A Viable Alternative?

Alternatives to Incarceration across Seven Federal Districts

Kevin T. Wolff

Laura M. Baber

Christine Dozier

Roberto Cordeiro

April 15, 2019

TABLE OF CONTENTS

ACKNOWLEDGMENTS

The authors gratefully acknowledge the dedication and support of the participating districts, without whose cooperation and hard work this study would not have been possible. In addition to the principals from the cooperating districts named below, many staff members worked tirelessly and across district lines to ensure this study was a success. Authors would also like to thank the research staff at the Administrative Office of the US Courts for their comments.

Principals

Mark Reichert and *Susan Hendrickson* of the U.S. Pretrial Services Office of the Eastern District of Missouri (Sentencing Alternatives Improving Lives (SAIL))

Roy Saenz (retired) and *Silvio Lugo* of the U.S. Pretrial Services Office of the Northern District of California (Conviction Alternatives Program (CAP))

George Walker (retired) and *Calvin Thomas* of the U.S. Pretrial Services Office of the Central District of California (Conviction and Sentencing Alternatives (CASA))

Douglas Heuermann (retired) and *Darrell Hite* of the U.S. Probation and Pretrial Services Office of the Central District of Illinois (Alternatives to Detention Initiative (PADI))

Scott Kowal and *Robert Trail* of the U.S. Pretrial Services Office of the Southern District of New York (Young Adult Opportunity Program (YAOP))

Study Team Members

Megan Augustine	Central District of California	Thalia Carrera	Eastern District of New York
Shirley Hyatt	Central District of California	Taia Givens-Childress	Eastern District of New York
Angela Savage	Central District of Illinois	Katrina Chu	Northern District of California
Kenneth Arthur	District of New Jersey	Timothy Elder	Northern District of California
Mitchell Duran	District of New Jersey	Betty Kim	Northern District of California
Daniela Guido	District of New Jersey	Kalisi Kupu	Northern District of California
Jon Muller	District of New Jersey	Allen Lew	Northern District of California
Arlene Raynor	District of New Jersey	Richard Sarlatte	Northern District of California
Lauren M. Blackford	Southern District of New York	Marisol Cardona	Southern District of New York
Joseph DiGiacomo	Eastern District of New York	Madalyn Toledo	Southern District of New York
Rena Bolin	Southern District of New York		

EXECUTIVE SUMMARY

Background

Though alternatives to incarceration courts have existed in the state system for nearly thirty years, such courts are a relatively new phenomena 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 utilized 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.

- popularity of "problem solving" courts in state systems led to experimentation in the federal system, especially for re-entry courts, which focus on defendants who have returned to the community following incarceration;
- a growing body of empirical evidence 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, which 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.
- 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 that have been at the forefront of implementing ATI programs 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 research 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 to quantify defendants' improvements in two supervision domains that are well-known correlates with 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.

Data

The study team assembled data from 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

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

programs within a single district, precluded analyses on *individual* programs. Instead, the study assesses the impact of ATI programs taken together (across all programs for the study districts).

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. We utilized 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.

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.[2]
- Additionally, to better understand the impact of ATI programs on reduced sentences or case dismissals, the study team: (1) 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.

[2] Because the programs that do not target a specific population had insufficient numbers of participants and comprise a heterogeneous population, those programs were not analyzed separately. Instead only programs that targeted substance abusing and youthful defendants were analyzed separately.

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 was 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 the defendants fit into one of two distinct "tracks". The track must 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 to 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 15 months.[3] 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.[4] 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 which have contributed to their involvement in the criminal justice system. The program length is a minimum 15 months.[5] Data for defendants in POP were tabulated in the Substance Abuse program category.

Results

Though this study focused on short-term outcomes only, the results are encouraging. Results suggest that defendants who successfully complete an ATI program are significantly less likely to be arrested during the period of pretrial supervision. Additionally, participants, regardless of whether they successfully completed the program, were employed a greater percentage of the days they were under supervision when compared to a group of statistically matched defendants.

[3] Program requires a minimum of 12 months of continuous sobriety. Many defendants require more time in the program to achieve the sobriety goal.
[4] SOS has no established program length. Program duration is individualized to participants' needs.
[5] NJ-POP requires a minimum of 12 months of continuous sobriety. Many defendants require more time in the program to achieve the sobriety goal.

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 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).
- were slightly more likely than their matched counterparts to receive a non-custodial sentence of probation (24.0 percent vs. 19 %).
- 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 re-entry 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 are 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 its importance, in its Five-Year Strategic Plan, (developed 2016), the Probation and Pretrial Services Office of the Administrative Office of the U.S. Courts (AOUSC), encourages research and evaluation of such programs.[6] 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).

[6] On file at the Administrative Office of the U.S. Courts.

More research is needed on the impact of ATI programs and its 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 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 offenders are most in need of the full array of services embodied in the "10 Key Components" of drug courts (NADCP, 1997). These are the offenders 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 offenders—reduce crime approximately twice as much as those serving less serious offenders (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?

Lastly, 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 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 offenders struggling upon reentry to the community. After long prison sentences, the majority are estranged from family, 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 re-entry with little improvements in those problems.

This "wake-up call" in the criminal justice system at large have 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 bi-partisan 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), this alone allows 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 allows defendants a better foot forward". Success on pretrial supervision begets success at life beyond criminal justice involvement.

INTRODUCTION

Emergence of Alternatives to Incarceration "Front End" Courts in the Federal System

Though alternatives to incarceration courts have existed in the state system for nearly thirty years, such courts are a relatively new phenomena 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 utilized 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. Only two federal court programs existed before 2010: The Pretrial Alternatives to Detention (PADI) program in the Central District of Illinois, a drug court program, and the Special Options Services (SOS) program in the Eastern District of New York, a youthful adult court program (United States Sentencing Commission, 2017). Both of these programs are represented in the study that is the subject of this article.

Prior to more wide-spread existence of ATIs, the federal system observed an increase in judge-involved "problem-solving" courts for persons on post-conviction supervision. Many federal judges were familiar with such courts in the state systems, and the popularity of these programs in the state and local systems led to experimentation in the federal system. These types of court programs, known as re-entry courts or "back-end courts", generally borrowed from the drug court model propagated at the state level. Reentry courts focus on individuals returning to society after a prison term, but otherwise operate in a fashion similar to drug courts. Of the various types of problem-solving courts, re-entry courts have gained the most traction in the federal system. One potential reason for this is the Department of Justice, specifically encouraged its prosecutors to actively participate in reentry courts.[7] As of January 2019, 67 re-entry court programs exist in 94 district courts.[8]

The emergence of ATI court programs is driven by a confluence of factors. Perhaps most concrete is 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. Prior to this decision, downward departures based on offender characteristics such as the presence of substance use or

[7] U.S. Department of Justice, Office of the Deputy Attorney General, Memorandum for All United States Attorneys, Guidelines for Participation by United States Attorneys' Offices in Post Incarceration Reentry Programs, Jan. 19, 2011.
[8] Federal Judicial Center (FJC) maintains a list of judge-involved programs, including re-entry courts. This list is on file at the FJC.

mental health disorders were limited based on provisions in the *Guidelines Manual*. Furthermore, the initial post-Booker position of the DOJ in 2006 was that "drug courts are an inappropriate and unnecessary program for the federal criminal system." Though the DOJ favored the use of such courts in the states, it did not support such programs in the federal system due to differences between federal defendants and the low-level addicted defendants in state courts (U.S. Sentencing Commission, 2017).

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. Additionally, DOJ reversed its policy regarding federal problem-solving court programs. On January 19, 2011, the Deputy Attorney General issued a memorandum encouraging United States Attorney's Offices to participate in re-entry courts. This memorandum formally reversed the DOJ's previously stated policy that "drug courts" were generally inappropriate and unnecessary in the federal system. As part of the initiative, the DOJ specifically endorsed federal alternatives to incarceration programs as part of a larger, national sentencing reform initiative: "In appropriate instances involving non-violent offenses, [federal] prosecutors ought to consider alternatives to incarceration, such as drug courts, specialty courts, or other diversion programs."

During this same timeframe, criminal justice officials and policy-makers grew increasingly alarmed at the unsustainable rate of growth in the federal prison system. Between 1980 and 2016 the federal prison population increased from approximately 25,000 to near 200,000, a 700% increase, with a budget expansion from $300 million to nearly $7.5 billion dollars in 2016 (U.S. Government Accountability Office, 2016). During the same period, annual spending on the federal prison system rose 595 percent, from $970 million to more than $6.7 billion in inflation-adjusted dollars. Prison expenditures grew from 14 percent of the Justice Department's total outlays to 23 percent, increasingly competing for scarce resources (Urban Institute, 2016).

The crisis of over-incarceration led to a widespread recognition among criminal justice professionals and policy-makers that much needed reform was in order. In 2014, Congress created the Charles Colson Task Force on Federal Corrections to assess the federal criminal justice system and make recommendations to Congress for long-lasting systemic, yet practical reforms. The report issued in January 2016 included six broad recommendations. *Recommendation 1: Reserve prison for those convicted of the most serious federal crimes* included the component "Encourage and incentivize alternatives to incarceration … Prosecutors and judges should employ alternatives to incarceration in their

districts when appropriate, including front-end diversion courts, problem-solving courts (such as drug courts), and evidence-based probation (such as employment of swift and certain sanctions)" (Charles Colson Task Force on Federal Corrections, 2016).

One of the strongest agents for change in the federal criminal justice system was the Department of Justice's 2013 Smart on Crime (SOC) initiative calling for the prioritization of the most serious defendants while developing and utilizing alternatives to incarceration (ATI) for lower-risk non-violent defendants. Such alternatives include pretrial release and pretrial diversion programs as well as specialty court programs, the successful completion of which avoids or reduces incarceration time for participating defendants. The SOC initiative required reentry representatives in every U.S. Attorney's Office in every federal district. This latter requirement shone a spotlight on the reentry movement in general, and further provided a catalyst for reentry courts in federal district courts.

The judiciary has historically supported *alternatives to criminal prosecution*, as evidenced by positions of the Judicial Conference of the United States (Vance, 2018). In March 1980, the Judicial Conference, the policy-making body of the judiciary, agreed to support a bill to establish alternatives to criminal prosecution for certain persons charged with offenses against the United States and procedures for judicial involvement in pretrial diversion proceedings designed to standardize practices and to require equal treatment of similarly situated persons selected for pretrial diversion (JCUS-MAR 80, p. 43). More recently, former Chair of the Criminal Law Committee, Judge Irene M. Keeley of the Northern District of West Virginia, testified before the Charles Colson Task Force on Federal Corrections that pretrial diversion is a potentially underutilized program in the federal criminal justice system.[9] Noting that less than one percent of activated cases are pretrial diversions, Judge Keeley expressed the Criminal Law Committee's readiness to work with the Department of Justice to discuss ways to increase the number of individuals participating in the pretrial diversion program. In addition to taking a position on pretrial diversion, the Judicial Conference also recently recommended legislation expanding the scope of "special probation" under 18 U.S.C. § 3607. Section 3607 of title 18, U.S. Code, offers a process of special probation and expungement for first-time drug offenders who are found guilty of simple possession under 21 U.S.C. § 844 (Vance,

[9] Judicial Conference committees review issues within their established jurisdictions and make policy recommendations to the Conference. The Criminal Law Committee has jurisdiction over matters that relate to probation and pretrial services. See Testimony of Hon. Irene M. Keeley Presented to the Charles Colson Task Force on Federal Corrections on January 27, 2015 (on file with the Administrative Office of the U.S. Courts).

2018).[10] While the Judicial Conference supports diversion and other measures to reduce incarceration, to date the Judicial Conference has yet to take a formal position on ATIs or re-entry courts.[11]

Further underpinning the emergence of ATIs is greater awareness of the impact of the pretrial release decision and its impact on downstream outcomes. In short, many believe that the high detention rate in the federal system is one of the drivers of mass incarceration. As Judge James Carr argues so eloquently in *Why Pretrial Release Really Matters,* defendants who are detained pending outcome of their cases are at a distinct disadvantage compared to those who are released.

> "Whether sentencing occurs within six months or twenty-four months after a case begins, federal defendants, if not detained, have the opportunity to stand on the best, most upright footing of all when before the judge for sentencing. Simply put, any defendant, regardless of charged crime, criminal history, or guideline range, who can 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. Courts with high detention rates fail to give the defendants who need it most the opportunity to live by, and to show the sentencing judge—and even the government—that they can (and more likely will) live by, society's rules and not, as they have in the past, their own outlaw rules." (Carr, 2017, pp.218).

