months	3.2%	6.1%	48%*	
1 Year	5.0%	10.6%	53%**	
18 Months	6.7%	13.5%	50%***	
2 Years	8.3%	15.6%	47%***	

\* p < .05, \*\* p < .01, \*\*\* p < .001

#### **Staten Island**

As in Brooklyn, DAP participants in Staten Island recidivated at a lower rate than the comparison group at all four time points. Unlike in Brooklyn, this effect was only statistically significant at six months, indicating that DAP participants were 43% less likely than individuals in the comparison group to experience recidivism on a DAP charge within sixmonths of the initial case disposition. This effect then decreased: DAP participants were between 25%-27% less likely to recidivate on selected DAP charges between six months and two years of their initial case's disposition compared to individuals not mandated to DAP; these

<sup>&</sup>lt;sup>11</sup> Overall, the DAP participant and full DAP mandated samples appeared similar across these characteristics (Appendix D, Table D.1). Compared to the DAP population that completed the program, the nonparticipant group contained a slightly larger percentage of Black, non-Hispanic, and male individuals. The nonparticipant DAP group also had slightly more prior

arraignments. However, given the small number of mandated non-participants we were unable to make statistical comparisons between these groups.

<sup>&</sup>lt;sup>12</sup> Percent difference represents the relative risk: (comparison – DAP)/comparison.

differences beyond six months are not statistically significant (Table 3.3). Additionally, the overall difference between the DAP and comparison groups in Staten Island is smaller than the difference in Brooklyn across all time periods.

#### Table 3.3. Staten Island DAP group has significantly lower recidivism rates at 6 months

	DAP	СОМР	PERCENT
Ν	692	692	511121102
6 Months	2.9%	5.1%	43%*
1 Year	4.5%	6.2%	27%
18 Months	5.8%	7.7%	25%
2 Years	6.6%	9.1%	27%

\* p < .05, \*\* p < .01, \*\*\* p < .001

#### **Robustness Checks**

For both Brooklyn and Staten Island, we also performed multivariate logistic regressions as a robustness check; these findings were consistent with the bivariate analyses reported here across all time periods (Appendix C).

As a further check, we also explored the impact of the *mandate* to DAP, rather than participation (ITT model). Overall, the findings of these analyses were substantively similar to those reported above with two exceptions. First, the reduction in recidivism at two years in Staten Island was statistically significant when including mandated non-participants and their matches. Also, in Brooklyn, the effect size at all time points was larger for the participants-only analyses, while the reverse is true in Staten Island at the latter three time points (see Appendix D, Tables D.2 and D.3 for complete ITT findings on recidivism).<sup>13</sup>

### **Case Outcomes**

#### Disposition

As displayed in Table 3.4, most DAP participants pled guilty and received a sentence, although this outcome was more common in Staten Island than in Brooklyn. Case dismissal was less frequent across both groups in both boroughs, although more common in Brooklyn than Staten Island.<sup>14</sup>

In Brooklyn, the rate of dismissal was nearly double for DAP participants compared to those in the comparison group. Additionally, DAP participants were sentenced less frequently than the comparison group. All observed differences in initial case disposition reached statistical significance.

While DAP and comparison individuals were sentenced at similarly high rates in Staten Island, DAP participants received sentences slightly more often. DAP participants were also less likely to receive a case dismissal than individuals in the comparison group. However, we caution

<sup>&</sup>lt;sup>13</sup> The 2-year recidivism rate for the nonparticipants was approximately 15% (n=10 across both boroughs). Due to the small sample size, we cannot assess statistical significance.

<sup>&</sup>lt;sup>14</sup> Because of data limitations, we are unable to determine which cases were dismissed outright and which

were initially adjourned in contemplation of dismissal (ACD), and later dismissed. An ACD means that, if an individual has no criminal legal involvement for a prescribed period following the disposition, the case will be dismissed. If there is further criminal legal involvement during that time period, a sentence is imposed.

	BROOKLYN	BROOKLYN		ISLAND
Ν	DAP 556	COMPARISON 556	DAP 692	COMPARISON 692
Case Outcome				
Guilty and sentenced	76.6%**	84.0%	98.0%**	94.7%
Dismissal	23.0%***	11.7%	1.3%*	3.0%
Consolidated/transferred	0.4%***	4.3%	0.6%*	2.2%

#### Table 3.4. Case outcomes differed by borough and group

\* p < .05, \*\* p < .01, \*\*\* p < .001

in interpretation of this finding since dismissal was rare in other groups. Additionally, some of the sentenced individuals in the DAP group in both boroughs may have been mandated to DAP post-plea that is, as a condition of a guilty plea; in these situations, the case outcome and DAP mandate would have been decided simultaneously. This is one example of the complexity that precludes causal conclusions regarding case outcomes.

