

A Viable Alternative?

Alternatives to Incarceration across Seven Federal Districts

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THOUGH ALTERNATIVES TO incarceration courts have existed in the state system for nearly 30 years, such courts are a relatively new phenomenon in the federal system. Alternatives to incarceration (ATI) courts, or “front-end” courts as they are sometimes known, are generally based on the “drug court” model first used in the state court in Miami-Dade County in 1989 (Scott-Hayward, 2017). While alternatives to incarceration court programs proliferated in the state courts in the 1990s and 2000s, they were nearly nonexistent in the federal system. A confluence of factors has contributed to the recent emergence of ATI courts in the federal system.

- The popularity of “problem solving” courts in state systems has led to experimentation in the federal system, especially for reentry courts, which focus on defendants who have returned to the community following incarceration.
- A growing body of empirical evidence has emerged that the “drug court” model—practiced with fidelity in other jurisdictions—is effective at reducing recidivism and provides financial return on investment by reducing recidivism.
- A change in the legal environment that resulted from the 2005 Supreme Court decision *Booker v. United States* that

rendered advisory the federal sentencing guidelines, and subsequently the Supreme Court’s decisions in *Gall v. United States* and *Pepper v. United States*, which generally approved downward variances based on defendants’ successful efforts at rehabilitation—allowed courts additional flexibility in sentencing.

- The crisis of over-incarceration has led to widespread recognition among criminal justice professionals and policy-makers that the policies and practices that have led to mass incarceration are not only extremely costly but ineffective at promoting public safety. Several publications by government entities called for swift action at the federal level and encouraged stakeholders to strongly consider alternatives to incarceration.
- There has been increasing awareness of empirically-demonstrated evidence of the importance of defendants’ success on pretrial services supervision as a harbinger of improved outcomes in subsequent stages of the criminal justice system, including more favorable sentences and reduced failures during post-conviction supervision.

Research Objectives

Though federal ATI programs have proliferated

at the grass roots level, and now number 38 as of January 2019,¹ to date there have been no empirical studies of the effectiveness of these programs in the federal system. Several districts at the forefront of implementing ATI programs have sought to contribute to the knowledge base concerning these programs. As a result, the pretrial offices of the districts of New Jersey (NJ), Southern District of New York (NY-S), Eastern District of New York (NY-E), Central District of California (CA-C), Northern District of California (CA-N), Eastern District of Missouri (MO-E), and the probation and pretrial services office of Illinois Central (IL-C) collaborated on a research effort that quantifies the association of ATI program participation with short-term outcomes. These districts contracted with a researcher from the John Jay College of Criminal Justice of the City University of New York to perform the analysis and publish an article with its results. Specifically, the study sought to quantify the pretrial services measures of new criminal arrests, failures-to-appear (FTAs), and other violations of court-ordered conditions of release, i.e., technical violations. In addition, the study sought

¹ The Federal Judicial Center (FJC) maintains a list of judge-involved programs. A list of ATI programs is on file with the FJC.

to quantify defendants' improvements in two supervision domains that are well-known correlates of criminal behavior: illicit drug use and employment. Finally, among the defendants whose cases have been disposed by the court, the study examined the sentences imposed by the court. This article describes the study methodology and results of the analyses.

Data

The study team assembled data from the probation and pretrial services national case management system, Probation and Pretrial Services Case Tracking System (PACTS). The sample consisted of 13,924 defendants with an average time under supervision of 14.7 months. Of the full sample of defendants drawn from the seven districts, 534 participated in an ATI program during their time under supervision. Of these defendants, 268 participated in a program designed for defendants with substance abuse disorders, while 75 participated in programs designed for youthful defendants. The remainder participated in programs that did not target a specific population. Seventy-two percent of the ATI participants in the study cohort successfully completed their ATI program.

Importantly, the study did not intend to establish the effectiveness of any one program. The relative newness of ATI programs and the small number of defendants who participate in ATI programs within a single district precluded analyses of *individual* programs. Instead, the study assesses the impact of ATI programs taken together (across all programs for the study districts).

The following programs were included in the study:

- **Sentencing Alternatives Improving Lives (SAIL) operated by the U.S. Pretrial Services Office of the Eastern District of Missouri.** This 12- to 24-month program, which began in March 2015, targets defendants who have contributors to their criminality that, if addressed, can help defendants lead a law-abiding lifestyle. Data for defendants in SAIL were tabulated in the statistics for all program types combined.
- **Conviction Alternatives Program (CAP) operated by the U.S. Pretrial Services Office of the Northern District of California** (with venues in San Francisco, Oakland, and San Jose). Each separate venue began between November 2015 and July 2016. CAP targets certain individuals who have been charged with one or more

federal crimes and who voluntarily agree to participate in the program. It focuses on individuals whose criminal conduct appears motivated by substance abuse issues or other underlying causes that may be amenable to treatment through available programs. Program length is 12 months but can be extended to 18 months. Data for the CAP program were included in the statistics in the Substance Abuse program category.

