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THIS ISSUE IN BRIEF

DEPARTMENTS

Expanding the Analysis: Alternatives to Incarceration across 13 Federal Districts

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THOUGH ALTERNATIVES TO incarceration courts have existed in the state system for nearly 30 years, such courts are a relatively new phenomenon in the federal system. Alternatives to incarceration (ATI) courts, or "front-end" courts as they are sometimes known, are generally based on the "drug court" model first used in the state court in Miami-Dade County in 1989 (Scott-Hayward, 2017). Specialty courts that borrow from the drug court model and target other populations (such as justice-involved veterans, juveniles, and the mentally ill) have continued to proliferate and are nearly ubiquitous. As reported in the November 2020 version of the Drug Courts fact sheet, over 3,000 drug courts are operating throughout the United States, half of which are adult drug courts. Although these courts vary in target populations and resources, programs generally comprise a multidisciplinary team of judges, prosecutors, defense attorneys, community corrections officers, and treatment service professionals. These programs also frequently encourage prosocial support by engaging family and others in the community in the participants' success.

Recognizing the potential for judge-involved programs to reduce recidivism, mitigate decades-long overincarceration, and direct resources where they are most impactful, the federal government provides considerable support for the drug court model through financial support of drug court programs, research, and various drug court initiatives. For example, each year the Bureau of Justice Assistance (BJA) and Substance Abuse and Mental Health Administration (SAMHSA) distribute grants to states and localities to support the creation and enhancement of drug courts. In fiscal year 2017, over $100 million in federal funding was appropriated for drug courts.[1]

Until recently, alternatives to incarceration court programs in the federal system were few, with little variety in the populations targeted. Most targeted defendants were charged with offenses related to their substance abuse dependence or addiction. The popularity of "problem solving" courts in state systems led to experimentation in the federal system, especially for reentry courts, which focus on defendants who have returned to the community following incarceration. Concurrently, support for alternatives to incarceration court programs has gained momentum due to a confluence of factors (Baber et al., 2019):

- 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 policymakers 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.

Over the last decade, problem-solving courts have continued to expand in the federal system. As of August 2021, there are 137 federal problem-solving courts. Of the total programs, 52 (40 percent) are "front end" or Alternatives to Incarceration programs.

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[1] *Federal Support for Drug Courts: In Brief,* Congressional Research Service, Updated March 2018.

The remainder are post-conviction reentry programs. Of the 52 ATI programs, 39 (75 percent) adopt a deferred prosecution or diversion model, while the remaining programs follow a post-plea or pre-sentencing model. The current analysis is dedicated to a sample of purely ATI programs and does not include any reentry programs.

Recognizing the proliferation of ATI programs in the federal system, several districts that had been at the forefront of implementing these programs sought to contribute to the knowledge base about the effectiveness of such programs. In 2018, the pretrial services offices of the District 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. Specifically, the study quantified 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 quantified defendants' improvements in two supervision domains that are well-known correlates of criminal behavior: illicit drug use and employment. Finally, among the defendants whose cases have been disposed by the court, the study examined the sentences imposed (Wolff et al., 2019).

That study, based on data drawn from the probation and pretrial services case management system, Probation and Pretrial Services Case Tracking System (PACTS), comprised 13,924 defendants. Of the full sample of defendants drawn from the seven participating districts, 534 participated in an ATI program during their time under court-ordered pretrial supervision.

The results of the first study were encouraging. First, successful graduation rates, at 87 percent, were very high.[2] Though we would hesitate to make a direct comparison to state and local drug court graduation rates, as context, we note that according to a survey of drug courts across the country, the average graduation rate was 59 percent in 2014, with

most graduation rates falling between 50 and 75 percent (Marlowe, Hardin, & Fox, 2016).

Secondly, the results suggest that defendants who participated in an ATI program exhibit more favorable outcomes than their matched counterparts who did not participate. Findings 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. ATI participants also tested positive for illicit substances less frequently than the comparison group. Study results suggest that participation in an ATI program, successfully completed or not, does not impact the likelihood of the defendant failing to appear in court or violating conditions of pretrial release. Importantly, only defendants who successfully completed the ATI program were significantly less likely to be rearrested while under pretrial supervision than their matched counterparts. Though defendants who participated in a program (without regard to program completion) demonstrated improved outcomes compared to matched defendants who did not participate in a program, defendants who *completed* a program demonstrated outcomes superior to those who *participated but did not successfully complete*. Taken together, the results suggest that ATI program participation is associated with improved outcomes, such as increases in employment and fewer positive drug tests, and, among successful participants, a lower probability of rearrest. This suggests that completion of an ATI program has—albeit demonstrated (to date) as relatively short-term—a protective effect on participants.