Looking at the size of the differences, the most substantively different are among sentencing and dismissal in Brooklyn. Dismissal in Staten Island is also substantively noteworthy, despite the small percentages, since the comparison group dismissal rate is more than twice that for the DAP group.

#### **Top Sentence**

In addition to case disposition, we examined whether, for those who were

sentenced, sentences varied between individuals in the DAP and comparison groups in the two boroughs. As shown in Table 3.5, the distribution of top sentences is fairly similar between DAP and comparison groups in both boroughs. Most individuals in both groups, and across both boroughs, received a fine as their top sentence. In Brooklyn, DAP participants received fines at a lower rate than those in the comparison group (53% and 80%, respectively); this difference reached statistical significance.15 Similarly, differences in time served, imprisonment, and split sentence between samples reached statistical significance in one or both boroughs.<sup>16</sup> Thirty-five percent of DAP participants in Brooklyn received time served, as compared with 12% of the comparison sample. Two percent of DAP participants in Staten Island received a top sentence of imprisonment, as compared with 6% of the comparison group. Both boroughs had significant differences in split sentence: 3% of Brooklyn and 2%

<sup>&</sup>lt;sup>15</sup> We excluded fees and surcharges that we could confirm were statutorily required, but it is possible that there are some required fines that we were unable to identify in the data so could not exclude. Furthermore, we did not have data on the dollar amount for fines and were therefore unable to determine if individuals referred to DAP received different fine amounts than the

comparison group, including within any statutorily required fines in the data.

<sup>&</sup>lt;sup>16</sup> A split sentence includes an incarceration component in addition to probation.

of Staten Island DAP participants received this, compared with less than half a percent of comparison cases in both boroughs. However, aside from fines, (and time served in Brooklyn), the number of individuals falling into the other sentence categories is very small, which makes it difficult to identify additional patterns in sentencing. As with recidivism, we also examined differences in disposition and sentencing between all individuals mandated to DAP (ITT model) and the comparison group, finding consistent results to those reported here (Appendix D, Table D.5).<sup>17</sup>

### Table 3.5. Sentences for DAP participants differed by borough, and in some cases by group

	BROOKLYN		STATEN ISLA	ND
Ν	DAP 425	COMPARISON 467	DAP 677	COMPARISON 653
Top Sentence				
Fine	52.5%***	79.9%	91.6%	90.0%
Time Served	35.1%***	12.0%	1.0%	2.0%
Imprisonment	0.7%	1.7%	2.1%**	5.5%
Split Sentence	3.3%***	0.2%	2.1%**	0.3%
Conditional Discharge	7.5%	6.0%	2.2%	1.1%
Probation	0.0%	0.2%	1.0%	1.1%
Missing/unknown/other	0.9%	0.0%	0.0%	0.0%

\* p < .05, \*\* p < .01, \*\*\* p < .001

<sup>&</sup>lt;sup>17</sup> Across both boroughs, DAP nonparticipants had their cases dismissed at a rate of 4%, compared to 11% for DAP participants. DAP nonparticipants received fines at a rate of 52%, compared to 77% for DAP participants. 8% of DAP nonparticipants received imprisonment,

compared to 2% of DAP participants. Percentages of participants and nonparticipants receiving other outcomes are similar to each other.

# Chapter 4 Discussion and Conclusion

### **Overview of Findings**

Overall, we find that recidivism on DAP charges is relatively low across our sample. To answer our first research question, DAP effectively reduces recidivism at six months in both boroughs analyzed: by about 50% in Brooklyn and 40% in Staten Island. In Brooklyn, we found this effect remained consistent across each time period analyzed, up to two years after the initial case disposition. With regard to our second research question, we found that DAP participants in Brooklyn had their cases dismissed more often and received fines less frequently than individuals not mandated to the program. Conversely, differences in case outcome in Staten Island were minimal and indicate no difference between individuals in the DAP and comparison groups.