- **Conviction and Sentencing Alternatives (CASA) operated by the U.S. Pretrial Services Office of the Central District of California.** The program duration is 12 to 24 months. While there are no set criteria for selecting participants, the intent is for defendants to fit into one of two distinct "tracks." The track most suitable for the defendant is dependent upon the defendant's criminal history, seriousness and nature of pending charges, and defendant's criminogenic risk and needs. Participants in either track of CASA were included in the statistics for other programs.
- **Alternatives to Detention Initiative (PADI) operated by U.S. Probation Office of the Central District of Illinois.** One of the earliest federal ATI programs, PADI began operation in 2002. The selection criteria for this 12-month program include minimal participation in the offense charged, limited criminal history with no serious violent offenses, and evidence of a current substance dependence or addiction. In 2016, PADI paused its operations. Data for defendants in PADI were tabulated in the Substance Abuse program category.
- **Young Adult Opportunity Program (YAOP) operated by the U.S. Pretrial Services Office of the Southern District of New York.** In 2015, YAOP began as a pilot program for non-violent young adults and became permanent in January 2017. The program, the duration of which is at least 12 months, is intended to benefit young adults between the ages of 18 and 25, with consideration given to defendants over 25 years of age on a case-by-case basis. Data for defendants in this program were tabulated in the Youthful Defendant category.
- **Pretrial Opportunity Program (POP) operated by the U.S. Pretrial Services Office of the Eastern District of New York.** POP, established in January 2012, targets defendants with substance abuse

disorders that are the major drivers of their criminal behavior. Its program length is a minimum of 15 months.² Data for defendants in POP were tabulated in the Substance Abuse program category.

- **Special Options Services (SOS) operated by the U.S. Pretrial Services Office of the Eastern District of New York.** SOS began operations in 2013 and targets high-risk defendants ages 18 to 25 who may benefit from the structure of intensive supervision.³ Data for defendants in this program were tabulated in the Youthful Defendant category.
- **Pretrial Opportunity Program (POP) operated by the U.S. Pretrial Services Office of the District of New Jersey.** POP, which began in May 2015, targets defendants who have documented histories of severe substance abuse disorders that have contributed to their involvement in the criminal justice system. The program length is 15 months.⁴ Data for defendants in POP were tabulated in the Substance Abuse program category.

ATI and non-ATI cases were drawn from PACTS using the approximate date in which the ATI program commenced in the district. For all districts, the supervision ending cut-off date was September 30, 2017. For IL-C, we selected all cases that began pretrial supervision from November 1, 2002. For NY-E, we selected all cases that began supervision on or after January 1, 2011. For all other districts, we selected cases that began pretrial supervision beginning January 1, 2012.

Independent (i.e., "Treatment") Variable

The key explanatory variable is a dichotomous measure (yes/no) indicating whether an individual was selected for participation in an ATI program during his or her time on pretrial supervision. Participation in an ATI program was determined using data on non-contract referrals drawn from the PACTS system. Districts recorded the start date, end date, and outcome of the defendants' ATI program participation in the non-contract referral screen of PACTS. The program types (substance abuse and youthful defendants)

² Program requires a minimum of 12 months of continuous sobriety. Many defendants require more time in the program to achieve the sobriety goal.

³ SOS has no established program length. Program duration is individualized to participants' needs.

⁴ Program requires a minimum of 12 months of continuous sobriety. Many defendants require more time in the program to achieve the sobriety goal.

were determined using a description of each district's specific ATI program drawn from program descriptions maintained by the districts.

Outcome Variables

The goal was to examine the relationship of ATI program participation and program completion on several court-related outcomes. In line with existing research on pretrial services, three traditional pretrial outcomes were examined; specifically, whether defendants failed to appear for their assigned court dates (coded 0/1), were arrested for new criminal activity (0/1), or received a technical violation pending case disposition (a count of technical violations during supervision period). Further, we examined the prevalence of several specific types of technical violations related to substance abuse testing and treatment, as well as three broad categories of technical violations. Categories of technical violations were used due to the relatively low frequency of certain technical violations, making assessment of individual violations inappropriate and statistically challenging.

In addition to the pretrial outcomes discussed above, we examined intermediate supervision outcomes related to employment and sobriety. Specifically, we used two measures of employment, the number and percentage of days worked at least part-time while on supervision ((total # of days working/# of days on supervision) *100). Additionally, we created a measure that represents the percentage of drug tests where there was a positive result. This measure accounts for the fact that defendants participating in an ATI program were often required to undergo additional screenings and are under supervision for a longer amount of time.

See Figure 1 for descriptive statistics of the ATI defendants in the study.

Methodology

The study employs propensity score matching (PSM) techniques to estimate "treatment" effects of ATI participation on the elements described above. This quasi-experimental approach estimates average treatment effects on the treated with the intervention of interest, in this case, ATI program participation (see Guo & Fraser, 2010). This technique is useful for simulating independent assignment of a designated treatment and estimating more directly the treatment's effects. For purposes of this study, "treated" defendants are those who participated in an ATI program.