Empirical evidence supports this assertion. Studies have demonstrated that pretrial detention is correlated with both *longer sentences* and *recidivism*. This is true in the federal system as

---

[10] Specifically, a court may, with the offender's consent, place the offender on a one-year maximum term of probation without entering a judgment of conviction, and upon successful completion of the term of probation, the proceedings are dismissed. For offenders under the age of 21 that successfully complete their terms of probation, upon application by the offender, an order of expungement is entered. A bill was introduced in Congress, H.R. 2617 (115th Congress), the RENEW Act, that would expand the age of eligibility for expungement under section 3607 of title 18 from "under the age of 21" to "under the age of 25." The Committee on Criminal Law noted that the RENEW Act's aim of expanding the scope of section 3607 is consistent with practices already occurring in many courts looking to increase alternatives to incarceration and enhance judicial discretion and is consistent with Judicial Conference policy on sealing and expunging records in that it would not limit judicial discretion in the management of cases and adoption of rules and procedures. On recommendation of the Criminal Law Committee, the Conference agreed to support amendments to 18 U.S.C. § 3607 that provide judges with alternatives to incarceration and expand sentencing discretion. JCUS-SEP 17, p. 11.

[11] In June 2016, the FJC completed the final report of its randomized experimental study. Among the report's findings were that the study districts had difficulty adhering to the requirements of the reentry court program model policy, there was a high refusal rate. At the request of the Criminal Law Committee, the Federal Judicial Center conducted a study on the efficacy of re-entry courts in the federal system. Both a process evaluation and randomized experiment study were conducted. For study participants who were randomly assigned to a reentry court program, there was a low completion or graduation rate for program participants, and no impact on revocation or recidivism rates was found. The Criminal Law Committee concluded that, while the FJC's report added to the research literature on the efficacy and cost-effectiveness of the reentry court program model used during the study, additional information should be considered before it could decide what, if any, recommendations it would make to the Judicial Conference about a national model policy. For a more specific summary of the findings of the FJC study, see Stephen E. Vance Judge-Involved Supervision Programs in the Federal System: Background and Research, 81 Federal Probation 15 (2017).

well as state systems. A 2013 study found that defendants held for the entire pretrial period were four times more likely to be sentenced to jail and three times more likely to be sentenced to prison than defendants released before trial (Lowenkamp, VanNostrand, & Holsinger, 2013). In addition, their jail sentences were three times longer, and their prison sentences were twice as long. Similar results were also observed for federal defendants. The financial implications of pretrial release as opposed to detention and shorter custody terms are clear. Perhaps more compelling, evidence suggests that the *length of time* that defendants are held in pretrial detention correlates with re-offending, both in the short and long term. This is particularly true for low-and moderate-risk defendants. Even for relatively short periods behind bars, low-and moderate-risk defendants who were detained for more days were more likely to commit additional crimes in the pretrial period. Further, they were also more likely to do so during the two years after their cases ended. These findings are consistent with *Evidence-Based Practices* literature, a compelling body of research demonstrating that the best outcomes are achieved when the intensity of criminal justice intervention is matched to participants' risk for recidivism (*Risk Principle*). Most important, mixing participants with different levels of risk or need in treatment groups or residential programs increases crime, substance use, and other undesirable outcomes, because it exposes low-risk participants to antisocial peers and values (Lowenkamp & Latessa, 2004; Welsh & Rocque, 2014).

Further, one study of 79,064 federal defendants released on pretrial supervision between October 1, 2000 and September 31, 2007 showed that detained defendants are at least twice as likely to fail on post-conviction supervision as defendants who are released during the pretrial period. The effect holds true for all levels of risk, except for the highest-risk offenders, who fail at similar rates. This finding is consistent with prior studies that show that defendants released prior to trial do better at each later stage of the criminal justice process. Additionally, this study showed that success on pretrial release is associated with greater levels of success on post-conviction supervision (as measured by the occurrence of an arrest for new criminal activity) (Cadigan & Lowenkamp, 2011). The implication for judges at sentencing is that a defendant's success on pretrial supervision is a factor worthy of favorable consideration.

Given that the mission of pretrial services is not rehabilitative, a fair question is how ATI programs fit into the purposes of the federal pretrial system? Federal pretrial has also been charged with supervising those who can be safely diverted from traditional prosecution, conserving resources for those who are at higher risk. In the federal system approximately 90 percent of defendants are

convicted[12], and 90 percent of those who are convicted are sentenced to custody.[13] Given these facts, it is evident the population that can be safely diverted is greater than the one percent who are diverted. This realization has contributed to the emergence of non-traditional diversion programs, for example, ATIs and other problem- solving courts, and other bail supervision practices consistent with rehabilitative intent.

Serving defendants who participate in ATIs is consistent with existing federal statutes, policies and procedures. In fact, Pretrial Services' governing statute 18 USC 3154(7) charges pretrial services to "Assist persons released....in securing any necessary employment, medical, legal, or social services." Additionally, consider judicial policy which states, "Pretrial Services is the front door to the federal criminal justice system and has the unique opportunity to lay the foundation for each defendant's success, not only during the period of pretrial supervision, but beyond … preventing the front door from becoming a revolving door."[14] The *Guide to Judiciary Policy* requires pretrial services officers to discuss employment, financial, family, and social services needs, and to provide or offer assistance when appropriate and even when not imposed as a condition of release, officers are to assist-- but not require--defendants to secure employment, medical, legal, or social services.[15] The *Charter for Excellence*[16] calls upon *all* officers to "facilitate long-term, positive changes in defendants and offenders through proactive interventions" (Hughes, 2008).

Today there are a total of 38 programs in 35 federal districts, the majority (16) of which target exclusively those whose criminality is largely driven by substance abuse disorders.[17] Program length of these ranges from 9 to 36 months, with 12 months being the most typical length, but is often extended to 18 to 24 months as necessary. Though these programs may differ in specifics (such as the referral process by which defendants are referred and selected), they share certain characteristics:

---

[12] Table D4, Criminal Defendants Disposed for 12-month period ending June 2018, indicates that of the 77,762 defendants disposed, 71,457 were found or pleaded guilty (92 percent).

[13] United States Sentencing Commission, 2017 Federal Sentencing Statistics, Table 4. Eight-eight percent of defendants sentenced in fiscal 2017 under the federal guidelines, 88 percent were sentenced to prison.

[14] Guide to Judiciary Policy » Volume 8: Probation and Pretrial Services » Part C: Supervision of Federal Defendants (Monograph 111) Ch 4: Assessment and Planning Process.

[15] The Guide to Judiciary Policy (420.01.20) "PRII - discuss employ, finance, family, social service needs, provide or offer assistance when appropriate"

The Guide to Judiciary Policy (420.01.30) "Determine Service Needs - even when not imposed as a condition of release, officers are to assist - but may not require – defendants to secure needed employment, medical, legal, or social services."

[16] Through consultation with probation and pretrial services chiefs in 2002, the Federal Judicial Center (FJC) developed the *Charter*, a document that spells out a shared understanding about the work of probation and pretrial services officers, the goals that matter most, and the values that the system stands by.

[17] The Federal Judicial Center (FJC) maintains a list of judge-involved programs in the federal system. This list is on file with the Federal Judicial Center (FJC).

- A non-adversarial inter-disciplinary team-based approach that emphasizes collaboration with the ATI program "team" comprising judges, pretrial services officer(s), defense counsel, prosecutor, and (in some programs), treatment providers.
- Regular group sessions in which defendants in the program discuss their progress and receive support from other peers in the group and guidance from the program team;
- Intensive supervision and treatment and other services that target the defendant's criminogenic risks and needs. For "drug court" programs, this frequently involves in-patient and other intensive treatment services.

Diversion vs. Alternatives-to-Incarceration in the Federal System

Both alternatives to incarceration and diversion programs are surmised to minimize social stigma, reduce prison overcrowding (thereby saving tax payer money), (re)habilitate defendants, and ensure public safety (Clark, 2007; Feeley, 1983; Sung, 2011). However, there are some key distinctions worthy of elaboration.

Pretrial diversion operates under the Title 9 Pretrial Diversion Program, where Title 9 of the U.S. Attorney's Criminal Resource Manual (USAM) permits the U.S. Attorney's Offices to divert certain federal defendants from prosecution into supervision and services programs administered by U.S. Probation and Pretrial Services offices. An officer investigates the suitability of the program for the defendant, makes a recommendation to the AUSA as to the suitability, and supervises those accepted into the program. Successful fulfillment of program requirements results in either the defendant not being prosecuted, or, if already charged, the charges being dismissed. Specifically, the USAM provides eight basic requirements for pretrial diversion: 1) identification of eligible individuals, 2) voluntary participation after consultation with legal counsel, 3) maintaining of confidential information, 4) coordination with the pretrial services or probation office regarding investigation, enrollment, and fingerprinting of participants, 5) individualized supervision plan development, 6) program length cannot exceed 18 months, 7) formal dismissal of charges upon successful completion, and 8) initiation of prosecution in the event of program failure (Zlatic, Wilkerson, & McAllister, 2010).

The U.S. Senate unanimously passed a bill in October 1973 providing for pretrial diversion services in the federal system (Zimring, 1974). According to Criminal Resource Manual 712 (9-22.100), current eligibility requirements are as follows:

The U.S. Attorney, in his/her discretion, may divert any individual against whom a prosecutable case exists and who is not:

1. Accused of an offense which, under existing Department guidelines, should be diverted to the State for prosecution;

2. A person with two or more prior felony convictions;

3. A public official or former public official accused of an offense arising out of an alleged violation of a public trust; or

4. Accused of an offense related to national security or foreign affairs.

The use of pretrial diversion is woefully underused, however. Notably, recent figures show the number of Title 9 pretrial diversion cases activated by pretrial services continues to decline to just 437 such cases for the 12-month period ending September 30, 2018 (down by approximately 1,000 from ten years prior; Administrative Office of U.S. Courts, Table H-1). While this could be a result of decreasing prosecutions of those eligible for diversion, as a proportion of pretrial cases, pretrial diversion has also decreased, from 2.3% in 2001 to less than 1% of all pretrial cases in 2018.[18]

Pretrial diversion is distinct from alternatives to incarceration programs which are established under the authority of the court in cooperation with the U.S. Attorney's office. Though specific practices vary across programs and courts, program participation in ATI programs is at the discretion of the program judge, U.S. Attorney Office, defense attorney, and pretrial services. If program requirements are satisfied, the defendant is not prosecuted, charges may be dismissed, or a reduced sentence is given. Court-involved alternatives to incarceration programs differ in that they usually involve regular meetings with court officials to discuss the defendants' progress, while Title 9 pretrial diversions do not.

Prior Work: Effectiveness of ATI and Pretrial Diversion Programs

Evaluations of ATI and pretrial diversion programs have occurred for decades in non-federal jurisdictions. Certainly, the methodological rigor by which these evaluations have been undertaken has increased over time. Studies have also investigated the components that differentiate successful outcomes from lack of effectiveness as well, given that most programs have both

[18] Total pretrial services cases activated for the 12-month period ending September 30, 2018 were 99,494. Pretrial diversion cases represent only .04 percent of all pretrial cases. Administrative Office of U.S. Courts, Table H-1

supervision and treatment components of varying types. In other words, studies have attempted to disentangle the effects of treatment protocols from the program itself, such as the sessions with the judge. For instance, an evaluation of an adult prison diversion program in Canada which focused on restorative justice components effectively reduced recidivism compared to matched probationers after controlling for assessed risk to reoffend (Bonta, Wallace-Capretta, Rooney, & McAnoy, 2002). The program diverted adults from incarceration upon entering a guilty plea and used risk/needs assessment to guide treatment planning. A reported 97% of the participants had a treatment component in their service plans, while 49% completed a treatment component. While the treatment was found unrelated to recidivism, a victim impact statement, restitution, and community service were all predictive of lower recidivism (though the authors note an interaction effect of restorative components with treatment completion as almost all offenders received treatment; Bonta et al., 2002). Importantly, offenders were required to have a minimum of a 6 months sentence to prison recommendation by the prosecutor to be considered, in efforts to avoid net-widening (only 10% were assessed as low-risk).