The first finding points to the program's success in its aim of improving traffic safety. Study findings indicate that fewer individuals are subsequently arraigned on DAP charges after DAP participation than individuals not initially referred to the program. These findings build on Sexton and Sharlein's (2022) findings regarding program impact based on participant self-report.

The second finding, regarding case outcomes, suggests partial success in the program's aim to reduce harms stemming from criminal legal involvement. Prior research demonstrates that involvement

with the criminal legal system can negatively impact employment and housing opportunities and worsen individuals' health and wellness (e.g., Harding et al. 2013; Harris and Smith 2022; Sundaresh et al. 2018; Western 2002). Where DAP participants receive case dismissals more often, as they do in Brooklyn, it stands to reason that individuals participating in the program experience fewer collateral impacts of criminal legal system involvement. When individuals avoid a conviction, they also avoid related consequences, such as housing or employment discrimination, or other punitive responses such as fines or fees that disproportionately harm low-income individuals. By contrast, where the DAP group less often receives a case dismissal, as was the case in Staten Island, there is an increased risk for these harms.

The differences in our findings by borough also suggest that local context is an important factor in program impacts and outcomes. Our recidivism analyses found that DAP's recidivism reduction effect was larger in Brooklyn than in Staten Island. Similarly, the difference in dismissal rates between DAP and comparison cases was greater in Brooklyn than in Staten Island. Staten Island also appeared to rely more on fines, while Brooklyn seemed to more frequently rely on sentences involving time served or conditional discharge. These findings are likely the result of differences in case dismissal and sentencing practices in the two jurisdictions.

Our investigation of case outcomes reveals that DAP participants were still frequently receiving relatively punitive sentences, including fines and, in rare cases, incarceration. While DAP participants in Brooklyn were less likely to receive fines than their counterparts, more than half still received fines. In Staten Island, 92% of the DAP group received fines, which was virtually identical to the proportion receiving fines in the comparison group. The fact that some individuals received these sentences in addition to a DAP mandate suggests that in some cases, DAP may be *increasing* the burden of criminal legal system involvement rather than reducing it. However, limitations in the data make it unclear if there is actually an increase in this burden. For one, some statutes (e.g., VTL 511) require mandatory fines or imprisonment, and the data used in this study did not reliably flag these required (versus discretionary) fines. Additionally, there may be undetected differences in fine amounts that we could not determine with the available data: thus, it is difficult to untangle whether DAP assisted in reducing the amount of fines imposed, including as part of any statutorily required fines.

At the same time, while far less frequent, sentenced DAP participants in Staten Island had an imprisonment sentence less than half as often as those in the comparison sample; split sentences—a less severe sentence than imprisonment only—were also rare, though given to DAP participants significantly more often than to comparison cases. However, it is likely many of these imprisonment sentences were driven by additional charges on the docket, rather than the charge that called for DAP intervention.

These findings suggest that in Brooklyn, DAP is achieving both of its primary goals: improving traffic safety and reducing the harm attributed to contact with the criminal legal system, respectively. In Staten Island, DAP is similarly improving traffic safety by reducing recidivism, though the size of this effect diminishes considerably after the first six months post-disposition. Additionally, case outcomes for DAP participants suggest it may not be effectively reducing contact with the criminal legal system. Nonetheless, the program led to decreased rates of recidivism in both boroughs, and less punitive case outcomes in Brooklyn.

### Recommendations and Future Research

Our findings lead to a few main recommendations. First, we recommend expanding the Driver Accountability Program to operate at a larger scale and in additional jurisdictions. Since the dismissal rate was relatively low across both boroughs, especially in Staten Island, we also recommend that prosecutors and judges consider more widely dismissing cases upon completion of DAP to further minimize collateral consequences of criminal legal system interaction. Finally, since DAP is intended to serve as an alternative to other, more punitive sentences, we recommend that judges consider reducing their use of fines or other harsh punishments for DAP participants.

Further research into this topic should examine the impacts of DAP across all five boroughs, including examining the postpandemic period. These analyses should include more detailed sentence information and court process data to

disentangle the impacts of the program on case outcome and sentence. Further, future analyses using data on traffic tickets would broaden knowledge about the program's effect on recidivism, expanding the definition of recidivism from subsequent arraignment to additional tickets for unsafe driving. By using court data, we could only ascertain the program effects on future driving-related incidents that both came to the attention of the police, leading to a stop, and were severe enough to merit a court case. If at a future point there is a large enough sample of people who are mandated to DAP but do not participate in the program, researchers could investigate the DAP mandate's potential effects on this group's outcomes.