FIGURE 1
Descriptive Statistics for the Evaluation of ATI Programs from 7 Districts

	N	Percent
ATI Indicator		
Regular Supervision	13390	96.16
ATI Participant	534	3.84
Sex		
Female	3190	22.91
Male	10734	77.09
Race		
White	5468	39.27
Black	3752	26.95
Hispanic	3408	24.48
Other	1296	9.31
Citizenship		
Non-Citizen	3618	25.98
U.S. Citizen	10306	74.02
Current Offense Type		
Drug Offense	4434	31.84
Financial Offense	5832	41.88
Violent Offense	798	5.73
Weapons Offense	898	6.45
Other Offense	1962	14.09
	Mean	SD
Age	40.05	12.97
Time Under Supervision Months	14.93	12.27
Total Prior Convictions	1.56	3.15
PTRA Score	5.63	2.69
PTRA Category		
Category 1	51	9.55%
Category 2	114	21.35%
Category 3	200	37.45%
Category 4	123	23.03%
Category 5	46	8.61%
Conditions of Supervision		
	Proportion	
Alcohol Restrictions	.255	
Substance Abuse Testing	.464	
Drug Treatment	.425	
Mental Health Treatment	.238	
Passport Restrictions	.791	
Travel Restrictions	.860	
Weapons Restrictions	.393	

We used PSM techniques to match the ATI group to a group of defendants who had not participated in an ATI program, yet were comparable in terms of their other characteristics. Based on this approach, two defendants with similar estimated treatment likelihood

scores (probability that they would participate in an ATI program) would be comparable. Using this method, differences between those individuals on a given outcome can be more confidently attributed to participation in an ATI program.

FIGURE 2
Equivalent Groups Generated by Propensity Score Matching

	Matched ATI Participants (n=507/534)	Matched Defendants (n=507)	% Bias	% Bias Reduction	T-Statistic	p-value
Sex (Male=1)	0.57	0.59	-4.80	91.90	-0.64	0.53
Age at Intake	33.32	32.64	1.90	97.30	1.03	0.30
White	0.50	0.48	-5.90	56.20	0.57	0.57
Black	0.17	0.19	8.60	54.10	-0.90	0.37
Hispanic	0.28	0.30	3.30	80.10	-0.48	0.63
Other Race	0.06	0.05	-3.80	80.50	0.57	0.57
U.S. Citizen	0.90	0.92	3.90	91.50	-0.76	0.45
Drug Offense	0.66	0.67	-4.70	94.10	-0.33	0.74
Financial Offense	0.27	0.26	2.60	93.10	0.43	0.67
Violent Offense	0.02	0.03	2.40	81.60	-0.59	0.56
Weapon Offense	0.04	0.04	2.20	84.80	0.00	1.00
Other Offense	0.01	0.01	-0.90	97.20	0.64	0.53
Length of Supervision	20.48	20.54	1.70	99.10	-0.07	0.94
PTRA Total Score	7.31	7.45	-0.10	92.60	-1.02	0.31
Total Prior Convictions	2.16	2.08	-2.40	81.20	0.38	0.70
Alcohol Restrictions	0.47	0.48	0.80	98.10	-0.13	0.90
Substance Abuse Testing	0.81	0.83	4.90	94.40	-0.89	0.37
Drug Treatment	0.80	0.80	-0.90	99.00	0.16	0.88
Mental Health Treatment	0.33	0.37	8.60	76.70	-1.32	0.19
Passport Restrictions	0.71	0.69	9.30	89.50	1.02	0.09
Travel Restrictions	0.77	0.76	-1.50	93.50	0.22	0.83
Weapons Restrictions	0.46	0.47	0.40	96.60	-0.06	0.95

Note: Nearest Neighbor Matching with Caliper of .05 used. Matching was done using a two-step process to assure that ATI defendants were matched to defendants within their own districts. The matching procedures are described in more detail in the methods section.

Comparing the results against their matched counterparts who did not participate in an ATI program, the study team analyzed the outcome measures described above and sentences imposed for:

- All defendants who *participated* in an ATI program, and separately for those who *completed* a program.
- All defendants who *participated* in an ATI program for substance abusing defendants, and separately for those who *completed* this type of program.
- All defendants who *participated* in an ATI program for youthful defendants, and separately for those who *completed* this type of program.⁵

⁵ Because the programs that do not target a specific population had insufficient numbers of participants and comprise a heterogeneous population, those

Additionally, to better understand the impact of ATI programs on reduced sentences or case dismissals, the study team analyzed the sentences imposed on matched defendants who did not participate in an ATI program with those who received a dismissal as a result of their participation in a program. This analysis was repeated for ATI defendants who successfully completed the ATI program.

Pre-matching Differences Between ATI and non-ATI Defendants

We examined the differences between defendants who had participated in an ATI program compared to those who had not participated. This comparison revealed that the ATI group

programs were not analyzed separately. Instead only programs that targeted substance abusing and youthful defendants were analyzed separately.

was significantly different on each of the 21 measures we examined and ultimately used in our matching specification. For example:

- Men comprise a lower percentage of ATI participants (50% vs. 78 %);
- ATI participants are younger than general population (mean age 32 vs. 40);
- Whites comprise a higher percentage of ATI participants (45% vs. 39%);
- Hispanics comprise a higher percentage of ATI participants (31% vs. 24%);
- ATI defendants charged with drug offenses comprise a higher percentage (67% vs. 30%);
- ATI defendants are higher risk as measured by the Pretrial Risk Assessment (PTRA) (mean 7.5 vs. 5.5 PTRA score); and
- ATI defendants are subject to a broader range of court-ordered conditions when on pretrial release.