Specialty courts have received empirical attention as well, especially drug courts. Early work showed promising findings of graduation rates (approximately 50% of participants graduating among drug courts active in 1997; Gottfredson & Exum, 2002), and reduced drug use and offending during participation when contrasted with comparison groups (Belenko, 2001). However, post-program drug use and crime received less empirical attention early on, and methodological issues led to concerns that positive findings should be considered tentative. In reviewing 20 evaluations of 16 drug courts, the U.S. General Accounting Office (1997) indicated most did not include a comparison group, lacked examination of post-program substance use or criminal behavior, and had relatively short follow-up periods. Additional concerns included small sample sizes (Roberts-Gray, 1994; Anspach & Ferguson, 1999), including only program completers in analyses (Anspach & Ferguson, 1999; Peters & Murrin, 1998), and not controlling for time at risk (Finigan, 1998). Not long after the GAO (1997) report, Belenko's (1998) updated review examined 30 studies of 24 drug courts noting similarly that criminal behavior was reduced during participation, but also reported lower post-program recidivism. Notably, however, Belenko (1998) discussed the lack of methodological rigor with respect to comparison group selection. Evaluation of the Douglas County, Nebraska Drug Court demonstrated participants had lower post-program recidivism rates than traditionally adjudicated felony drug offenders (and a longer time to rearrest), though rates were equivalent to those of drug offenders participating in a diversion program prior to the drug court's

implementation (Spohn, Piper, Martin, & Frenzel, 2001). Using two comparison groups (a traditionally adjudicated group, and a pre-implementation of the drug court cohort) and considering assessed risk level in matching techniques strengthened the methodological rigor from prior work.

A 2002 evaluation of the Baltimore city drug court demonstrated, through a random control trial thereby addressing methodological shortcomings plaguing prior work, that the drug court reduced recidivism among 139 participants compared to 96 control group adults (recidivism rate of 48% compared to control group's 64%; Gottfredson & Exum, 2002). Additionally, the evaluation showed the average non-suspended incarceration sentence for the drug court participants was 187 days shorter than that of the control group, and 288 days shorter for the more serious cases. This demonstrated the drug court was indeed being used as an alternative to incarceration (Gottfredson & Exum, 2002).

More recent work has continued to evaluate drug diversion and court programs. The Multi-Site Adult Drug Court Evaluation (MADCE) was a result of the National Institute of Justice commissioning Urban Institute's Justice Policy Center, RTI International, and the Center for Court Innovation to conduct a multi-site evaluation of the nation's drug courts. Uniquely, the MADCE was to examine crime, drug use, socioeconomic outcomes, family functioning, and mental health outcomes (Rossman, Roman, Zweig, Rempel, & Lindquist, 2011). The study comprised 23 drug courts and 6 comparison sites from the same geographic areas across 8 states that provided services to drug-involved offenders, but not drug courts (so there was not a "no treatment" group, but rather drug courts vs. alternative practices). To summarize outcomes, drug courts significantly reduced drug relapse above comparison sites, reduced recidivism (proportion committing crimes, about half as many total criminal acts on average, and 52% vs. 62% official rearrest over 2-year follow-up), decreased need for employment, education, or financial services, reduced family conflict, and with participants reporting less drug use, which was sustained over time (Rossman et al., 2011). Effectiveness of the drug courts was attributed to certain practices; specifically, "across multiple methods, among the most consistent findings were that offenders who received higher levels of judicial supervision and drug testing, and who attended more than a month of substance abuse treatment, reported fewer crimes and fewer days of drug use" (Rossman, 2011, p. 8). With regards to cost-benefit, the MADCE was reported to return $2 for every $1 of cost (non-significant, but with even greater benefit among higher-risk offenders, based on the costs of avoiding more serious offending).

Further improving the methodological rigor of drug court evaluations, propensity score matching (PSM) has been employed recently to better ensure equivalence between participant and comparison groups to control for selection bias (including the voluntary nature of many programs). For instance, an evaluation of a Winnebago County, Wisconsin misdemeanor drug diversion program demonstrated a 16% reduction in recidivism probability and a 60% lower hazard rate of reoffending per day among program participants to a matched comparison group (using PSM; Cotti & Haley, 2014). Like prior work, additional results included finding partial participation was indistinguishable from no participation at all (Cotti & Haely, 2014; see also Peters & Murrin, 2000), highlighting the importance of program completion. Similarly, Kalich and Evans (2006) demonstrated the longer participants were exposed to drug court components the lower their subsequent recidivism. Uniquely, the Kalich and Evans study included both completers and non-completers compared to a group who were screened eligible and suitable, but never entered the program (meaning the treatment group was on a continuum with respect to commitment and motivation to change).

In sum, drug court research certainly has produced some instances of mixed results (e.g., Wilson, Mitchell, & MacKenzie, 2006), though the consensus is that they are, on average, effective at recidivism reduction especially for adults (Mitchell, Wilson, Eggers, & MacKenzie, 2012), and may assist with reducing jail and prison overcrowding (Marlowe, 2010). As Cotti and Haley (2014) note, however, this is not to imply that all drug courts are effective, and the average effectiveness should not be misconstrued to assume any program is effective. In addition, although much improved in recent years, past research on drug courts has suffered from a number of methodological issues which threaten the validity of results obtained (Wilson, Mitchell, & MacKenzie, 2006). It should be noted, even among more rigorous studies demonstrating effectiveness, research has shown drug courts work less well for racial minorities and less educated offenders (see Hartley & Phillips, 2001). Other critics have also called for gender-specific programming options to meet the unique needs of female offenders (Dannerbeck, Sundet, & Llyod, 2002), though other work has found limited subgroup differences in effectiveness (Rossman et al., 2011).

A more recent evaluation of a short-term mental health court in D.C. Superior Court also yielded promising results. The pretrial services agency screens for mental illness, and places all defendants screening positive in a specialized supervision unit, including those participating in the mental health court. Results showed those in the mental health court were significantly less likely to be rearrested, averaged fewer rearrests, and had a longer time to rearrest than the comparison group

who screened positive for mental illness and were placed under the specialized supervision unit as well but did not participate in the mental health court (Hiday, Wales, & Ray, 2013). Positive results were driven by differences between mental health court participants that completed the program, whom were 51% less likely to recidivate than the control group (58.3% completed; Hiday, Wales, & Ray, 2013). The program's 58% graduation rate was in the middle of the range of 31% to 89% reported in prior work (Dirks-Linhorst & Linhorst, 2012; Herinckx, Swart, Ama, Dolezal, & King, 2005; Hiday & Ray, 2010; McNeil & Binder, 2007; Redlich, Steadman, Callahan, Robbins, Vessilinov, & Ozdgru, 2010).

A broad review of nine of the 10 non-federal ATI programs in New York City compared recidivism rates over 3 years of over 300 defendants in the alternative programs to similar defendants not sentenced to an alternative program (Porter, Lee, & Lutz, 2011). While the programs operated independently, each required 6-12 months of treatment, counseling, and classes in order to successfully complete and avoid jail or prison. Importantly, while only half the defendants who participated in New York City ATI programs are arrested for felonies, the evaluation solely examined felony offenders. Each of the programs are operated exclusively through contracts with non-profit organizations and serve either substance abusers, women, or youth. Defendants can enter the ATI programs either at the time of sentencing or as part of a plea deal in which the judge defers sentencing (the latter being the most common path). Perhaps dissimilar to federal ATI programs, most New York City ATI participants are disadvantaged financially, do not have a high school diploma, lack consistent employment, and have prior drug involvement (Porter et al., 2011). Retention rates average 60% over the first 180 days but are lower (~50%) for substance abuse programs. Averaging a 60% completion rate, completion is not related to the severity of the instant charge, with failure to complete higher among those with prior suicidal ideation, prior incarceration, and recent cocaine or heroin use (Porter et al., 2011). The evaluation demonstrated ATI participants are no more likely to be arrested or convicted than the comparison group (controlling for time incarcerated), with similar recidivism offenses. Additionally, the ATI participants were significantly more likely to return to the community rather than be incarcerated post-rearrest. This suggests that while the ATI programs may not "reduce" recidivism, they are certainly a less expensive alternative than incarceration that nets the same outcomes with respect to public safety. Furthermore, people who complete the ATI programs are more than twice as likely to not be convicted as those who do not complete, suggesting efforts be dedicated to enhancing completion rates (Porter et al., 2011).

Federal ATI Programs in the Current Study

The study cohort comprised current and prior ATI program defendants from 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). 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.

Pretrial Opportunity Program (POP) – Eastern District of New York

The Pretrial Opportunity Program ("POP") was established in January 2012. POP, like other drug courts, is founded on the premise that many substance abusers are arrested for behavior that is grounded in their drug or alcohol addictions and, but for those addictions, they might lead law-abiding lives. POP provides a framework for more intensive supervision of these defendants, combining judicial involvement with the efforts of pretrial services officers and treatment providers throughout a defendant's term of pretrial supervision. In addition to their more frequent sessions with their drug counselors and pretrial services officers, all the participants meet monthly with the judges and Pretrial Services officers assigned to the program. Although most participants have entered guilty pleas by the time they enter the program, a guilty plea is not required. All participants do, however, agree to adjourn any future court proceedings for at least a year until the program is completed. All such adjournments have occurred with the consent of the U.S. Attorney's Office. Participants must remain drug free, attend all monthly POP sessions, obtain a Graduate Equivalency Degree if appropriate, maintain employment, and comply with substance treatment and testing regimens. As the participant nears completion of the program, defense counsel negotiates with the AUSA consistent with Rule 11(c)(1).[19] The program agreement contemplates that the defendant's rehabilitation may be sufficiently extraordinary to warrant dismissal of the charges on the motion of the government.

[19] *Federal Rules of Criminal Procedure Title IV. Arraignment and Preparation for Trial.* Rule 11 governs pleas. https://www.law.cornell.edu/rules/frcrmp/rule_11

As of June 2018, a total of 42 defendants have participated in POP, 27 of which successfully completed the program, an 84 percent rate of successful completion. There were 10 active participants.

Special Options Services (SOS) – Eastern District of New York

The Special Options Services (SOS) program began initially in 2000, when it operated solely under the auspices of the U.S. Pretrial Services Office. SOS operated under the premise that many youthful defendants would benefit from more intensive supervision and services. In 2013, the court approved a modification of the program to involve the direct participation of two judges. SOS targets defendants ages 18 to 25 who may benefit from the structure of intensive supervision.

Participants in the SOS Program are evaluated and recommended for the program by the assigned Pretrial Services Officer, but referrals may come from a judicial officer, a defense attorney or the United States Attorney's Office. The decision to accept a defendant into the Program is solely at the discretion of Pretrial Services, subject to the approval of the presiding judge. Factors that are considered in determining eligibility include drug use history, mental health history, loss of parent or guardian, parental incarceration, victim of child abuse or neglect, and a determination that they have the potential to live law-abiding lives if offered structure and opportunities for education, job training and counseling that may have been unavailable to them prior to their arrest. Defendants are typically high risk with extensive needs. The SOS Program is voluntary but defendants who are accepted into the SOS program are directed to participate in the program's intensive supervision as a condition of pretrial release. Release conditions are determined on an individualized basis depending on the needs of the participant and may include curfew and travel restrictions, drug testing and treatment, mental health counseling, vocational and educational training, sex education and relationship counseling and anger management. Several SOS participants attend 12 weeks of Cognitive Behavioral Therapy, with various incentives to encourage completion. All participants must report to and work closely with the Pretrial Services officer who monitors their conduct, verifies their residence and employment, assists them in developing individualized programs and goals, and communicates regularly with family members, treatment providers and counselors.

As of June 2018, 64 defendants have been through SOS, of which 25 have successfully completed the program, a 59 percent success rate. There were 22 active participants.

The Conviction Alternative Program (CAP) – Northern District of California

The Conviction Alternative Program (CAP) operates in the Northern District of California, with venues in San Francisco, Oakland, and San Jose. Each separate venue began between November 2015 and July 2016. The CAP uses the Pretrial Services Risk Assessment (PTRA) to assess risk and is designed to target those at higher risk to reoffend. The CAP includes intensive supervision, ongoing judicial oversight, and addresses causes of antisocial behavior through restorative justice components, substance abuse treatment (inpatient and/or outpatient), mental health treatment, vocational and educational programs, and cognitive behavioral programming aimed at restructuring criminal thinking. The program is intended to be one year in duration but may last up to 18 months. Intensive supervision components include court appearances twice monthly, drug testing at a minimum of twice per week, and frequent office visits, while the treatment component includes cognitive restructuring, employment workshops, and individual and group therapy. A collaborative approach involves prosecutors, defense attorneys, pretrial services officers, treatment providers, and judges. Enrollment is voluntary but depends on an eligibility assessment and either support from the U.S. Attorney's Office at the pre-conviction stage, or referral from the presiding judge post-conviction for a deferred sentencing placement into the program. Successful completion may lead to dismissal of charges if the AUSA agrees, but disposition is decided on a case-by-case basis.