Finally, because most arraignments in our sample, and the DAP population generally, include license suspension or driving without a license charges, program staff recently developed a secondary DAP curriculum focused on these charges that better address individuals' needs.

### Limitations

Readers should consider several challenges and limitations when reviewing these findings. First, we limited our sample to individuals arraigned on one of the six DAP charges to create an appropriate comparison group. Since there are no strict charge-based eligibility requirements for DAP, this limited the study by imposing an operational definition that is not entirely reflective of program operations, which include discretion on the part of court stakeholders. Accordingly, nearly 20% of the actual DAP population mandated during the study period were excluded from the analysis. Due to the process of obtaining UCS data, the recidivism rate for this group is unknown; however, the dismissal rate for those referred on other charges was 51% in Brooklyn and 12% in Staten Island, considerably higher than the respective rates for those arraigned on one of the six DAP charges (see Appendix B for a full description of our data cleaning procedures).

Importantly, we were unable to make causal claims related to DAP and case outcomes, for several reasons. First, we did not have access to data on plea status, and without knowing whether dispositions and sentences were given pre- or post-plea, it is impossible to ascertain DAP's impact on case outcomes. Second, the same prosecutors likely made decisions about both DAP mandates and case outcome for people in our sample, which makes it additionally difficult to disentangle DAP's effect.

Data on sentences was also limited. Since our data did not include information on which sentences were assigned to each individual charge on the dockets in the sample, we could not identify which sentence was associated with the DAP charge or charges. For example, for individuals in the DAP group, it is likely many of the imprisonment sentences were driven by additional charges on the docket, rather than the charge that called for DAP intervention. Finally, as noted, we did not have data for the amounts of imposed fines, and therefore were unable to determine if DAP participation was associated with reduced fine amounts; some fines required by statute may also be present in the data we analyzed, thus complicating understandings of judicial decision-making related to the program based on our findings.

Several program- and policy-related challenges may have impacted our analyses. Importantly, our recidivism period includes the COVID-19 pandemic. While reports indicate an increase in reckless driving and related traffic injuries and death in New York City in 2020 (The New York Times 2021), it is unclear how the pandemic may have impacted study findings; there is no reason to think that changes in overall transportation habits would necessarily lead to a change in the impact of DAP on participants. Further, DAP conducted during this pre-pandemic study period occurred in person. Since the pandemic, operating sites offer DAP virtually, in addition to in-person, possibly creating a different participant experience. Virtual programming allows staff to provide individual DAP classes to accommodate schedules or court mandates. However, the content of virtual sessions is substantively the same as in-person sessions, and in light of group participants' comments on the impact of the course content (Sexton and Sharlein, 2022), there is good reason to think program impacts will be consistent regardless of delivery mode. Finally, our study period concluded prior to the rollout of several criminal justice policy changes, including bail reform and Desk Appearance Ticket reform, which may have led to different outcomes for individuals similar to those in our sample but who entered the system following reform efforts. For this reason, case outcome findings may not be fully generalizable.

Additionally, our TOT analytic approach—focusing our main analysis on DAP *participants* as opposed to anyone who was mandated regardless of participation—has an important limitation. There are two key reasons why an ITT

approach (i.e., looking at all DAP mandates) is often preferred by researchers: concerns about biased attrition, and, for quasi-experimental studies like this one, to account for unmeasured factors which influence both group assignment (i.e., DAP mandate) and outcomes. For example, there could be certain defendant attributes not captured in the data which lead criminal legal system personnel to mandate some people but not others to DAP, which also influences the likelihood of future recidivism. As explained in Chapter 2, biased attrition seems unlikely in this data sample (a one-session intervention with a 95% completion rate is unlikely to introduce bias to analyses due to program attrition); however, the possibility of one or more unmeasured attributes influencing both assignment and outcome is a limitation. This is one possible explanation, as well as the small number of mandated individuals who did not complete DAP, for the substantive similarity between the findings from the main TOT and secondary ITT analyses. Due to these substantively similar results, we were unable to determine if outcome stem from program participation itself or from the fact of being mandated (or from any confounding factors). Finally, related to this issue of focusing on DAP participants versus anyone mandated to the program, the sample of mandated non-participants is too small to draw statistical conclusions. However, our interest in estimating the impact of the intervention itself, rather than a mandate to the program, outweighs this limitation.