Matching ATI Defendants to Non-ATI Defendants

The matching process contains two steps. We first estimated propensity scores using a logistic regression analysis in which we predicted the likelihood of a defendant participating in an ATI program during his or her period under pretrial supervision (n=534). This model included all the measures shown in previous tables as matching dimensions. We then used the estimated likelihood scores from this analysis to match the ATI group (the treated group) to the comparison group, applying one-to-one nearest neighbor matching without replacement, and a .05 caliper setting. Using these specifications, matches were found for all but 27 (5 percent) of the defendants in the treatment group. The remaining 27 cases fell “off support” during the matching procedure because no suitable matches in the pool of eligible “controls” (i.e., those defendants who did not participate in an ATI program) could be found. In other words, for these unmatched cases there is no satisfactory counterfactual in the sample of pretrial defendants in our dataset.

The results shown in Figure 2 demonstrate that the matching procedure yielded treatment and comparison groups that show strong balance on the covariates considered.⁶ For all variables, the standardized bias statistic (SBS) values in the matched samples fall below the conventional cutoffs (Rosenbaum & Rubin, 1985). We observed no significant

⁶ Matching results for the successful group of ATI defendants are available upon request.

differences across the samples on any of the characteristics considered once the groups had been matched. It is also important to note that matched cases come from the same district as the focal treatment case to ensure that jurisdictional differences did not confound the results. The resulting matched groups, comprising 507 defendants who participated in an ATI program and 507 who did not, made it possible to more accurately assess the relationship between ATI participation and the outcomes of interest.

Matching Repeated for Sub-Group Comparisons

We repeat this analytical procedure to estimate the effect of ATI participation on each outcome for three groups: 1) all ATI participants from across the participating districts, 2) defendants who participated in programs that targeted those who suffer from substance dependence or addiction, and 3) defendants who participated in programs targeted to youthful defendants (typically between 18 and 25 years old).⁷ For all three, to identify the best possible matches, we re-estimate the propensity score. (In the interest of brevity, we limit our discussion here to ATI participants without regard to program type. However, the results for the substance abuse and youthful defendant groups did not differ materially from those for the group.) Finally, to understand the differences in sentences imposed, we re-estimate the propensity scores for each group among the sample of defendants who have had their sentences executed, i.e., who have begun their term of prison or probation (for both the treatment and matched comparison groups). We go on to assess the differences in sentences imposed between the group who participated in ATI programming and the matched control group. We then repeat the matching procedure for these groups to ensure balance of covariates for ATI defendants who *completed* their ATI program.⁸

⁷ Youthful defendants are relatively rare within the federal system. Given this, matching the youthful defendants to like defendants within their same district did not prove feasible. Therefore, for this group only, ATI participants were matched to like defendants regardless of what district they were located in.

⁸ Because recent research has highlighted potential shortcomings of using PSM to estimate treatment effects when random assignment is not possible (King & Nielsen, 2018), we assessed the robustness of our results using Kernel matching. Kernel matching uses the estimated propensity scores to match individual cases in the treatment group to a

Results

Supervision Outcomes for Matched Groups

Rearrest, Failures to Appear, and Technical Violations

Seventy-two percent of the ATI participants in the study cohort successfully completed their

weighted mean of control cases. Control cases are weighted based on the distance between their estimated propensity score and the propensity score of the treatment case to which they are being matched. All control cases can potentially contribute to the final estimation of treatment effects, which improves statistical power and efficiency (Becker & Ichino, 2002), while also reducing the potential for bias which can be introduced when using PSM. In each case, the results of the Kernel matching specification were substantively similar to that from the PSM analysis. As one-to-one matching offers a more logical interpretation, we chose to present those results in the text. Ancillary results are available upon request.

ATI program (n=365). The same matching procedures described above were repeated for this subsample, resulting in successful matches for 327 of the 365 defendants within this group. Figure 3 depicts the supervision outcomes of rearrest, failures to appear, and technical violations for (1) all ATI participants regardless of completion and for (2) successful completers compared to their non-ATI counterparts. Notably, we observe that defendants who successfully completed their ATI program were significantly less likely to be rearrested on supervision. Fewer successful ATI participants have rearrests compared to matched comparison group (2.1 vs. 6.1). However, we observed little difference in FTA and technical violations among the four groups, and both events are relatively rare among the groups.