As of June 2018, 28 defendants have participated in CAP, of which 23 have successfully completed the program, a 82 percent success rate. There were 19 active participants.

Conviction and Sentence Alternatives (CASA) – Central District of California

The Conviction and Sentence Alternatives (CASA) Program operates in the Central District of California. A post-guilty plea diversion program, participation is voluntary and must be approved by the Court. If approved, the case is transferred to a CASA program judge where the defendant enters a guilty plea whereby the plea agreement requires CASA program completion. The program includes intensive pretrial services supervision including regular CASA court appearances and individualized programs aimed at addressing the defendant's criminal conduct (such as substance use or mental health treatment and employment or education services). The program duration is 12-24 months, with successful completion resulting in either dismissal of charges or a sentence reduction to one that does not include imprisonment (results are dependent on the plea agreement). While there are no set criteria for selecting participants, the intent is the defendants fit into one of two distinct "tracks". The track chosen as most suitable for the defendant is based upon the nature and

seriousness of the pending charges and the defendant's criminal history and presenting criminogenic risks and needs.

As of June 2018, 204 defendants have participated in CASA, of which 184 have successfully completed the program, a 90 percent success rate. There were 37 active participants.

Pretrial Alternatives to Detention Initiative (PADI) – Central District of Illinois

One of earliest federal ATI programs, established in 2002, is the Pretrial Alternatives to Detention Initiative (PADI) program developed in the Central District of Illinois, which includes intensive supervision, frequent court appearances, and substance abuse treatment services. In the first 14 years, 145 participants entered the program, with a reported 91% completion rate. The AUSA refers defendants who are evaluated by a substance abuse treatment provider and pretrial services. Upon joint recommendation from the provider and pretrial services to the PADI Assistant U.S. Attorney, the PADI AUSA then decides if the defendant will be admitted. Selection criteria include: minimal participation in the offense charged, limited criminal history with no serious violent offenses, evidence of a current substance dependence or addiction, and willingness to voluntarily participate. Incentives to participate for eligible defendants include release from pretrial detention, a motion for downward departure from the sentencing guideline range, reduction in charge to a lesser offense (based on USAO discretion), recommendation for a sentence at the low end of the guideline range, or dismissal of charges.

PADI is currently inactive in IL-C. As of June 2018, 157 defendants have participated in PADI), of which 133 have successfully completed the program, an 85 percent success rate.

Sentencing Alternatives Improving Lives (SAIL) – Eastern District of Missouri

The Sentencing Alternatives Improving Lives (SAIL) program operating in the Eastern District of Missouri is also a post-guilty plea diversion program. SAIL is a voluntary program, contingent upon approval by the court. The program features intensive treatment, sanction alternatives, and incentives to address contributing causes to criminal behavior (such as substance abuse). Successful completion results in either the criminal charges dismissed with prejudice or a reduced sentence that may or may not include a term of imprisonment. The program is 12 to 24 months in duration, with participants agreeing to a substance abuse and mental health evaluations as appropriate, participation in treatment, and compliance with other court-imposed conditions, such as restitution, as well as search of person, property, domicile, and electronics by a U.S. Pretrial Services or an investigator with the AUSA. SAIL completion requires six months drug-free, and completion of Moral Recognition Therapy (MRT) cognitive behavioral programming. A series of

graduated sanctions address noncompliant behavior (ranging from judicial reprimand, order to spend time in jail, and ultimately termination from SAIL).

As of June 2018, 15 defendants have participated in SAIL, of which nine have successfully completed the program, a 60 percent success rate. There were four active participants.

The Pretrial Opportunity Court (POP) - District of New Jersey

Modeled after the NY-E's POP program, the District of New Jersey's Pretrial Opportunity Program (POP) is a post-plea, presentence alternative to incarceration program which began in May 2015. Participants in the program have documented histories of severe addiction which have contributed to their involvement in the criminal justice system. To be considered for POP, they must have demonstrated a significant commitment to sobriety and the recovery process. Intensive supervision techniques coupled with effective treatment alternatives and support services provide participants with the opportunity to make significant lifestyle changes. Further guidance and accountability are provided via regular meetings with team members, including U.S. District Court Judges, Assistant U.S. Attorneys, Federal Public Defenders, Pretrial Services Officers and Probation Officers. Participants work toward short- and long-term goals in order to maintain a drug-free, law abiding lifestyle and to effectuate life altering and life-saving change.

As of June 2018, 11 defendants have participated in POP, 9 of which have successfully completed the program, an 82 percent success rate. There were 14 active participants.

The Young Adult Opportunity Program (YAOP) - Southern *District of New York*

On July 1, 2015, the Southern District of New York implemented the Young Adult Opportunity Program, a pilot program providing for intensive pretrial supervision of non-violent young adults. The Program, which became permanent in the district in January of 2017, is intended to benefit young adults between the ages of 18 to 25, with consideration given to defendants over 25 years of age on a case by case basis. The program involves intensive supervision by Pretrial Services, with regular interaction with the two supervising program judges. The participants may be recommended by any judge, by Pretrial Services, by defense counsel, or the United States Attorney's Office, with participants being selected by Pretrial Services subject to the consent of the presiding judge. Upon approval, the participant's case is transferred to the program's district judge for all purposes.

The program is designed to provide structure and access to counseling, employment, treatment, and legal or other social services. Candidates for the program must agree to sign an agreement setting forth the obligations of the program and agree to a transfer of their case to the

program judge. Participants are expected to complete the program within 12 to 18 months and those who are successful may receive a shorter sentence, a reduction or deferral of the charges filed, or possibly dismissal of the charges altogether.

As of June 2018, 12 defendants have participated in YAOP, of which 10 have successfully completed the program, an 83 percent success rate. There were eight active participants.

CURRENT STUDY

The purpose of the current study is to assess the impact of a range of ATI programs on a sample of defendants from seven federal courts. Using data drawn from the Northern and Central Districts of California, the Central District of Illinois, the Eastern District of Missouri, New Jersey, and the Eastern and Southern Districts of New York, we assess the effectiveness of ATI programs on several outcomes. Specifically, using data drawn from the courts' Probation and Pretrial Services Automated Case Tracking System (PACTS), we provide a detailed description of the defendants who have participated in ATI programs within each of the participating districts. After describing this population, we assess the impact of participation in an ATI program on three pretrial supervision ultimate outcomes (failure to appear, rearrest, and technical violations), as well as two intermediate outcomes (employment and detected substance abuse usage while under supervision). Finally, among the defendants whose cases have been disposed by the court, we examine the sentences imposed and compare them to a matched group of defendants.

Importantly, the purpose of this report is not to establish the effectiveness of any one program. Given the relatively small number of defendants who participate in ATI programs within a single district, the current analysis assesses the impact of ATI programs taken together (across all programs included). Any positive findings are not to be considered evidence for a particular program individually but provide support for ATI programs within the federal courts more generally. In addition to assessing the impact across all programs, we study the effects of ATI programs for two distinct groups of defendants, namely those with substance abuse issues and youthful defendants. Doing so allows us to provide a more targeted assessment of types of ATI programs.

To accomplish these study objectives, we use propensity score matching (PSM), a quasi-experimental research method, to statistically match defendants who participated in an ATI program to a group of defendants who did not participate. Using PSM enables us to determine whether intrinsic differences exist between defendants who participated in ATI programming and those who

did not, and to make better "apples to apples" comparisons between defendants that differ only on their "exposure" to the various ATI programs while on pretrial supervision. Said another way, PSM accounts for potential confounding influences on the relationship between ATI participation and the various outcomes explored, which allows us to more directly estimate the effect of ATI program participation among the sample of defendants analyzed.

Data and Measures

Data used in the current study was drawn from the Probation/ Pretrial Services Automated Case Tracking System (PACTS). PACTS is a case management platform used in all 94 federal districts to record all activity associated with investigating and supervising defendants in the pretrial and post-conviction stages of federal cases. Data drawn from PACTS was used to evaluate the effects of participation in an ATI program on all pretrial defendants within the seven participating districts during the period of 2002-2017.[20] 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.[21] Of these clients, 268 participated in a program designed for defendants with substance abuse disorders, while 75 participated in programs designed for youthful defendants.

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 their 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) 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 effect of ATI program participation on several court-related outcomes. In line with existing research on pretrial services, three traditional pretrial outcomes were

[20] As noted above, many of the programs included in the current study began in recent years. This period captures both the more mature programs as well as those instituted more recently. Comparison cases were drawn from each district only in the years that an ATI program was operating to assure the best comparison group was achieved.

[21] Because PACTS has no standardized way of identifying ATI participation, the study team devised data entry procedures in which the dates of ATI program entry and exit and program outcomes were recorded. This required the study team to update PACTS to designate ATI participation and to ensure that other critical data elements were recorded accurately and consistently.

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) were assessed. Further, we examine the prevalence of a number of 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 relative low frequency of certain technical violations, making an assessment of individual violations inappropriate and statistically challenging.

Beyond the outcomes linked to time under supervision, we examined intermediate outcomes related to employment and sobriety. Specifically, we used two measures of employment, the number of days worked at least part-time, and the percentage of days worked at least part-time while on supervision ((total # of days working/ # of days on supervision)*100). Additionally we generated 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.

Matching Variables

Critical to isolating a relationship between participation in an ATI program and the outcomes described above is to account for any potential confounding variables. We include a host of individual-level characteristics in our analysis that may be predictive of program participation while on pretrial supervision and that, as suggested by prior research, are significant predictors of our outcomes. Table 1 provides descriptive statistics for the variables used in the matching specification described below for the full sample of pretrial defendants from across the seven study districts. Below we elaborate on the measurement of a number of these variables.

In addition to demographic characteristics (age, sex, and race) we include alleged offense type (i.e. violent offense, property offense, sex offense, drug offense, etc.) and citizenship status. The majority of these characteristics are captured using dummy (0/1) variables. Also included is the length of time on pretrial supervision, measured in months, as well as a count of total prior convictions. Importantly, we also incorporate a measure of risk of failure, as determined by the Pretrial Risk Assessment (PTRA), generally administered prior to the defendant's initial bail hearing. The PTRA contains 11 scored items and provides a risk score which has been shown to be a valid predictor of failure-to-appear, new criminal arrest, and technical violations that lead to revocation while on pretrial release (Cadigan, Johnson, & Lowenkamp, 2012; Cohen & Lowenkamp, 2018).

Table 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	**N**	**Percent**
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	

In the current study we utilized the total score provided by the PTRA, in which higher values indicate greater risk. We also match on a number of court-ordered conditions of release using a series of dummy variables (1=condition present). Finally, in addition to the defendant characteristics, we include the supervising district and year supervision began within the matching specification described below to account for differences in program implementation times and other potential jurisdictional differences across the participating districts.

Analytic Method

The current analysis employs propensity score matching (PSM) techniques in which we estimate "treatment" effects of ATI participation on a number of outcomes. 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 an independent variable's effects than is typically accomplished with standard regression procedures (Apel & Sweeten, 2010; Rosenbaum & Rubin, 1983). For the purposes of our analyses, "treated" defendants are those who participated in an ATI program. We utilized 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. Additionally, in order to control for both district- and year-effects, we include a series of dummy variables in the estimation of the propensity score to control for area and period heterogeneity in the probability of ATI participation. 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.

In addition to using a broad range of defendant characteristics in the matching specification, we include a series of district and year dummy variables in the estimation of the propensity score to control for jurisdictional and timeframe heterogeneity in the probability of ATI participation. Unfortunately, due to the small number of districts participating in the study, as well as the small number of ATI defendants in several of the districts, it was infeasible to estimate the propensity scores and execute the matching algorithm within each district individually, a process known as "matching within strata" (Leuven and Sianesi, 2003). However, to assure that each ATI participant was matched to a defendant within their district who had not participated in an ATI program, an

integer between one and seven was added to the estimated propensity score corresponding to the defendant's supervision district. Given the size of the caliper used in the matching specification, and the fact that the propensity score is bounded (0-1), this process assures that matches would only occur if the defendants were supervised in the same district, reducing the potential influence of between-district heterogeneity.