### Conclusion

Overall, our findings suggest that alternative approaches to traffic safety that emphasize personal reflection and take a restorative approach can have a greater impact on recidivism than traditional punitive responses. DAP's effect on recidivism suggests that more humane responses to traffic safety can help NYC reach its Vision Zero goals of reducing traffic violence, as one component of a holistic set of solutions. These results could be applied to other areas of traffic safety and response to vehicle violations to improve community safety and healing.

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#### STEERING TOWARDS SAFETY

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# Appendix A. Propensity Score Matching

The central idea of PSM is to use observable factors to create a counterfactual treatment group—to create a comparison sample whose cases are just as likely (have the same propensity) to have been assigned to the treatment group as the treatment cases themselves. This matching based on propensity makes this a quasi-experimental method, where the comparison group can serve as a counterfactual for what would have happened to the treatment cases in the absence of treatment.

The key in determining variables to include in the propensity score model is to identify which observable characteristics may have impacted group selection—in this case, mandate to DAP. We therefore included the following variables in our model to calculate propensity scores:

- Top charge severity
- Flags for DAP charges (driving without a license, aggravated unlicensed operation, leaving scene of accident, reckless driving, DWI, failure to yield)
- Age at arraignment
- Race
- Ethnicity
- Gender
- Number of charges on docket
- Number of prior arraignments (total)
- Number of prior arraignments on DAP charges
- Number of prior convictions (total; at the charge level, could be more than one conviction per arraignment episode)
- Number of prior convictions on DAP charges (at the charge level, could be more than one conviction per arraignment episode)

Borough is another important factor, and in fact, it is possible that somewhat different mechanisms led to DAP mandates in the two study boroughs. This could be due to factors such as differences in judges and judicial decision making, prosecutors and prosecutorial decision making, prosecutorial policies, and intake and operations at the Center sites. The observable characteristics listed above are important in both places. As such, we conducted propensity score matching separately for each borough but using the same propensity score model. The tables below display descriptive statistics for the pre- and post-matching samples for the full sample in Brooklyn and Staten Island separately.

	UNADJUSTED SAMPLES		ADJUSTED SAMPLES	
	DAP	COMPARISON	DAP	COMPARISON
Ν	632	21,121	628	628
DEMOGRAPHICS				
Black Hispanic Male	46.2%*** 47.2%*** 91.1%	61.0% 26.8% 88.8%	46.3% 47.0% 91.1%	42.8% 48.4% 90.9%
Mean age at arraignment	33.9**	35.5	33.9	34.0
CRIMINAL CHARGE & HISTORY				
Charge <sup>18</sup> VTL 509 VTL 511 VTL 1212 VTL 1192 VTL 600 AC 19-190 Charge Severity Infraction Violation Unclassified Misdemeanor B – Misdemeanor A – Misdemeanor E – Felony D - Felony	79.4% 73.3% $18.4\%^{***}$ $10.0\%^{***}$ 2.5% 0.3% 1.6% 0.0% 75.6% 1.4% $18.8\%^{*}$ $1.4\%^{***}$ $1.1\%^{***}$	80.1% 71.4% 8.5% 21.0% 3.5% 0.4% 1.6% 0.2% 73.6% 1.8% 15.9% 3.8% 3.1%	76.3% $73.4%$ $18.2%$ $10.0%$ $2.5%$ $0.3%$ $1.6%$ $0.0%$ $75.8%$ $1.4%$ $18.6%$ $1.4%$ $1.1%$	76.9% 69.9% 21.3% 11.5% 2.9% 0.3% 1.9% 0.2% 73.9% 1.4% 17.0% 1.6% 4.0%
Prior arraignments (mean, any charge)	4.9**	5.5	4.8	4.6
Prior arraignments (mean, DAP charges)	1.1***	0.8	1.0	1.1
Prior convictions (mean, any charge)	3.0*	2.7	2.9	2.7
Prior convictions (mean, DAP charges)	0.8***	0.5	0.8	0.8
Charges on docket (mean, any charge)	4.0	3.9	4.0	4.2

# A.1. PSM adjustments eliminated significant differences between the DAP and comparison samples in Brooklyn

\* p < .05, \*\* p < .01, \*\*\* p < .001

 $<sup>^{18}</sup>$  Cases can have more than one DAP charge on the docket, so totals sum to greater than 100%.