FIGURE 3
Program Outcomes for Matched Groups

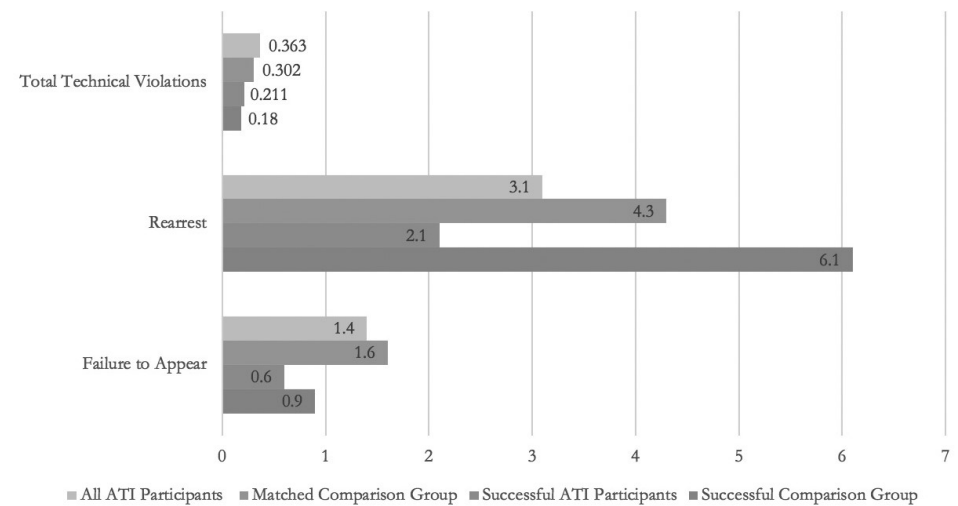
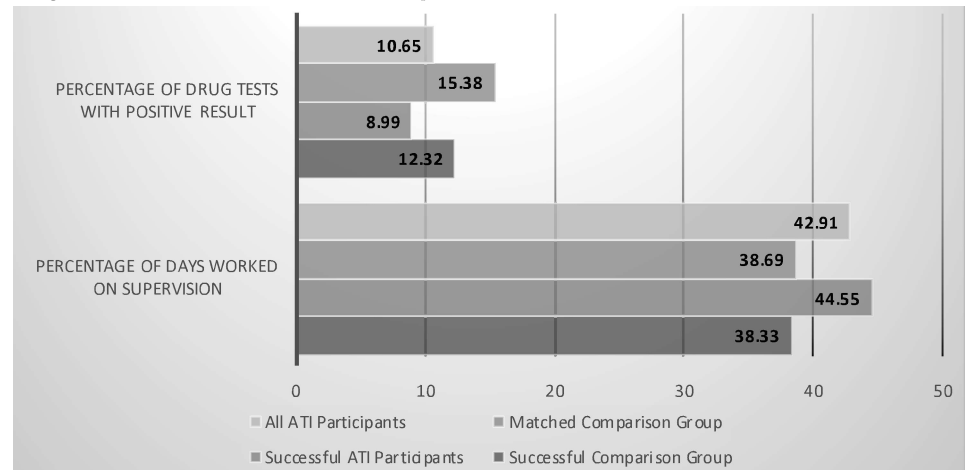


FIGURE 4
Program Outcomes for Matched Groups



Sobriety and Employment Defendant Outcomes

In addition to rearrests, FTAs, and technical violations, for all ATI participants as well as those who successfully completed their ATI, we observed the differences in two commonly-used indicators of prosocial adjustment to pretrial supervision. These measures were chosen because these domains are known correlates to criminal behavior and are also readily available in PACTS.

Results reveal (shown in Figure 4) that defendants who successfully completed their program worked a greater proportion of days while on supervision (44.5 percent vs. 38.3 percent) and had significantly fewer positive drug tests measured as a percentage of all drug

tests taken (9 percent vs. 12.3 percent).

Taken together, the results presented in Figures 3 and 4 suggest that ATI program completion is associated with improved outcomes, such as increases in employment and fewer positive drug tests, and a lower probability of rearrest.

ATI Case Dispositions

After examining the association of ATI programs on improved outcomes during supervision, we assessed the impact of ATI programs on case dispositions and sentences imposed. Panel A of Figure 5 presents the resultant case dispositions for the 416 defendants who participated in an ATI program and whose cases have been closed (regardless of whether they successfully completed the program). Of the 416 ATI participants, a sizeable proportion (43 percent) had their cases dismissed outright, or received pretrial diversion leading to dismissal upon satisfaction of the terms of the pretrial diversion agreement. Of the whole group, 32 percent of the ATI defendants received prison time while 22 percent received a probation term. Finally, 3 percent of ATI participants were placed on supervised release following time served.

Importantly, there are substantial differences in the sentences imposed on those who successfully completed their ATI program and those who did not. For example, nearly half (49 percent) of successful defendants ultimately had their cases dismissed, while 22 percent received a probation term and 26 percent were sentenced to prison. Compare this to the unsuccessful group, of which 77 percent were sentenced to prison and 23 percent were given a probation term. These differences are shown in Panels B and C of Figure 5.

ATI Participant Success and Sentences Imposed

Successful ATI Participants

Successful ATI participants *who were sentenced* (N = 184 of 237 sentenced defendants) were significantly less likely to receive a prison term than their matched counterparts (49.7 percent vs. 76 percent). Conversely, successful

completers were significantly more likely than their matched counterparts to receive a non-custodial sentence of probation (44.9 percent vs. 12.6 percent). Finally, a handful of sentenced ATI participants received a term of supervised release after time served in pre-trial detention, while none of the matched defendants did. Each of these differences was statistically significant (not shown in tabular form).