Thirdly, participants who fulfill their commitments to the program and graduate from the program receive substantially more favorable dispositions of their cases.

Research Objectives

Encouraged by the results and armed with sustained commitment by the leadership of the participating districts, the original seven study districts enlisted the cooperation of six additional districts to extend and expand the study. These newly added districts joined the study group by agreeing to contribute their programs' data to the study cohort, and where possible, to contribute financial support

as well. The primary research goal of this expanded study was to determine if, using a more recently assembled dataset, the results of the first study are generalizable to a larger set of defendants in other programs in other districts. The study was conducted under contract with Dr. Kevin Wolff, who holds a faculty position at the John Jay College of Criminal Justice, part of the City University of New York.

Secondly, but equally as important, the research objectives included an empirical assessment of the demographics of ATI participants in the context of program entry and successful completion metrics. Given the recent attention to racial injustices in all aspects of the nation's criminal justice systems, close attention by problem-solving courts to the racial and ethnic composition of defendants who are *accepted* into programs, and who go on to *complete* those programs, is fundamental to the fair administration of justice. This is equally relevant for alternatives to incarceration courts in the federal system. Depending on the program's model, defendants who are accepted to an ATI program are eligible for a non-custodial sentence, reduced custody term, or dismissal of their federal case conditional to complying with the requirements of the program. It is not hyperbolic to state that the stakes are very high. A term of custody imposed on non-participants and failed participants alike poses significant life-long negative consequences, which, if avoided, can allow defendants the chance to continue their rehabilitation in the community.

While interest in problem-solving courts generally, and specifically in demographic fairness, is relatively recent in the federal system, over a decade ago public policy and criminal justice professionals at the state and local levels began to focus on whether demographic disparities exist in these courts, thus possibly exacerbating systemic injustices in the criminal justice system at large. There is evidence that this concern was not unfounded. For example, in the United States, Black individuals are underrepresented in drug courts by approximately 15 to 20 percentage points compared with the arrestee, probation, and incarcerated populations, and Hispanic or Latino individuals are underrepresented by approximately 10 to 15 percentage points (Marlowe et al., 2016). Among those who enter drug court programs, Black, Hispanic, and female participants are less likely than White males to graduate successfully from many programs (Finigan, 2009; Marlowe, 2013; Marlowe et al., 2016).

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[2] Of the 416 ATI defendants whose program was completed, 363 were successful graduates. Fifty-three had their programs terminated unsuccessfully, and the remaining 96 were still participating in a program at the time the data were drawn.

Today criminal justice professionals, including drug court professionals, maintain their eye on the goal of racial and gender equity. In 2010, the board of directors of the National Association of Drug Court Professionals (NADCP), which describes itself as the premier training, membership, and advocacy organization for the treatment court model in the United States and 20 other countries,[3] issued a resolution directing treatment courts to determine whether racial or ethnic disparities exist in their programs and to take reasonable corrective measures to eliminate any disparities that are identified. More recently, the National Center for State Courts (NCSC) partnered with NADCP to develop a tool known as the Equity and Inclusion Assessment Tool.[4] Developed by NCSC and announced in 2020, the tool keeps track of who gets referred to these courts and who is more likely to get the most out of the programs. This tool is also applicable to problem-solving courts other than drug courts.

Recognizing the importance of racial and gender equity, in 2019 the study group designed and developed a Decision Support System (DSS) report[5] that displays the racial and gender composition of a court's ATI program in the context of the entire defendant pretrial services supervision caseload. This report uses extant data from PACTS, and thus requires no additional data entry or separate tracking systems. This report is available to any district that wants to monitor the racial and gender composition of its program(s).

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 27,283 defendants. Of the full sample of defendants drawn from the 13 districts, 1000 defendants participated in an ATI program. Sixty-three percent (63.4 percent) of the participants in the study cohort successfully completed their ATI program, fifteen percent (15.1 percent) were unsuccessfully discharged from the program, and twenty-one percent (21.5 percent) were still enrolled in the program as of the date of the data extract.

The following programs were included in the original study:

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[3] About NADCP - NADCP.org

[4] Is your drug court serving all the people it should? | NCSC.

[5] The report was developed by the Eastern District of New York and is named *PTS Active ATI and Regular Supervision Cases Demographics*.