	UNADJUSTED SAMPLES		ADJUSTED SAMPLES	
	DAP	COMPARISON	DAP	COMPARISON
Ν	804	4,397	791	791
DEMOGRAPHICS				
Black Hispanic	34.7%* 28.6%	30.4% 30.2%	34.8% 28.7%	34.6% 30.2%
Male	82.5%	80.3%	82.2%	82.7%
Mean age at arraignment	33.4	35.8	33.5	33.4
CRIMINAL CHARGE & HISTORY				
DAP Charges VTL 509 VTL 511 VTL 1212 VTL 1192 VTL 600 AC 19-190 Top Charge Severity Infraction Violation Unclassified Misdemeanor B – Misdemeanor A – Misdemeanor E – Felony D – Felony	94.3%*** 59.1%*** 1.4%* 6.2%*** 1.0%** 0.1% 0.4%** 0.0% 91.0%*** 0.7% 5.6%*** 2.2%*** 0.0%***	57.1% 35.3% 2.9% 43.5% 2.7% 0.1% 2.1% 0.1% 75.7% 1.1% 10.2% 8.5% 2.3%	94.2% 59.0% 1.3% 6.3% 1.0% 0.1% 0.1% 0.1% 0.1% 91.3% 0.8% 5.6% 2.3% 0.0%	93.9% 59.9% 1.5% 7.0% 1.0% 0.3% 0.6% 90.0% 1.0% 4.9% 2.8% 0.6%
Prior arraignments (mean, any charge)	3.4***	4.6	3.3	3.3
Prior arraignments (mean, DAP charges)	0.7	0.6	0.7	0.8
Prior convictions (mean, any charge)	2.2*	2.5	2.1	2.1
Prior convictions (mean, DAP charges)	0.6**	0.5	0.6	0.6
Charges on docket (mean, any charge)	2.2***	2.7	2.2	2.3

### A.2. PSM adjustments eliminated differences between the DAP and comparison samples in Staten Island

\* p < .05, \*\* p < .01, \*\*\* p < .001

There are various approaches to propensity score matching. For this analysis (for both counties), we utilized the nearest neighbor method with one-to-one matching and without replacement, and a 0.1 caliper. One-to-one matching without replacement means that each treatment case is matched with no more than one comparison case, and vice-versa. Nearest neighbor matching means that the matching algorithm minimizes the distance between propensity scores for each match; a 0.1 caliper means that the maximum distance between propensity scores in each pair is 0.1. Setting a caliper helps ensure a close match between treatment and comparison groups; it also leads to some loss of data from the treatment group when cases do not match within the set caliper. Here, 17 cases (1.2%) of overall DAP sample did not match: 4 cases (0.6%) from Brooklyn and 13 cases (1.6%) from Staten Island.

# **Appendix B. Sample Development**

In developing our sample, we made several decisions related to case inclusion and exclusion criteria that meaningfully narrowed our final sample. Prior to cleaning, we began with 30,245 cases in our comparison population, and 2,137 cases in our DAP population. The cleaning steps we took are described in the table below.

#### **B.1. Sample Development Steps**

CLEANING DECISION	RATIONALE	NUMBER OF CASES REMOVED			
Before PSM: 2,137 cases in DAP sample, 30,245 cases in comparison sample					
Limited DAP sample to cases with at least one of six DAP charges on the docket (i.e., fail- ure to yield, driving without a li- cense, aggravated unlicensed op- eration, leaving scene of accident, reckless driving, DWI)	DAP advertises these six charges as its target population.	462 DAP cases			
Removed missing data using a list-wise procedure—removing cases missing data on any key variable.	All key variables for PSM and regression models have complete data in the final sam- ple. Listwise deletion is generally considered appropriate when the rate of missing data is low and data are missing completely at ran- dom, meaning that there is no relation be- tween their real values and being missing in the data (e.g., Black people are no more or less likely to have race information than white people).	DAP missing variables Race: 174 (10.4%) Ethnicity: 167 (10.0%) Gender: 1 (<0.1%) Total cases removed = 222 Comparison missing variables Race: 2,749 (9.1%) Ethnicity: 2,258 (7.5%) Gender: 49 (0.1%) Total cases removed: 3,487 Since some cases were missing data on more than one variable, this accounted for deleting			