Also important are the sizeable differences in the length of terms received. Successful ATI participants received an average prison sentence of 4.97 months (ranging from one day to five years), while their matched counterparts were sentenced to an average of 42 months (ranging from one day to twenty years). Probation terms, on the other hand, were more similar (38.5 months vs. 32.6 months), with successful participants receiving a slightly longer probation term.

Unsuccessful ATI Participants

As expected, among unsuccessful participants the differences were far less pronounced. Unsuccessful participants who were sentenced (N = 53 of 225 sentenced defendants) were no more-or-less likely to receive a prison or probation sentence than the defendants in the comparison group. Further, although the prison sentences received by the unsuccessful ATI participants were shorter on average (22.6 months vs. 33.7 months), this difference was not statistically significant. This was also true of the terms of probation and supervised release.

Comparison of Non-ATI cases to Dismissed ATI Cases.

Given the striking differences between the two groups in case dispositions and sentences imposed, we took a closer look at dismissed ATI cases (including those who were granted pretrial diversion and ultimately dismissed) who were matched to non-ATI cases on the matching dimensions described above. A total of 167 of the 179 defendants who had their cases dismissed after participating in an ATI program were successfully matched to a group who did not. Of the 167 comparison cases, the

FIGURE 5
ATI Case Dispositions for ATI Defendants Across Districts

Panel A : ATI Participants		
	Cases	Percent
Were Dismissed / Deferred Resulting in Dismissal	179	43%
Received TSR Time Only	12	3%
Received a Probation Term	90	22%
Received a Prison Sentence	135	32%
Total	416	100
Panel B : Successful ATI Participants		
	Cases	Percent
Were Dismissed / Deferred Resulting in Dismissal	179	49%
Received TSR Time Only	12	3%
Received a Probation Term	78	22%
Received a Prison Sentence	94	26%
Total	363	100
Panel C : Unsuccessful ATI Participants		
	Cases	Percent
Were Dismissed / Deferred Resulting in Dismissal	0	0%
Received TSR Time Only	0	0%
Received a Probation Term	12	23%
Received a Prison Sentence	41	77%
Total	53	100

Note: There were a total of 96 open ATI cases and 22 for which sentencing data was not available at the time of the analysis.

FIGURE 6
Sentences Received by Defendants Matched to Dismissed/Diverted ATI Cases (n=167)

	Cases	Mean	Median	Std. Dev.	Min	Max
Prison Time in Months	130	26.717	13.6	33.258	0.033	180
Probation Time in Months	37	38.919	36	16.101	12	84
TSR Time in Months	128	55.125	36	24.131	12	120

vast majority (77.8 percent) received a prison sentence, while the remainder (22.1 percent) received probation (not shown). These results are even more striking when considering the length of the terms imposed on the comparison group presented in Figure 6. The average prison sentence was 26.7 months, although sentences ranged from 1 day to 180 months. The median prison term imposed was 13.6 months. The average supervised release term imposed was 55.1 months. The average probation term given was 38.9 months, with a range of 12 to 84 months. These results underscore the potential for ATI programs to provide significant cost savings in avoided prison time and are discussed below.

Summary

Though this study focused on short-term outcomes only, results in the aggregate are encouraging. Findings suggest that defendants who successfully complete an ATI program are significantly less likely to be arrested during the period of pretrial supervision. Additionally, regardless of whether participants successfully completed the program, they were employed a greater percentage of the days they were under supervision when compared to a group of statistically matched defendants. ATI participants also tested positive for illicit substances less frequently than the comparison group. This was true for both the ATI participants in the aggregate and for defendants that participated in a program designed for substance abusers. It was also true for youthful defendants who successfully completed the program. Study results suggest that participation in an ATI program, successfully completed or not, does not impact the likelihood of the defendant failing to appear in court or violating conditions of pretrial release. Importantly, only defendants who successfully completed the ATI program were significantly less likely to be rearrested while under pretrial supervision than their matched counterparts. Though defendants who participated in a program (without regard to program completion) demonstrated improved outcomes compared to matched defendants who did not participate in a program, defendants who *completed* a program demonstrated outcomes superior to those who *participated but did not successfully complete*. Taken together, the results suggest that ATI program participation is associated with improved outcomes, such as increases in employment and fewer positive drug tests, and among successful participants, a lower probability of rearrest. This

suggests that completion of an ATI program has—albeit relatively short-term—a protective effect on participants.

Analysis showed that successful completion of an ATI program is associated with more favorable case dispositions and less severe sentences. Consider that:

- Nearly half (49%) of successful completers ultimately had their cases dismissed.
- Twenty-six percent were sentenced to prison time with a median sentence of half a month (4.5 months average).
- Twenty-two percent were placed on probation, with an average term of 40 months.
- Successful completers are:
- Significantly less likely to receive a prison term than their matched counterparts (23.0 percent vs. 81 percent). Of those who were sentenced, 49.7% received a prison term vs. 76% of their matched sentenced counterparts.
- Were slightly more likely than their matched counterparts to receive a non-custodial sentence of probation (24.0 percent vs. 19%). Of those who were sentenced, 44.9% received probation vs. 12.6% of their matched sentenced counterparts).
- Received an average prison sentence of 4.97 months (ranging of one day to five years), while their matched counterparts were sentenced to an average of 42 months (ranging from one day to 20 years).