- **Sentencing Alternatives Improving Lives (SAIL)**, operated by the U.S. Pretrial Services Office of the Eastern District of Missouri. This population contributed 36 cases, or 3.6 percent of the total cohort.
- **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). This program contributed 87 cases, or 8.7 percent.
- **Conviction and Sentencing Alternatives (CASA)**, operated by the U.S. Pretrial Services Office of the Central District of California. By a significant margin, this program, with 297 cases (29.7 percent), was the largest contributor to the study's cohort.
- **Alternatives to Detention Initiative (PADI)**, operated by the U.S. Probation Office of the Central District of Illinois. Unlike other programs in the study, PADI has been inactive for several years. This program contributed 148 cases, 14.8 percent of the total. This program represented the next largest contributor to the cohort. All the other programs represented single-digit percentages of the total cohort. This means that findings of this study will be heavily weighted in favor of this and the CASA program.
- **Young Adult Opportunity Program (YAOP)**, operated by the U.S. Pretrial Services Office of the Southern District of New York. This program contributed 43 cases, or 4.3 percent of the study cohort.
- **Pretrial Opportunity Program (POP)**, operated by the U.S. Pretrial Services Office of the Eastern District of New York. The POP program contributed 45 ATI cases, or 4.5 percent.
- **Special Options Services (SOS)**, operated by the U.S. Pretrial Services Office of the Eastern District of New York. SOS contributed 72 cases, or 7.2 percent of the total. Combined, the two programs in the Eastern District of New York contributed 117 cases, or 11.7 percent of the total.
- **Pretrial Opportunity Program (POP)**, operated by the U.S. Pretrial Services Office of the District of New Jersey. This program contributed 31 cases, or 3.1 percent of the total.

The following programs augmented the original dataset by contributing their case data:

- **Repair Invest Succeed Emerge Program (RISE)**, operated by the U.S. Probation

Office of the District of Massachusetts. This 12- to 18-month program, which began in 2015, targets defendants with (a) serious history of substance abuse; or (b) history that reflects significant deficiencies in family support, education, decision-making, or prosocial peer networks because of which the defendant would benefit from a structured program under intense supervision. This program contributed 59, or 5.9 percent of the study's cohort.

- **Kapilipono**, operated by the U.S. Pretrial Services Office of the District of Hawaii. This program began in 2019 and is 12-18 months in duration. Being a new program, Kapilipono contributed only 5 cases, or 0.5 percent of the total.
- **Sentencing Options that Achieve Results (SOAR)**, operated by the U.S. Pretrial Services Office of the Northern District of Illinois. This program targets young adult defendants (generally under 30 years old), was begun in 2016, and is 18 to 24 months in duration. SOAR contributed 28 cases, or 2.8 percent.
- **Law Abiding Sober Employed and Responsible Lifestyle (LASER)**, operated by the U.S. Probation Office of the District of New Hampshire. Begun in 2010, this 12-month program targets defendants with a criminal history that is likely attributable to drug abuse or addiction. This program contributed 59 cases, or 5.9 percent.
- **Drug Reentry Alternative Model (DREAM)**, operated by the U.S. Probation Office of the Western District of Washington. This 12- to 24-month program that began in 2012 targets defendants whose criminal conduct appears to be motivated by a substance use disorder. This program contributed 71 cases, or 7.1 percent.
- **Deferred Sentencing** of the U.S. Probation Office of the District of Rhode Island is a 6- to 12-month program. This program, which began in 2016, has flexible eligibility criteria, but generally is offered to defendants with little or no prior criminal history, supportive family, strong community connections, or other positive influences; and is motivated to effect positive change. This program contributed 19 cases, or 1.9 percent.

ATI and non-ATI cases were drawn from PACTS using the approximate date when the ATI program commenced in the district. For all districts, the supervision ending cut-off date was December 30, 2019.

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 New Hampshire, we selected cases that began Jan 1, 2010. For all other districts, we selected cases that began pretrial supervision beginning January 1, 2012.

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

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

Outcome Variables

The goal was to examine the relationship of ATI program participation and program completion on several pretrial services outcomes. In line with existing research on pretrial services, three familiar pretrial outcomes were examined: 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[6] pending case disposition (a count of technical violations during supervision period).

In addition to the pretrial outcomes discussed above, we examined intermediate supervision outcomes related to employment and sobriety. Specifically, we used two measures of employment, the number and percentage of days worked at least part-time while on supervision ((total # of days working/# of days on supervision) *100). Additionally, we created a measure that represents the percentage of drug tests where there was a positive result. This measure accounts for the fact that defendants participating in an ATI program were often required to undergo additional screenings and are under supervision for a longer amount of time. Table 1 presents the descriptive statistics for the sample of ATI defendants included in the analysis.