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).[22] For all three, to identify the best possible matches, we re-estimate the propensity score. 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.

Finally, because recent research has highlighted potential shortcomings of using PSM to estimate treatment effects when random assignment is not possible (King and Nielsen, 2018), we assess 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 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.

Below we present the results of our analysis, followed by a discussion of the policy implications for ATIs within the federal court system and an agenda for future research.

[22] Youthful offenders are relatively rare within the federal system. Given this, matching the youthful defendants to like defendants within their same district proved infeasible. Therefore, for this group only, ATI participants were matched to like defendants regardless of what district they were located.

RESULTS

A Description of Federal ATI Participants

Table 2 provides a description of the defendants from across the seven districts who participated in an ATI program during their time under the court's supervision. As can been seen in the first column, 51% of the 534 defendants were male, while 49% were female. Just over two-fifths of the study population (45.7%) comprised non-Hispanic whites, while blacks (19.1%) and Hispanics of any race (30.7%) accounted for smaller portions of the ATI group. The vast majority of defendants in the ATI sample (90.6%) were U.S. citizens. The average age among the ATI group was about 32 years (SD = 10.9) and the average time on supervision was 21 months (SD=11.16). The majority of the ATI group were charged with a drug offense (67.8%), while smaller proportions were charged with financial offenses (24.9%) and violent (3.18%) or weapons offenses (3.4%).[23] This group had an average of around 2 prior convictions (SD = 3.7) (Nearly one third of the ATI group was classified as low risk (PTRA Categories 1 & 2), while the remainder (68%) were moderate-to-high risk (Categories 3, 4, and 5).[24] The mean PTRA risk score was 7.5 (SD = 2.2) which corresponds to the moderate risk category. Finally, most defendants in the ATI group were subject to a number of conditions including substance abuse testing (83%), mental health (40%) and drug treatment (81%), as well as passport (67%), travel (77%) and weapons restrictions (45%). The second column shown in Table 2 describes the subset of ATI defendants who participated in programs that were focused on individuals with substance abuse disorders. This group also had a slightly higher proportion of female defendants (53%) than the full group, but were similar in terms of average age, number of prior convictions, and level of risk. This group also comprised a larger proportion that was non-Hispanic white (70.5%). Given the focus of this type of program, it is not surprising that the majority had been charged with a drug offense (85.8%). The conditions of release were also reflective of their current substance abuse in that nearly all had court-ordered drug testing and treatment requirements while a number of these defendants had additional conditions placed on them as well.

The third column of Table 2 provides the summary statistics for the defendants who participated in ATI programs for youthful defendants. This group was largely male (70.7%) and was

[23] If the defendant was charged with multiple offense types, our measure of current offense represents the most severe charge (in terms of potential penalty).

[24] Risk categories determined by the PTRA are normed against the pretrial population as a whole. That is, a designation of moderate risk represents an average level of risk in the context of the rest of the population. Risk assessment tools, including the PTRA are meant to help stratify caseloads and estimate a defendant's level of risk.

much younger than the full sample, with a mean age of 22.8 years (SD=2.74). Hispanics made up three fifths of this subset of defendants (60%), with non-Hispanic blacks representing a sizeable portion of the sample as well (33%). Although this group was similar in terms of risk as measured by the PTRA, due to their youth, they had fewer prior convictions (M=.24; SD=.59). Like the full group, the majority of the youthful defendant group were charged with a drug offense (73.3%), while smaller proportions were charged financial (20.0%) and violent offenses (5.3%), and most had similar conditions of release placed on them.

Overall, Table 2 provides a fairly in-depth look at this group of federal defendants who participated in an ATI program from across the participating districts. This description also hints that this group may be fundamentally different from the larger defendant population in a number of meaningful ways that might be related to the pretrial outcomes of interest. We explore this next by examining the pre-matching differences between the ATI participants and the other defendants included in the current analysis. The results of which are presented in Table 3.

Comparing ATI Participants to All Other Defendants

Table 3 highlights that the group of ATI participants analyzed are substantively distinct from the larger population of defendants who did not participate in an ATI program. In fact, ATI participants were significantly different from the unmatched comparison group on all of the measures we examined. Specifically, the ATI group had a larger proportion of females, differed significantly in terms of racial composition, was significantly younger in age, and had a much larger proportion of defendants charged with drug offenses compared to those defendants who did not participate in an ATI program. The ATI group also spent a significantly longer period of time on supervision (21 months vs. 14.7 months), had more prior convictions (1.99 vs 1.55), and higher levels of risk as measured by the PTRA. Defendants in the ATI group were also more likely to have certain court-ordered conditions of release, most notably drug testing and treatment, but also mental health treatment and weapons restrictions. These differences underscore the need to account for preexisting differences between the ATI group and all other defendants before drawing conclusions regarding the relationship between participation in an ATI program and the outcomes of interest.[25]

[25] We assessed whether prior violent offending presents a potential confounding variable not included in our list of matching covariates as those defendants with violent offending history may be excluded from participation in an ATI program. Within the current analysis, the ATI defendants were no less likely to have had a prior violent felony conviction than the non-ATI group (10.8% vs 11.6%; Chi-Square=.512; p = .474). Further, the program inclusion

We accounted for these differences by applying PSM techniques to match the individuals who participated in an ATI program to a more suitable sample of defendants who did not, but were comparable on all other observed characteristics. We detail the results of this analysis below.

Table 2: Description of ATI Participants from 7 U.S. Districts

	All ATI Participants (n=534)		SA ATI Paticipants (n=268)		YO ATI Participants (n=75)	
	N	**Percent**	**N**	**Percent**	**N**	**Percent**
Sex						
Female	262	49.06	142	52.99	22	29.33
Male	272	50.94	126	47.01	53	70.67
Race						
White	244.00	45.69	189	70.52	3	4.00
Black	102.00	19.10	54	20.15	25	33.33
Hispanic	164.00	30.71	19	7.09	45	60.00
Other	24.00	4.49	6	2.24	2	2.67
Citizenship						
Non-Citizen	50	9.36	6	2.24	15	20.00
U.S. Citizen	484	90.64	262	97.76	60	80.00
Current Offense Type						
Drug Offense	362	67.79	230	85.82	55	73.33
Financial Offense	133	24.91	19	7.09	15	20.00
Violent Offense	17	3.18	5	1.87	4	5.33
Weapons Offense	18	3.37	14	5.22	0	0
Other Offense	4	.75	0	0	1	1.33
	Mean	**SD**	**Mean**	**SD**	**Mean**	**SD**
Age	32.11	10.90	33.56	10.50	22.86	2.74
Time Under Supervision Months	21.03	11.16	18.64	9.65	27.60	16.47
Total Prior Convictions	1.99	3.69	2.53	4.31	.24	.59
PTRA Score	7.50	2.22	7.84	2.23	7.84	1.72
PTRA Category	**N**	**Percent**	**N**	**Percent**	**N**	**Percent**
Category 1	51	9.55	21	7.84	2	2.67
Category 2	114	21.35	50	18.66	14	18.67
Category 3	200	37.45	96	35.82	34	45.33
Category 4	123	23.03	69	25.75	21	28.00
Category 5	46	8.61	32	11.94	4	5.33
Conditions of Supervision	**Proportion**		**Proportion**		**Proportion**	
Alcohol Restrictions	.46		.73		.12	
Substance Abuse Testing	.83		.95		.83	
Drug Treatment	.81		.95		.72	
Mental Health Treatment	.40		.35		.80	
Passport Restrictions	.67		.43		.97	
Travel Restrictions	.77		.58		1.0	
Weapons Restrictions	.45		.69		.13	

Note: SA= "Substance Abuse Specific"; YO= "Young Offender Specific"

criteria for the majority of the programs in the current study did not suggest clear-cut exclusion due to a prior violent felony. For these reasons we believe its inclusion is unlikely to impact the results presented.

Table 3: Difference in Group Composition between ATI and Non-ATI Participants

	ATI Participants Mean (n=534)	All Defendants Mean (13,390)	T-Statistic	*p*-value
Sex (Male=1)	.509	.781	-14.78**	.000
Age at Intake	32.11	40.37	-14.54**	.000
White	.457	.390	3.10**	.002
Black	.193	.273	-4.07**	.000
Hispanic	.318	.245	3.86**	.000
Other Race	.045	.095	-3.91**	.000
U.S. Citizen	.906	.734	8.96**	.000
Drug Offense	.678	.304	18.40**	.000
Financial Offense	.249	.426	-8.13**	.000
Violent Offense	.032	.058	-2.58**	.010
Weapon Offense	.034	.066	-2.95**	.003
Other Offense	.007	.146	-9.06**	.000
Length of Supervision	21.03	14.69	11.77**	.000
PTRA Total Score	7.50	5.55	16.52**	.000
Total Prior Convictions	1.99	1.55	3.17**	.002
Alcohol Restrictions	.457	.247	10.94**	.000
Substance Abuse Testing	.833	.449	17.65**	.000
Drug Treatment	.805	.409	18.36**	.000
Mental Health Treatment	.401	.232	9.02**	.000
Passport Restrictions	.669	.796	-7.11**	.000
Travel Restrictions	.772	.863	-5.98**	.000
Weapons Restrictions	.449	.391	2.73**	.006

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

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 their period under pretrial supervision (n=534). This model included all of 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%) 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 Table 4 demonstrate that the matching procedure yielded treatment and comparison groups that show strong balance on the covariates considered.[26] 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 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 assure 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.

Table 5 presents the results most central to our evaluation of ATI programs within the participating districts. By comparing the outcomes after the statistically matching procedure was completed, it is possible to attribute any differences observed to participation in an ATI program while under supervision with relative certainty.

Matched Groups Regardless of Program Completion

In Panel A, which displays the results for all ATI participants (including those who successfully and unsuccessfully completed the program), we see a couple of notable differences between the treatment and the matched comparison groups. First, for the majority of our outcomes, no significant differences were observed between the ATI group and their matched counterparts. ATI participants were no more or less likely to be re-arrested, or fail to appear for court than the matched group, nor did they have a greater number of technical violations. ATI participants did have a greater number of technical violations associated with court-ordered location, employment, or association restrictions. We did, however, see favorable results for ATI participants in the interim outcomes of employment (as measured by the percentage of days employed) and substance abuse (as measured by the percentage of positive drug tests). In terms of employment, ATI participants worked a greater proportion of the days under supervision (42.9% vs 39.7%), (but there was no significant difference in the total number of days worked). Finally, ATI participants

[26] Matching results for the successful group of ATI defendants is provided in Appendix A.

had a lower percentage of positive drug tests (expressed as a percentage of total tests taken) compared to the matched group of defendants (10.6% vs 15.4%).

Matched Groups for Defendants Who Successfully Completed ATI Program

Seventy-two percent of the ATI participants in the study cohort successfully completed their ATI program. Panel B of Table 5 displays the results for the same set of outcomes for that subset (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. Among these matched groups, we observe that defendants who successfully completed their ATI program were significantly less likely to be re-arrested while on supervision. They also worked a greater proportion of days while on supervision (44.5% vs 38.3%) and had significantly fewer positive drug tests measured as a percentage of all drug tests taken (9% vs 12.3%). Taken together, the results presented in Table 5 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.

It is important to note there were some substantial differences between successful program completers and those that did not complete the ATI program. Specifically, the 365 successful completers were significantly older, on average, than the 65 defendants who were not successful (33.5 vs 26.26 years old). The successful group also had a significantly lower average risk score as measured by the PTRA (7.26 vs. 8.57) and were less likely to have mental health treatment as a condition of release. Finally, the successful group was composed of a greater proportion of white defendants than the unsuccessful group. These results echo those presented above for the full ATI group regardless of program outcome. While there are a number of significant differences between the entire ATI group and their matched comparisons, these differences are even larger for those defendants who completed the program successfully.