Unsuccessful participants were no more or less likely to receive a prison or probation sentence than the defendants in the comparison group. Further, although the prison sentences received by the unsuccessful participants were shorter on average (22.6 months vs 33.7 months), this difference was not statistically significant. This was also true of the terms of probation and supervised release.

Going Forward

Because to date the Judicial Conference has taken no formal position on reentry courts or ATI courts in the federal system (Vance 2018), the federal system has no common definition of or standards for Alternatives to Incarceration courts. As noted in a report by the United States Sentencing Commission titled *Federal Alternative-to-Incarceration Court Programs*, these programs have developed at the grass roots and independently of both the Sentencing Commission and the Judicial Conference policy. Evaluation of the programs is hindered by the lack of standardization due to their decentralized and individualistic nature. (In fact, though each

program included in this study shares important commonalities, each program has some unique operating protocols.) Recognizing the importance of such evaluations in its Five-Year Strategic Plan (developed 2016), the Probation and Pretrial Services Office of the Administrative Office of the U.S. Courts (AO) encourages research and evaluation of such programs.⁹ Though this study did not evaluate individual programs, its aggregated results represent an advancement in the knowledge base about federal ATIs.

Related to the lack of a national model of ATIs, there is no standardized way to track ATI program participation in the case management system PACTS. For purposes of this study, the districts agreed upon procedures to record ATI program entry and exit, program outcome, and session attendance. This required that the study districts adjust data entries to comport with the study standards, a burden that would have been avoided if standards were already in existence. Districts not participating in the study or who have yet to begin an ATI could benefit from standardized data entry procedures, which would greatly facilitate future studies and help ensure accurate data collection. Going forward, we hope that the knowledge gained from studies on ATIs informs practices throughout the federal system and will be used to develop models for various program types. In the meantime, we lean heavily on National Association of Drug Court Professionals' (NADCP) best practices as they relate to drug courts, but recognize the need to confirm the efficacy of those practices in the federal system and for target populations other than those suitable for drug courts (NADCP, 2013).

More research is needed on the impact of ATI programs and their longer term effect on recidivism, especially recidivism by those whose cases were dismissed or who served a term of incarceration, with or without supervised release. More elusive but important to understand are the more qualitative indications of long-term positive changes in defendants' lives, such as relationships, employment, education, access to healthcare, and financial independence. Finally, more research is needed to understand what factors influence the likelihood that an individual will complete an ATI program successfully, thus providing the greatest cost-benefit.

Another area of study in the context of

⁹ On file at the Administrative Office of the U.S. Courts.

ATIs is the impact of procedural justice on outcomes and a more thorough understanding of how that translates to specific practices in federal courts. Procedural justice has four core components: voice, neutrality, respectful treatment, and trustworthy authorities (MacKenzie, 2016). Extant research on state and local drug courts indicates that procedural fairness is the driver of the judge's influence upon drug court participants. This finding holds true regardless of a participant's gender, race, age, or economic status (MacKenzie, 2016). Given that judicial time is a valuable yet expensive commodity, how specifically can the role of the judge in federal ATIs be leveraged for maximum efficacy? How can others on the ATI team demonstrate procedural justice for maximum effectiveness, and what is the influence of outcomes?

Equally important to study is the selection criteria for ATI participation in the federal system. A substantial body of research now indicates which drug-involved defendants are most in need of the full array of services embodied in the "10 Key Components" of drug courts (NADCP, 1997). These are the defendants who are (1) substance dependent and (2) at risk of failing in less intensive rehabilitation programs. Drug courts that focus their efforts on these individuals—referred to as high-risk/high-need defendants—reduce crime approximately twice as much as those serving less serious defendants (Lowenkamp et al., 2005; Fielding et al., 2002). What criteria are most appropriate for non-drug ATI programs, such as those for youthful defendants and veterans? Finally, should defendants with violent offenses in the background be automatically excluded from these programs?

Last, but perhaps the most important avenue for future study, is to quantify the short- and long-term financial implications of federal ATI programs. These programs are resource intensive. Intensive supervision and treatment modalities for participants—coupled with considerable staff involvement from pretrial services staff, judges, defense attorneys, and prosecutors—are costly. What is the financial payoff of avoiding prison versus the costs of these programs? Further, what are the savings attributable to reduced recidivism and improved lives by successful participants? Importantly, future cost-benefit analyses must include in the *cost* side of the equation the costs of failed program participation, and on the benefit side, the *marginal* cost of prison (versus the *average* cost) (United States Sentencing Commission, 2017). An analysis

of drug court cost-effectiveness conducted by The Urban Institute (2016) found that drug courts provided \$2.21 in benefits to the criminal justice system for every \$1 invested. When expanding the program to all at-risk arrestees, the average return on investment increased even more, resulting in a benefit of \$3.36 for every \$1 spent. Can the federal system expect similar return-on-investment for its ATI programs? Can federal ATI programs scale to maximum capacity, yet retain effectiveness?