		representing 13.2% of the DAP sample at this stage and 11.5% of the comparison sample.		
Removed duplicate people		DAP: 234 cases		
within each sample		Comparison: 773 cases		
Removed cases with A-C -level	Fewer than 1% of the DAP sample were ar-	DAP: 9 cases		
felonies	raigned on these charges. It is unlikely that individuals arraigned on A-C-level felonies would be receive a DAP mandate.	Comparison: 425 cases		
Limited sample to only Black	Samples included very few individuals of any	DAP: 5 cases		
and white individuals	other race (0.3%). Removing these cases al- lowed for a more meaningful comparison based on race.	Comparison: 40 cases		
After PSM: 1,419 cases in DAP sar	nple, 1,419 cases in comparison sample			
Removed cases from the com-		DAP: 17 cases		
parison sample that also ap- peared in the DAP sample, and their matches		Comparison: 17 cases		
Removed cases missing disposi-	We removed any cases that remained open in	DAP: 85 cases		
tion date, and their matches.	the court system since we calculated recidi- vism as a subsequent arraignment post-dis- position of the instant case.	Comparison: 85 cases		
Removed recidivism events that	Subsequent arraignments that occurred prior	DAP: 124 events		
occurred before the disposition date of the initial case (the cases with these subsequent arraign- ments remained in the sample).	to disposition of the initial case did not fall within our definition of recidivism.	Comparison: 79 events		
ITT Final Sample: 1,317 DAP cases, 1,317 Comparison cases				
Removed DAP cases that did not	To complete a "treatment of the treated"	DAP: 69 cases		
end up attending a DAP session, and their matches.	(TOT) analysis, we estimated the effects of <i>participation</i> in DAP versus a comparison group, rather than simply <i>referral</i> to DAP.	Comparison: 69 cases		
TOT Final Sample: 1,248 DAP cas	es, 1,248 Comparison cases	<u> </u>		

# **Appendix C. Multivariate Analyses**

# C.1. Results of multivariate logistic regression examining impact of DAP participation on recidivism on select charges, at four time periods, Brooklyn

NUMBER OF PARTICIPANTS	1,112			
VARIABLE	EFFECT SIZE (OR)			
	6 months	1 year	18 months	2 years
DAP participant	0.490*	0.421***	0.435***	0.471***
Black race	1.027	1.141	1.134	1.030
Hispanic	0.934	0.930	0.914	1.003
Male gender	1.252	2.098	2.789	3.528*
Age at arraignment	0.979	0.966**	0.963***	0.957***
DAP charges				
Failure to yield	0.000	0.000	0.000	0.000
Drive without license	1.333	0.842	0.791	0.945
Aggravated unlicensed operation	1.467	2.299	1.498	1.626
Leave scene of incident	3.473*	1.725	1.168	1.322
Reckless driving	1.832	1.734	1.186	1.434
DUI	0.532	0.349	0.206*	0.298
Number of prior arraignments (select charges)	0.735	0.945	1.096	1.120
Number of prior convictions (select charges)	1.692*	1.423*	1.208	1.174

\* p<.05, \*\* p < .01, \*\*\* p < .001

# C.2. Results of multivariate logistic regression examining impact of DAP participation on recidivism on select charges, at four time periods, Staten Island

NUMBER OF PARTICIPANTS	1,384			
VARIABLE	EFFECT SIZE (OR)			
	6 months	1 year	18 months	2 years
DAP participant	0.558*	0.716	0.751	0.714
Black race	1.517	1.425	1.333	1.530
Hispanic	0.996	0.825	0.780	0.825
Male gender	1.059	1.222	1.187	1.246
Age at arraignment	1.005	0.987	0.977	0.977*
DAP charges				
Failure to yield	0.000	0.000	.000	0.000
Drive without license	0.854	0.924	0.842	0.787
Aggravated unlicensed operation	7.417*	7.526*	5.112*	6.806**
Leave scene of incident	7.280	2.774	2.049	3.899
Reckless driving	0.000	2.310	1.620	2.578
DUI	6.073***	4.529**	3.610**	3.276*
Number of prior arraignments (select charges)	0.736	0.614	0.595*	0.708
Number of prior convictions (select charges)	1.847	2.275**	2.437**	1.962**