Table 4: 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	0.525
Age at Intake	33.32	32.64	1.90	97.30	1.03	0.304
White	0.50	0.48	-5.90	56.20	0.57	0.572
Black	0.17	0.19	8.60	54.10	-0.90	0.371
Hispanic	0.28	0.30	3.30	80.10	-0.48	0.629
Other Race	0.06	0.05	-3.80	80.50	0.57	0.569
U.S. Citizen	0.90	0.92	3.90	91.50	-0.76	0.447
Drug Offense	0.66	0.67	-4.70	94.10	-0.33	0.740
Financial Offense	0.27	0.26	2.60	93.10	0.43	0.670
Violent Offense	0.02	0.03	2.40	81.60	-0.59	0.559
Weapon Offense	0.04	0.04	2.20	84.80	0.00	1.000
Other Offense	0.01	0.01	-0.90	97.2	0.635	0.526
Length of Supervision	20.48	20.54	1.70	99.1	-0.07	0.944
PTRA Total Score	7.31	7.45	-0.10	92.6	-1.023	0.307
Total Prior Convictions	2.16	2.08	-2.40	81.2	0.384	0.701
Alcohol Restrictions	0.47	0.48	0.80	98.1	-0.126	0.9
Substance Abuse Testing	0.81	0.83	4.90	94.4	-0.89	0.374
Drug Treatment	0.80	0.80	-0.90	99	0.157	0.875
Mental Health Treatment	0.33	0.37	8.60	76.7	-1.316	0.189
Passport Restrictions	0.71	0.69	9.30	89.5	1.023	0.093
Travel Restrictions	0.77	0.76	-1.50	93.5	0.221	0.825
Weapons Restrictions	0.46	0.47	0.40	96.6	-0.063	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 proceedures are described in more detail in the methods section.

Table 5: ATT Effects of ATI Participation on Outcomes

Panel A: Assessment of Outcomes Among All ATI Participants

Outcome	Matched ATI Participants (n=507/534)	Matched Defendants (n=507)	Difference	S.E.	T-statistic
Failure to Appear	.014	.016	-.002	.008	-.23
Rearrest	.031	.043	.061	.016	-.76
Total Technical Violations	.363	.302	.061	.071	.86
Alcohol/Drug Restriction Violation	.341	.375	-.034	.091	-.37
SA Testing Requirement Violation	.357	.300	.057	.070	.81
Location / Employment / Association Restrictions Violation	.175	.132	.043	.026	1.65*
Treatment / Counseling / Training Related Violation	.106	.108	-.002	.020	-.10
Supervision Reporting / Custodial Conditions Violation	.043	.043	0	.013	0.00
Total Days Worked on Supervision	282.92	276.19	6.73	21.65	.31
Percentage of Days Worked on Supervision	42.91	38.69	4.22	2.41	1.75*
Percentage of Drug Tests with Positive Result	10.65	15.38	-4.73	1.53	-3.08**

Panel B: Assessment of Outcomes Among All Successful ATI Participants

Outcome	Matched ATI Participants (n=327/365)	Matched Defendants (n=327)	Difference	S.E.	T-statistic
Failure to Appear	.006	.009	-.003	.007	-.45
Rearrest	.021	.061	-.040	.021	-1.84*
Total Technical Violations	.211	.180	.030	.063	.49
Alcohol/Drug Restriction Violation	.211	.180	.030	.063	.49
SA Testing Requirement Violation	.278	.214	.064	.099	.65
Location / Employment / Association Restrictions Violation	.134	.110	.024	.028	.88
Treatment / Counseling / Training Related Violation	.080	.073	.007	.022	.28
Supervision Reporting / Custodial Conditions Violation	.037	.037	.000	.015	0
Total Days Worked on Supervision	316.43	283.20	33.23	28.50	1.17
Percentage of Days Worked on Supervision	44.55	38.33	6.23	3.00	2.07*
Percentage of Drug Tests with Positive Result	8.99	12.32	-3.33	1.77	-1.87*

* $p < .05$, ** $p < .01$

ATI Programs for Substance Abusing Defendants

Presented in Table 6 are the results of the ancillary analyses performed on the specified subsets of ATI participants. Panel A presents the results of a propensity score matching analysis in which the group of defendants who participated in an ATI program designed for those individuals whose alleged offense was related to a substance abuse disorder were matched to a comparison group that did not. Here the treatment group includes all defendants who participated in an ATI program regardless of whether they completed the program successfully. Appropriate matches were found for 267 out of 268 of these individuals, leaving only one off support. Results of this analysis suggest that substance abuse program participants were not significantly more or less likely to fail to appear in court or be rearrested. Substance abuse program participants had significantly fewer technical violations related to treatment, counseling or training conditions. Much like the full sample, this group worked a significantly greater proportion of their time on supervision than those who did not participate in a substance abuse ATI program (45% vs 35% of days on supervision), and a smaller proportion of drug tests with positive results (9.5% vs 20%).

As above, we repeated the matching analysis for the subset of ATI defendants who successfully completed the ATI program. Successful matches were obtained for 213 of the 236 successful substance abuse program completers. Among these matched groups, we observe that defendants who successfully completed the program were significantly less likely to be re-arrested while on supervision (< 1% vs 5.1% of the comparison group). Defendants who successfully completed the program also worked a greater proportion of days while on supervision (46% vs 32.5%) and had significantly fewer positive drug tests measured as a percentage of all drug tests taken (9.4% vs 16%). These results echo those presented above for the full ATI group regardless of program outcome. While there are a number of significant differences between the entire ATI group and their matched comparisons, these differences are even larger for those defendants who completed the program successfully.

ATI Programs for Youthful Defendants

Panel B presents the results of a similar analysis focused on those defendants who participated in a program designed for youthful defendants. It is important to note that as this group represents a relatively small population within the federal court system (few juveniles are charged in federal court), the pool of potential matches was limited to defendants who were less than 30 years of age. This allowed for a more accurate estimation of the propensity score among a

sample of defendants who were most likely to be matched to the ATI group. While no differences were observed in terms of re-arrest or failure to appear, the youthful defendants in the treatment group had a significantly greater number of technical violations. Specifically, the participants were more likely to have violated a substance abuse testing condition as well as a location, employment, or association restriction. However, the treatment group had significantly fewer violations related to treatment, counseling, or training court-ordered conditions, compared to the comparison group. Finally, the group of youthful defendants who participated in an ATI program worked a significantly greater number of days (468 vs 291), and a greater proportion of their time spent on supervision (53.6% vs 37.1%).

We again examined the differences between the youthful defendants who successfully completed the ATI program and a matched comparison group. Technical violations related to location, employment, or association restriction are also significantly greater than for the comparison group. However, successful program completers worked a significantly greater number of days during their time on supervision (615 vs 469) but there were no significant differences in the percentage of positive tests (9.9% vs 7%). These results should be interpreted with caution, however, given the extremely small number of individuals included in this group (n=29).

Table 6: ATT Effects of ATI Participation on Outcomes; Substance Abusers and Youthful Offenders

Panel A: Assessment of Outcomes Among Substance Abusing Sample of ATI Participants

Outcome	Matched ATI Participants (n=267/268)	Matched Defendants (n=267)	Difference	S.E.	T-statistic
Failure to Appear	.022	.011	.011	.012	.91
Rearrest	.037	.049	-.012	.023	-.52
Total Technical Violations	.498	.573	-.075	.121	-.62
Alcohol/Drug Restriction Violation	.453	.622	-.169	.141	-1.20
SA Testing Requirement Violation	.490	.573	-.083	.120	-.69
Location / Employment / Association Restrictions Violation	.206	.236	-.030	.042	-.74
Treatment / Counseling / Training Related Violation	.138	.221	-.083	.039	-2.13*
Supervision Reporting / Custodial Conditions Violation	.052	.045	.007	.019	.37
Total Days Worked on Supervision	265.75	240.83	24.92	27.95	.89
Percentage of Days Worked on Supervision	45.28	34.95	10.33	3.21	3.22**
Percentage of Drug Tests with Positive Result	9.53	19.97	-10.44	2.05	-5.09**

Panel B: Assessment of Outcomes Among Youthful Sample of ATI Participants

Outcome	Matched ATI Participants (n=61/75)	Matched Defendants (n=61)	Difference	S.E.	T-statistic
Failure to Appear	.016	.049	-.033	.032	-1.03
Rearrest	.049	.082	-.033	.045	-0.73
Total Technical Violations	.475	.049	.426	.169	2.52**
Alcohol/Drug Restriction Violation	.295	.541	-.246	.279	-.88
SA Testing Requirement Violation	.475	.049	.426	.169	2.52**
Location / Employment / Association Restrictions Violation	.328	.098	.230	.056	4.11**
Treatment / Counseling / Training Related Violation	.016	.115	-.099	.044	-2.25*
Supervision Reporting / Custodial Conditions Violation	.065	.098	-.033	.050	-.66
Total Days Worked on Supervision	468.13	290.92	177.21	77.41	2.29*
Percentage of Days Worked on Supervision	53.62	37.14	16.48	6.75	2.44**
Percentage of Drug Tests with Positive Result	14.41	16.04	-1.63	4.25	-.38

Impact of ATI Programs on Sentences Imposed

ATI Case Dispositions. After examining the potential for ATI programs to improve outcomes during supervision, we assessed the impact of ATI programs on the sentences imposed among this group of defendants. Panel A of Table 7 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 or not). Of the 416 ATI participants, a sizeable proportion (43%) had their cases dismissed outright, or received a 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 ended up receiving 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%) 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 Table 7.

ATI Sentences. After exploring the case dispositions the ATI participants we then examine the sentences imposed on this group as a whole and by program completion. Panel A of Table 8 displays the summary statistics for the ATI group as a whole (regardless of whether they successfully completed the program or not). The average prison sentence imposed on the ATI group is nearly 10 months, although this ranged widely from one day to 121 months. The median prison term imposed was 1.6 months. The median probation term imposed was 36 months (mean=40.3) and this ranged from 12 to 60 months. Again, however, there are substantial differences in the sentences imposed on those who successfully completed their ATI program and those who did not.

Table 7: 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.

The average prison term imposed on successful ATI participants was 4.5 months (median=.5 months) compared to 22.3 months (median=15) for those who did not complete the program successfully (Panels B and C). The difference between the median probation term imposed was much smaller (36 vs 54 months); however, it is important to note again that unsuccessful defendants were more likely to have received a prison term than those who completed their program successfully.

Table 8: Sentences Received by ATI Participants

Panel A: All ATI Participants who were Sentenced						
	Cases	Mean	Median	Std. Dev.	Min	Max
Prison Time in Months	135	9.944	1.6	18.589	0.033	121
Probation Time in Months	90	40.267	36	14.538	12	60
Panel B: Successful ATI Participants who were Sentenced						
	Cases	Mean	Median	Std. Dev.	Min	Max
Prison Time in Months	94	4.549	0.517	9.572	0.033	60
Probation Time in Months	78	39.077	36	14.269	12	60
Panel C: Unsuccessful ATI Participants who were Sentenced						
	Cases	Mean	Median	Std. Dev.	Min	Max
Prison Time in Months	41	22.315	15	26.821	0.033	121
Probation Time in Months	12	48	54	14.473	24	60

Sentences for Matched Groups Regardless of Program Completion. Next, we compare dispositions to that of a comparison group made up of a statistically matched set of defendants who did not participate in an ATI program. Panel A of Table 9 compares the sentences of these two groups and includes a total of 365 of the 416 ATI participants along with their matched counterparts.[27]

As can be seen in Panel A of Table 9, a much larger percentage of the comparison group received a prison sentence (80 percent), and none had their case dismissed. Finally, a smaller proportion received a probation term compared to the ATI group (20 percent vs. 24.4%) although these differences were not statistically significant. These results suggest that on average participation in an ATI resulted in a lower likelihood of incarceration and a greater chance of dismissal or non-custodial sentence.

[27] A total of 51 defendants fell 'off support' meaning there was no appropriate match available within the comparison group. Panel A of Table 8 presents the results for the matched groups which contain 365 defendants in each group.

Table 9: Comparison of Case Dispositions Reached for ATI and Matched Comparison Groups

Panel A: All ATI Participants	Matched ATI (n=365)		Matched Comparison (n=365)		T-Statistic	p-value
	N	%	N	%		
Were Dismissed / Deferred Resulting in Dismissal	160	43.8%	0	0.0%	16.86***	<.000
Received a Prison Sentence	107	29.3%	293	80.0%	-16.08***	<.000
Received a Probation Term	89	24.4%	73	20.0%	1.43	>.05
Panel B: Successful ATI Participants	Matched ATI (n=321)*		Matched Comparison (n=321)		T-Statistic	p-value
	N	%	N	%		
Were Dismissed / Deferred Resulting in Dismissal	162	50.5%	0	0%	18.06***	<.000
Received a Prison Sentence	74	23.0%	261	81.00%	-18.16***	<.000
Received a Probation Term	77	24.0%	60	19.00%	1.54	>.05
Panel C: Unsuccessful ATI Participants	Matched ATI (n=49)		Matched Comparison (n=49)		T-Statistic	p-value
	N	%	N	%		
Were Dismissed / Deferred Resulting in Dismissal	0	0%	0	0%	--	--
Received a Prison Sentence	37	75.50%	37	75.50%	0	1
Received a Probation Term	12	25.50%	12	25.50%	0	1

* The 8 cases not accounted for here received time served and a period of supervised release.