Conclusion

The financial implications of avoiding or minimizing custody—both at the pretrial and post-conviction stages—are clear. And the human implications cannot be overstated. Practitioners have long observed defendants struggling upon reentry to the community. After long prison sentences, the majority are estranged from family and prosocial support systems and are generally ill-equipped to resume law-abiding lives. Further, those defendants who struggled with substance abuse and mental health disorders upon arrest are likely to confront reentry with little improvement in those problems.

A "wake-up call" in the criminal justice system at large precipitated by the crisis of over-incarceration has led leaders in the pretrial profession to understand the unique opportunity they have to improve our criminal justice system, so that public safety is ultimately enhanced; that is, pretrial professionals see an opportunity to be part of the solution as opposed to part of the problem. Pretrial services is uniquely situated to assess defendants, advocate for suitable alternatives to detention pending disposition for all but the highest risk defendants, and use the pretrial period to begin rehabilitation. Alternative to incarceration programs are one way that federal pretrial services can make a meaningful difference in stemming the tide of mass incarceration, while making a positive difference in defendants' lives, which ultimately leads to safer communities and healthier future generations.

In the words of Jeremy Travis, Executive Vice President of Criminal Justice at the Laura and John Arnold Foundation:

We are emerging from a 'tough on crime' era with the sobering realization that our resources have been misspent. Over decades, we built a response to crime that relied blindly on incarceration and punishment, and provided too

little safety, justice, or healing. Now is the time for a new vision—the time to dig deep, challenge our imaginations, and build a new response to crime that comes closer to justice (LJAF, 2018).

We in the federal system can rise to this challenge. The timing is right. In December 2018, the First Step Act was enacted. This legislation, which among other provisions included additional "safety valves" for certain mandatory minimum sentences and provided for "good time" incentives for inmates to participate in recidivism-reducing programs, is primarily aimed at the Bureau of Prisons. Though far from whole-sale sweeping reform, the legislation represents a bipartisan effort that recognizes the value of rehabilitative measures and takes concrete steps to stem the tide of mass incarceration and its harmful effects.

Though more research on federal ATI programs is clearly needed, the results of this study are encouraging. These results indicate that participants are more likely to avoid new arrests for criminal behavior, remain employed, and refrain from illegal drug use while their case is pending in court. As noted by Judge Carr (2017), to allow a defendant to "show a court, often for the first time in his or her life, that he or she can be law-abiding offers the court the best of all possible records and reasons to consider leniency," allowing defendants a better foot forward. Success on pretrial supervision begets success at life beyond criminal justice involvement.

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Appendix A: Equivalent Groups Generated by Propensity Score Matching (Successful ATI Participants Only)

	Matched Successful ATI Participants (n=327/365)	Matched Defendants (n=327)	% Bias	%Bias Reduction	T-Statistic	p-value
Sex (Male=1)	0.55	0.53	-3.30	94.90	0.55	0.585
Age at Intake	35.25	33.88	-10.50	81.40	1.63	0.104
White	0.52	0.49	-6.70	75.60	0.78	0.437
Black	0.12	0.18	11.90	46.80	-1.95	0.052
Hispanic	0.32	0.31	-4.80	47.20	0.42	0.675
Other Race	0.04	0.05	7.20	64.40	-0.77	0.441
U.S. Citizen	0.92	0.92	0.00	100.00	0.14	0.888
Drug Offense	0.69	0.70	3.60	79.20	0.24	0.814
Financial Offense	0.30	0.24	-14.00	69.20	1.84	0.066
Violent Offense	0.03	0.02	-6.20	66.70	0.25	0.806
Weapon Offense	0.03	0.03	-4.40	77.90	0.23	0.816
Other Offense	0.02	0.01	-1.20	97.80	1.01	0.315
Length of Supervision	21.92	21.85	-4.00	93.70	0.08	0.940
PTRA Total Score	7.12	7.15	3.00	95.60	-0.15	0.877
Total Prior Convictions	2.50	2.07	-9.00	35.90	1.51	0.133
Alcohol Restrictions	0.43	0.45	0.60	98.70	-0.31	0.754
Substance Abuse Testing	0.73	0.79	11.10	82.10	-1.82	0.069
Drug Treatment	0.69	0.76	12.30	84.60	-1.92	0.055
Mental Health Treatment	0.30	0.32	3.60	37.00	0.45	0.658
Passport Restrictions	0.67	0.67	-0.70	93.40	0.17	0.869
Travel Restrictions	0.72	0.75	-3.00	93.00	-0.70	0.482
Weapons Restrictions	0.44	0.45	-1.20	92.20	-0.16	0.876

Note: Nearest Neighbor Matching with Caliper of .05 used. Matching was done using a two-step process to assure that ATI defendants were matched to defendants within their own districts. The matching procedure is described in more detail in the methods section.