\* p<.05, \*\* p < .01, \*\*\* p < .001

# Appendix D. Intent-to-Treat Findings

While ITT is typically the preferred research approach in experimental and quasi-experimental research, after careful consideration, we deemed TOT to be more appropriate for the main analyses here. For one, the primary motivation for this evaluation is understanding the effect of the actual DAP program as outlined in Chapter 1 and discussed in greater detail by Sexton and Sharlein (2022), rather than the effect of an opportunity for diversion from the criminal legal system. Additionally, ITT is often preferred due to concerns about biased attrition. That is, there may be factors which affect both individuals' likelihood of completing a program and their outcomes; in these situations, estimated program effects may really be an artifact of these unmeasured confounding variables. However, DAP is a one-session program, with a 95% completion rate among our mandated sample. As such, there is very little attrition, and only one time point at which it may happen. Another issue specific to quasi-experimental studies like this one is that there could be unmeasured factors influencing mandate to DAP. In other words, despite utilizing propensity score matching on observed characteristics to create a counterfactual comparison group, it is possible that there remain unobserved differences between the groups, which make individuals referred to DAP less likely to recidivate on this set of charges independent of any program effect. We note this possibility when discussing study limitations in Chapter 4.

However, in addition to the TOT findings presented in the main text, we also conducted our primary analyses using an ITT approach. Below are the findings of our analyses on DAP *mandate* versus the comparison group, as well as some discussion of the DAP participants and nonparticipants.

Ν	DAP PARTICIPANTS 1,248	DAP NON-PARTICIPANTS 69
Demographics		
Black Hispanic Male Mean age at arraignment	39% 37%* 86% 34*	48% 25% 91% 30
DAP Charges		
Aggravated unlicensed operation (VTL 511) Drive without license (VTL 509) Reckless driving (VTL 1212) Driving under the influence (VTL 1192) Leave scene of incident (VTL 600) Failure to yield (AC 19-190)	84% 67% 9% 8% 2% 0%	88% 73% 10% 6% 1% 0%
Top Charge Severity		
Infraction Violation Misdemeanor Felony	1% 0% 97% 2%	0% 0% 94% 6%
Mean number of prior arraignments (DAP charges)	0.8	1.0
Mean number of prior convictions (DAP charges)	0.7	0.8
Recidivism rate at 2 years	7%*	15%

# Table D.1. Characteristics of DAP participants versus non-participants, both boroughs

\*p<.05, \*\*p<.01, \*\*\*p<.001

N=1,174	6 MONTHS	1 YEAR	18 MONTHS	2 YEARS
DAP	3.6%	5.6%	7.2%	8.7%
Comparison	6.5%	10.7%	13.5%	15.5%
Percent Difference	45%*	48%**	47%***	44%***

# Table D.2. Cases mandated to DAP in Brooklyn have significantly lower recidivism across all four time periods

\* p < .05, \*\* p < .01, \*\*\* p < .001

### Table D.3. Cases mandated to DAP in Staten Island have significantly lower of recidivism at 6 months and 2 years

N=1,174	6 MONTHS	1 YEAR	18 MONTHS	2 YEARS
DAP	3.0%	4.7%	6.0%	7.0%
Comparison	5.3%	6.8%	8.5%	9.9%
Percent Difference	43%*	31%	29%	29%*

\* p < .05, \*\* p < .01, \*\*\* p < .001

# Table D.4. Case outcomes differed by borough and group (full mandated sample)

	BROOKLYN		STATEN ISLAND	
Ν	DAP 587	COMPARISON 587	DAP 730	COMPARISON 730
Case outcome				
Guilty & sentenced	77.2%**	84.2%	97.9%***	94.4%
Dismissal	22.3%***	11.8%	1.2%*	3.2%
Consolidated/transferred	0.5%***	4.1%	0.7%*	2.3%

\* p < .05, \*\* p < .01, \*\*\* p < .001

	BROOKLYN		STATEN ISL	AND
Ν	DAP 453	COMPARISON 494	DAP 715	COMPARISON 715
Top Sentence				
Fine	51.0%***	79.8%	90.6%	90.0%
Time Served	34.7%***	11.5%	1.3%	1.9%
Imprisonment	1.1%	2.0%	2.4%**	5.4%
Split Sentence	4.2%***	0.2%	2.5%***	0.3%
Conditional Discharge	7.7%	6.3%	2.4%	1.2%
Probation	0%	0.2%	0.6%	0.9%
Other	0.9%	0%	0.1%	0%
Missing/unknown	0.4%	0%	0.1%	0.3%

### Table D.5. Sentences for DAP participants differed by borough, and in Brooklyn by group (full mandated sample)

\* p < .05, \*\* p < .01, \*\*\* p < .001