Sentencing Outcomes for Matched Groups of Successful Program Completers. While it is important to understand the impact of ATI participation on sentences imposed in the aggregate, it is pertinent to assess how these results vary between defendants who successfully completed their ATI program and those who did not. For that reason, these analyses were repeated twice more for both the successful (n=365) and unsuccessful (n=61) ATI participants whose pretrial cases have been closed. Results of these ancillary analyses, presented in Panels B and C of Table 9, indicate that the differences observed between the ATI and matched comparison groups were driven by the sentence reductions for successful participants. More specifically, successful ATI participants were more likely to have their cases dismissed and less likely to receive a prison sentence than the matched comparison group. However, these differences were not significant between the unsuccessful ATI group and their counterparts (i.e. these two groups received comparable sentences). Among the 49 unsuccessful participants who were matched, an equal proportion of defendants from each group had a prison sentence imposed. These results suggest that the ATI programs are resulting in reduced sentences for individuals who successfully met the requirements of the program but not for those who did not.

Table 10: Outcomes for Defendants Matched to Dismissed/Diverted ATI Cases

	N	%
Received a Prison Sentence	130	77.80%
Received a Probation Term	37	22.10%

Comparison of Non-ATI cases to Dismissed ATI Cases. Given the striking differences between the two group in terms of case disposition and sentences imposed, we thought it imperative to take 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. Table 9 displays the outcome of this matched group. 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 vast majority (77.8 percent) received a prison sentence, while the remainder (22.1 percent) received probation. (Results shown in Table 10). These results are even more striking when considering the length of the terms imposed on the comparison group, which are presented in Table 11. 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 in detail below.

Table 11: 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

Potential Savings among Sentenced Defendants. Finally, we assessed the differences in sentences between ATI participants (regardless of program completion) and a matched comparison. This analysis was repeated for 1) all ATI participants, 2) those who participated in an ATI program designed for substance abuse, and 3) those devoted to youthful defendants. Here we were interested in the likelihood that a defendant received a prison term (with or without a term of supervised release), was

sentenced to a term of probation, or was given a term of supervised release following time served in pretrial detention. Table 12 displays the results of this analysis.

As can be seen in Panel A of Table 12, ATI participants were significantly less likely to receive a prison term (55.5 percent vs 72.2 percent). Conversely, ATI participants were significantly more likely than their matched counterparts to receive a non-custodial sentence to probation (41.1 percent vs. 20.8 percent). Finally, a handful of ATI participants received a term of supervised release after time served in pretrial detention, while none of the matched defendants did, however these results were not statistically significant considering their infrequency. The results for the ATI programs devoted to defendants with substance abuse disorders were substantively similar to that of the full group (Panel B). These ATI participants were less likely to be sentenced to prison (73.7 percent vs 88.1 percent) and more likely to receive probation. However, the results for the small sample of youthful participants suggest only minor differences between the groups, with no statistically significant differences (Panel C).

Table 12: An Assessment of Type of Sentence Received for Matched Sets of Pretrial Defendants

Panel A: All ATI Participants	Matched ATI (n=202/237)	Matched Defendants (n=202)	T-Statistic	p-value
Prison Sentence	112 (55.5%)	160 (72.2%)	-5.25***	<.001
Probation Term	83 (41%%)	42 (20.8%)	4.39***	<.001
Term of Supervision after Time Served	7 (3.5%)	0 (0%)	2.69**	.007
Panel B: Substance Abuse ATI Participants	Matched ATI (n=118/149)	Matched Defendants (n=118)	T-Statistic	p-value
Received a Prison Sentence	87 (73.7%)	104 (88.1%)	-2.85**	.002
Received a Probation Term	24 (20.3%)	14 (11.9%)	1.78*	.030
Term of Supervision after Time Served	7 (3.5%)	0 (0%)	2.69**	.007
Panel C: Youthful ATI Participants	MatchedATI (n=15/20)	Matched Defendants (n=15)	T-Statistic	p-value
Received a Prison Sentence	10 (67%)	8 (53.3%)	.73	.237
Received a Probation Term	5 (33%)	7 (46.7%)	-.73	.237
Term of Supervision after Time Served	0 (0%)	0 (0%)	0.0	1.00

The results in Table 13 underscore these findings by assessing the differences in the severity (length) of the terms imposed. The average prison sentence received by ATI defendants was 9.22

months compared to 40.6 months among the matched defendants (see Panel A).[28] At the same time, on average ATI defendants were sentenced to a similar amount of time on probation (40.2 vs 37.9 months). The differences are similar for defendants who participated in substance abuse programs, although those defendants received slightly longer probation terms (shown in Panel B). Finally, as seen in Panel C of Table 13, there were no differences observed among youthful defendants although these results should be interpreted with some caution given the extremely small sample.

Table 13: An Assessment of Sentencing Outcomes for Matched Sets of Pretrial Defendar

Panel A: All ATI Participants

	Matched ATI (n=202/237)		Matched Defendants (n=202)		T-Statistic	p-value
	Count	Mean	Count	Mean		
Prison Time in Months	112	9.22	160	40.58	7.43***	<.001
Probation Time in Months	83	40.19	43	37.95	-.827	.205
TSR Time in Months	112	39.9	160	51.43	1.50	.068

Panel B: Substance Abuse ATI Participants

	Matched ATI (n=118/149)		Matched Defendants (n=118)		T-Statistic	p-value
	Count	Mean	Count	Mean		
Prison Time in Months	87	9.20	104	41.12	6.65***	<.001
Probation Time in Months	24	50	14	41.14	-1.72*	.044
TSR Time in Months	87	40.90	104	48.11	2.22*	.014

Panel C: Youthful ATI Participants

	Matched ATI (n=15/20)		Matched Defendants (n=15)		T-Statistic	p-value
	Count	Mean	Count	Mean		
Prison Time in Months	10	13.73	8	8.45	-.939	.179
Probation Time in Months	5	43.2	7	49.71	.782	.222
TSR Time in Months	10	37.2	8	42	.776	.223

[28] While a matching design, such as the one used here, represents one way to assess the potential for completion of an ATI program to lead to sentence reductions, these results should be verified using other means. The matched groups were similar on all measured characteristics, including PTRA risk score which is heavily influenced by criminal history, and offense severity score (another major sentencing criterion under the Federal Sentencing Guidelines). However, it is possible that the sentences the ATI defendants originally faced differed significantly from the non-ATI group. Gathering presumptive sentencing information for the entire sample was outside the scope of the current project. Moving forward, research should consider examining the sentencing reductions using information on presumptive sentences and assessing any reductions that resulted from successfully completing an ATI program more directly.

Considering ATI Participant Success and Sentences Imposed. Again, while it is important to understand the impact of ATI participation on sentences in the aggregate, it is critical to assess whether these results vary between defendants who successfully completed their ATI program and those who did not. For that reason, we repeated the analyses presented in Tables 12 and 13 twice more, taking into account whether the defendant successfully completed their ATI program.[29]

Similar to the results presented above, although to a larger degree, successful ATI participants 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%). Finally, a handful of ATI participants received a term of supervised release after time served in pretrial detention, while none of the matched defendants did, and these differences were statistically significant. More important are the sizeable differences in the length of terms received. Successful ATI participants 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 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.

As expected, among unsuccessful participants the differences were far less pronounced. 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 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.

The findings for substance abuse specific program participants are substantively similar to those presented above. Successful participants were less likely to be sentenced to prison and are imposed substantially shorter terms (4.3 months vs. 36.7 months on average). Successful participants were more likely to receive a probation term and these terms were slightly longer than their matched counterparts (48 months vs 32 months on average). On the flip side, unsuccessful ATI participants were equally as likely to be sent to prison and were sentenced to a similar amount of time (36.9 months vs 37.5 months). Again, as this group represents a small number of individuals, these numbers should be interpreted with some caution. In fact, only one of the

[29] Due to the extremely small number of youthful defendants who had been sentenced, it was not possible to break out the results for this group by program completion.

defendants matched to this group received probation so statistical tests of equality could not be computed.

The results presented above highlight the potential for ATI programs to provide cost savings in the form of reduced incarceration. This is especially true since shorter prison sentences are in addition to the differences in the significantly larger proportion of ATI defendants whose cases result in dismissal. Although a full analysis of the potential cost savings is not presented here, this is a topic ripe for future research.

Summary of Findings

In summary, the various analyses described in this article provide a fairly detailed description of the defendants who have taken part of ATI programs in the seven districts under study. Using quasi-experimental methods, we assessed the impact of participation in an ATI program on a host of outcomes. Given the number of analyses undertaken, we provide a summary of all the findings in a single table in Table 14, which are discussed briefly below.

For the group as a whole, our findings do not demonstrate significant differences in the pretrial supervision outcomes (FTA, rearrest, and technical violations), however, for the successful ATI participants alone, we see significant differences in the probability of rearrest. Specifically, defendants who successfully completed their ATI program were significantly less likely to be rearrested while under pretrial supervision than their matched counterparts. Further, findings suggest there are a number of positive outcomes associated with participation in an ATI program. For example, for each type of ATI program assessed, participants worked 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 often 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 drug users.

It was also true for youthful defendants who successfully completed the program. Finally, results suggest that participation in an ATI program results in fewer prison terms and reduced sentences. ATI participants were more likely to have their cases dismissed (or deferred and then dismissed), and were less likely to receive a prison sentence. Among those who successfully completed their ATI program yet still received a prison term, the terms imposed were significantly shorter. The implications of these results are discussed in further detail in the sections that follow, along with future research needs.

Table 14: Outcomes and Groups Assessed in Cross-District Evaluation of ATI Courts

ATI Groups Assessed Against Individually Matched Comparison Groups			
	All ATI Participants	**Substance Abuse (SA) Program Participants**	**Youthful Defendant (YD) Program Participants**
Pretrial Outcomes			
FTA	No Sig. Differences	No Sig. Differences	No Sig. Differences
Rearrest	No Sig. Differences**	No Sig. Differences**	No Sig. Differences**
Technical Violations	No Sig. Differences	No Sig. Differences	YD ATI > # of Technical Violations
Intermediate Life Outcomes			
# of Days Worked	No Sig. Differences	No Sig. Differences	YD ATI Worked > # Days**
% Days Employed	ATI Worked > % Days**	SA ATI Worked > % Days**	YD ATI Worked > % Days
% Positive Drug Test Results	ATI < Likely to have + Drug Test**	SA ATI < Likely to have + Drug Test**	No Sig. Differences**
Sentencing Outcomes (Only for those participants who have received a sentence)			
Prison Time Received	ATI Received Sig. < Prison Time**	SA ATI Received Sig. < Prison Time**	No Sig. Differences#
Probation Time Received	No Sig. Differences	No Sig. Differences	No Sig. Differences#
TSR Time Received	No Sig. Differences	SA ATI Received Sig. > TSR Time	No Sig. Differences#

Note: Not all outcomes will be available for all groups given some come after program/sentence is completed. Those still participating in program will have limited outcomes assessed. **Differences in rearrest were significant when examining only the successful ATI participants. # Due to sample size limitations, some analyses could not be repeated for the youthful ATI group individually.

DISCUSSION & CONCLUSION

Going Forward

As noted above, because the Judicial Conference has taken no formal position on re-entry 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 are 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 its importance, in its 5-year Strategic Plan, (developed 2016), the Probation and Pretrial Services Office of the Administrative Office of the U.S. Courts (AOUSC), encourages research and evaluation of such programs.[30] Though this study did not evaluate individual programs, its aggregated results represent an advancement in the knowledge base about federal ATIs as a whole.

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).

[30] On file with the Probation and Pretrial Services Office of the AOUSC.

More research is needed on the impact of ATI programs on its longer-term impact 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 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?

Another area of future study is the selection criteria for ATI participation in the federal system. A substantial body of research now indicates which drug-involved offenders are most in need of the full array of services embodied in the "10 Key Components" of drug courts (NADCP, 1997). These are the offenders 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 offenders—reduce crime approximately twice as much as those serving less serious offenders (Lowenkamp et al., 2005). 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?

Lastly, 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 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 offenders struggling upon reentry to the community. After long prison sentences, the majority are estranged from family, 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 re-entry with little improvements in those problems.

This "wake-up call" in the criminal justice system at large have 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 its included reforms are far shy of those systemic reforms recommended by the Colson Task Force in 2016, the legislation represents a bi-partisan 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 remain employed, refrain from illegal drug use, and most importantly avoid new arrests for criminal behavior while their case is pending in court. As noted by Judge Carr (2017), this alone allows 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 allows defendants a better foot forward". Success on pretrial supervision begets success at life beyond criminal justice involvement.

REFERENCES

Anspach D. F., & Ferguson, A. S. (1999). *Cumberland County's drug court program: An evaluation report of Project Exodus*. Washington, DC: U.S. Department of Justice, Office of Justice Programs, Drug Courts Program Office.

Apel, R. J., & Sweeten, G. (2010). Propensity score matching in criminology and criminal justice. In A. R. Piquero, & D. Weisburd (Eds.), The Handbook of Quantitative Criminology (pp. 543-562). New York, NY: Springer.

Becker, S. O., & Ichino, A. (2002). Estimation of average treatment effects based on propensity scores. The stata journal, 2(4), 358-377.

Belenko, S. (1998). Research on drug courts: A critical review. *National Drug Court Institute Review, 1*, 1-27.

Belenko, S. (2001). *Research on drug courts: A critical review 2001 update*. New York: The National Center on Addiction and Substance Abuse at Columbia University.

Bonta, J., Wallace-Capretta, S., Rooney, J., & McAnoy, K. (2002). An outcome evaluation of a restorative justice alternative to incarceration. *Contemporary Justice Review, 5(4),* 319-338.

Cadigan, T. P., & Lowenkamp, C. T. (2011b). Preentry: The key to long-term criminal justice success. *Federal Probation,* 75, 74.

Cadigan, T. P., Johnson, J. L., & Lowenkamp, C. T. (2012). The re-validation of the federal pretrial services risk assessment (PTRA). *Federal Probation,* 76, 3.

Carr, J. J. G. (2017). Why pretrial release really matters. *Federal Sentencing Reporter*, 29(4), 217-220.

Clark, J. (2007). *The role of traditional pretrial diversion in the age of specialty treatment courts: Expanding the range of problem-solving options at the pretrial stage*. Washington, DC: The Pretrial Institute.

Cohen, T. H., & Lowenkamp, C. (2018). Revalidation of the federal pretrial risk assessment instrument (PTRA): Testing the PTRA for Predictive Biases.

Cotti, C. D., & Haley, M. R. (2014). Estimating the effectiveness of a misdemeanor drug diversion program using propensity score matching and survival analysis. *The Social Science Journal, 51,* 638-644.

Dannerbeck, A. P., Sundet, P., & Llyod, K. (2002). Drug courts: Gender differences and their implications for treatment strategies. *Corrections Compendium, 27(12),* 1-8.

Dirks-Linhorst, P. A., & Linhorst, D. M. (2012). Recidivism outcomes for suburban mental health court defendants. *American Journal of Criminal Justice,* 37, 76-91.

Feeley, M. M. (1983). *Court reform on trial: Why simple solutions fail?* New York: Basic Books.

Finigan, M. (1998). *An outcome program evaluation of the Multnomah County S.T.O.P. drug diversion program.* West Linn, OR: State Justice Institute.

Gottfredson, D. C., & Exum, M. L. (2002). The Baltimore city drug treatment court: One-year results from a randomized study. *Journal of Research in Crime and Delinquency, 39(3),* 337-356.

Guo, S., & Fraser, M. W. (2010). Propensity score analysis: Statistical methods and applications. Thousand Oaks, CA: Sage.

Hartley, R. E., & Phillips, R. C. (2001). Who graduates from drug courts? Correlates of client success. *American Journal of Criminal Justice, 26(10),* 107-119.

Herinckx, H. A., Swart, S. C., Ama, S. M., Dolezal, C. D., & King, S. (2005). Rearrest and linkage to mental health services among clients of the Clark County mental health court program. *Psychiatric Services, 56,* 853-857.

Hiday, V. A., & Ray, B. (2010). Arrests two years after exiting a well-established mental health court. *Psychiatric Services, 61,* 463-468.

Hiday, V. A., Wales, H. W., & Ray, B. (2013). Effectiveness of a short-term mental health court: Criminal recidivism one year postexit. *Law & Human Behavior, 37(6),* 401-411.

Hughes, J. M. (2008). Results-based management in federal probation and pretrial services. *Federal Probation*, 72, 4.

Kalich, D. M., & Evans, R. D. (2006). Drug court: An effective alternative to incarceration. *Deviant Behavior, 27,* 569-590.

King, G., & Nielsen, R. (2016). Why propensity scores should not be used for matching. Copy at http://j. mp/1sexgVw Download Citation BibTex Tagged XML Download Paper, 378.

Laura and John Arnold Foundation. (2013). Pretrial criminal justice research. Retrieved December 1, 2018: http://www.arnoldfoundation.org/wp-content/uploads/2014/02/LJAF-Pretrial-CJ-Research-brief_FNL.pdf.

Laura and John Arnold Foundations. (2018, September 20). The Square One project unites researchers, policymakers, practitioners to conceptualize a new criminal justice paradigm. [Blog post]. Retrieved from https://www.arnoldventures.org/newsroom/the-square-one-project-unites-researchers-policymakers-practitioners-to-conceptualize-a-new-criminal-justice-paradigm/

Lowenkamp, C. T., & Latessa, E. J. (2004). Understanding the risk principle: How and why correctional interventions can harm low-risk offenders. *Topics in Community Corrections*, 2004, 3-8.

Lowenkamp, C. T., Holsinger, A. M., & Latessa, E. J. (2005). Are drug courts effective: A meta-analytic review. *Journal of Community Corrections*, 15(1), 5-11.

Lowenkamp, C. T., VanNostrand, M., & Holsinger, A. M. (2013). The hidden costs of pretrial detention. Laura and John Arnold Foundation. Retrieved from https://www.arnoldventures.org/wp-content/.../LJAF_Report_hidden-costs_FNL.pdf

Leuven, E., & Sianesi, B. (2003). PSMATCH2: Stata module to perform full Mahalanobis and propensity score matching, common support graphing, and covariate imbalance testing. <http://ideas.repec.org/c/boc/bocode/s432001.html> Version 4.0.11.

MacKenzie, B. (2016). The judge is the key component: The importance of procedural fairness in drug-treatment courts. *Court Review*, 52, 8.

Marlowe, D. (2010). *Research update on adult drug courts.* Alexandria, VA: National Association of Drug Court Professionals.

McNeil, D. E., & Binder, R. L. (2007). Effectiveness of a mental health court in reducing criminal recidivism and violence. *American Journal of Psychiatry, 164,* 1395-1403.

Mitchell, O., Wilson, D. B., Eggers, A., & MacKenzie, D. L. (2012). Assessing the effectiveness of drug courts on recidivism: A meta-analytic review of traditional and non-traditional courts. *Journal of Criminal Justice, 40,* 60-71.

National Association of Drug Court Professionals. Drug Court Standards Committee, & United States. Drug Courts Program Office. (1997). *Defining drug courts: The key components.* US Dept. of Justice, Office of Justice Programs, Bureau of Justice Assistance.

National Association of Drug Court Professionals. (2013). *Adult drug court best practice standards.* Retrieved December 1, 2018: https://www.nadcp.org/wp-content/uploads/2018/12/Adult-Drug-Court-Best-Practice-Standards-Volume-I-Text-Revision-December-2018-1.pdf

Peters, R. H., & Murrin, M. R. (1998). *Evaluation of treatment-based drug courts in Florida's First Judicial Circuit.* Tampa, FL: University of South Florida, Department of Mental Health Law and Policy.

Peters, R. H., & Murrin, M. R. (2000). Effectiveness of treatment-based drug courts in reducing criminal recidivism. *Criminal Justice and Behavior, 27(1),* 72-96.

Porter, R., Lee, S., & Lutz, M. (2011). *Balancing punishment and treatment: Alternatives to incarceration in New York City.* New York: Vera Institute of Justice.

Redlich, A. D., Steadman, H. J., Callahan, L., Robbins, P. C., Vessilinov, R., & Ozdgru, A. A. (2010). The use of mental health court appearances in supervision. *International Journal of Law & Psychiatry, 33, 272-277.*

Roberts-Gray, C. (1994). *Process evaluation: SHORT program, 1993-1994.* Austin, TX: Resource Network.

Rosenbaum, P. R., & Rubin, D. B. (1983). The central role of the propensity score in observational studies for causal effects. *Biometrika*, 70, 41-55.

Rosenbaum, P. R., & Rubin, D. B. (1985). Constructing a control group using multivariate matched sampling methods that incorporate the propensity score. *The American Statistician*, 39(1), 33-38.

Rossman, S. B., Roman, J. K., Zweig, J. M., Rempel, M., & Lindquist, C. H. (2011). *The Multi-site Adult Drug Court Evaluation: Executive Summary.* Washington, DC: Urban Institute Policy Center.

Scott-Hayward, C. S. (2017). Rethinking federal diversion: The rise of specialized criminal courts. *Berkley Journal of Criminal Law, 22(2),* 47-109.

Spohn, C., Piper, R. K., Martin, T., & Frenzel, E. D. (2001). Drug courts and recidivism: The result of an evaluation using two comparison groups and multiple indicators of recidivism. *Journal of Drug Issues, 31(1),* 149-176.

Sung, H. (2011). From diversion to reentry: Recidivism risks among graduates of an alternative to incarceration program. *Criminal Justice Policy Review, 22(2),* 219-234.

Urban Institute (2016). Transforming prisons, restoring lives: Final recommendations of the Charles Colson Task Force on Federal Corrections. Urban Institute. Retrieved December 1, 2018: https://www.urban.org/research/publication/transforming-prisons-restoring-lives.

U.S. Department of Justice. (2006). Report to Congress on the feasibility of federal drug courts. Retrieved December 1, 2018: https://www.justice.gov/archive/olp/pdf/drug_court_study.pdf.

U.S. District Court (2018). Table H-1—Federal Pretrial Services Federal Judicial Caseload Statistics Retrieved December 1, 2018: http://www.uscourts.gov/statistics/table/h-1/federal-judicial-caseload-statistics/2018/03/31.

U.S. District Court (2017). Pretrial services release and detention, excluding immigration cases, for the 12-month period ending September 30, 2016. Retrieved December 1, 2018: http://www.uscourts.gov/sites/default/files/data_tables/jb_h14a_0930.2017.pdf.

U.S. General Accounting Office. (1997). *Drug courts: Overview of growth, characteristics, and results.* Washington, DC: U.S. General Accounting Office.

U.S. Government Accountability Office. (2016). *Federal prison system: Justice has used alternatives to incarceration, but could better measure program outcomes*. Washington DC: Report to Congressional Committees, United States Government Accountability Office.

U.S. Sentencing Commission. (2017). Federal alternative-to-incarceration court programs. Washington, D.C. : The Commission. Retrieved from https://www.ussc.gov/research/research-reports/federal-alternative-incarceration-court-programs

Vance, S. E. (2011). Federal reentry court programs: A summary of recent evaluations. *Federal Probation, 75(2),* 108-121.

Vance, S. E. (2018). Overview of Federal Pretrial Services Initiatives from the Vantage Point of the Criminal Law Committee. *Federal Probation*, 82, 30.

Welsh, B. C., & Rocque, M. (2014). When crime prevention harms: A review of systematic reviews. Journal of Experimental Criminology, 10(3), 245-266.

Wilson, D., Mitchell, O., & MacKenzie, D. (2006). A systemic review of drug court effects on recidivism. *Journal of Experimental Criminology, 4,* 459-487.

Zimring, F. E. (1974). Measuring the impact of pretrial diversion from the criminal justice system. *The University of Chicago Law Review, 41(2),* 224-241.

Zlatic, J. M., Wilkerson, D. C., & McAllister, S. M. (2010). Pretrial diversion: The over-looked pretrial services evidence-based practice. *Federal Probation, 74(1),* 28-33.

Court Cases Cited

Gall v. United States, 552 U.S. 38 (2007).
Pepper v. United States, 562 U.S. 476 (2011).
United States v. Booker, 543 U.S. 220 (2005).

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 proceedure is described in more detail in the methods section.