Methodology

Much like its predecessor, the current study employs propensity score matching (PSM) techniques to estimate "treatment" effects of ATI participation on the outcomes 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 used PSM techniques to match the ATI group to a group of defendants who had not participated in an ATI program yet were comparable in terms of their other characteristics. Based on this approach, two defendants with

TABLE 1.

Descriptive Statistics for Analysis of Alternative to Incarceration Courts across 13 U.S. Districts (n=1,000)

		N	%
Sex	Female	456.00	45.60%
	Male	544.00	54.40%
Race	Non-Hispanic White	457.00	45.70%
	Non-Hispanic Black	194.00	19.40%
	Hispanic	296.00	29.60%
	Non-Hispanic Other/ Unknown	53.00	5.30%
Offense Type	Drug Offense	642.00	64.20%
	Financial Offense	260.00	26.00%
	Other Offense	11.00	1.10%
	Violent Offense	28.00	2.80%
	Weapons Offense	59.00	5.90%
PTRA Risk Category	Category 1	77.00	7.70%
	Category 2	201.00	20.10%
	Category 3	396.00	39.60%
	Category 4	237.00	23.70%
	Category 5	89.00	8.90%
ATI Program Outcomes	Still Active	215.00	21.50%
	Unsuccessful Program Discharge	151.00	15.10%
	Successful Program Completion	634.00	63.40%

	Mean	Median	SD	Min	Max
Age at Intake	32.05	29.19	10.25	18.32	71.66
Time in Program	14.40	12.47	10.06	0.07	80.07
New Charge / Rearrest During Supervision	0.12	0.00	0.33	0.00	1.00
Technical Violations	2.08	0.00	5.61	0.00	60.00
FTAs	0.01	0.00	0.08	0.00	1.00
Drug Tests Administered	42.11	31.00	38.96	0.00	223.00
Percent Positive Drug Tests	11.54	2.86	21.35	0.00	100.00
% of Days on Supervision Worked	53.05	52.98	45.69	0.00	292.26

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[6] Technical violations are violations of court-imposed conditions of release.

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

Pre-matching Differences between ATI and non-ATI Defendants

We examined the differences between defendants who had participated in an ATI program compared to those who had not participated. (Of the 785 defendants who had completed their program at the time of the data extraction, 634 of those successfully completed, an 81 percent success rate.) This comparison revealed that the ATI group was significantly different on each of the 20 measures we examined and ultimately used in our matching specification. For example:

- Men comprise a lower percentage of ATI participants (54.5 percent vs. 78.7 percent).
- ATI participants are younger than general population (mean age 32 vs. 36).
- Whites comprise a higher percentage of ATI participants (45.7 percent vs. 37.6 percent).
- Hispanics comprise a higher percentage of ATI participants (29.6 percent vs. 22.9 percent).
- ATI defendants are higher risk as measured by the Pretrial Risk Assessment (PTRA) (mean raw score[7] of 7.6 vs. 5.8 PTRA).

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 the period under pretrial supervision (n=1000). This model included all the measures used 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 caliper setting equal to 0.2 of the standard deviation of the propensity score (Austin, 2011). Using these specifications, matches were found for all but 83 (8.3 percent) of the defendants in the treatment group. The remaining 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 matching procedure yielded treatment and comparison groups that show strong balance on the covariates considered.[8] 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 ensure that jurisdictional differences did not confound the results. The resulting matched groups, comprising 917 defendants who participated in an ATI program and 917 who did not, made it possible to assess the relationship more accurately between ATI participation and the outcomes of interest.

To estimate the effect that ATI program participation has on sentences imposed by the court, 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 comparison group. We then

repeat the matching procedure for these groups to ensure balance of covariates for ATI defendants who *completed* their ATI program.[9]

Results

Successful Graduation Rates

Like the first study, we observe high rates of successful completion among our ATI defendants (81 percent). In the matched ATI group, a total of 758 defendants had completed the program. Of those, 616 completed successfully and 142 did not.

Supervision Outcomes for Matched Groups

Rearrest, Failures to Appear, and Technical Violations

Expressed as a percentage of all ATI participants *including both closed and ongoing (still active in the program)*, sixty-three percent of the ATI participants in the study cohort successfully completed their ATI program (n=634). As Table 1 shows, the cohort included 215 defendants (21.5 percent) whose programs were still active.

The same matching procedures described above were repeated for this subsample, resulting in successful matches for 598 of the 634 defendants within this group. Table 2 depicts the supervision outcomes of rearrest, failures to appear, and technical violations for (1) all ATI participants regardless of completion and for (2) successful completers compared to their non-ATI counterparts. Notably, we observe that defendants who successfully completed their ATI program were significantly less likely to be rearrested on supervision. Fewer successful ATI participants have rearrests compared to matched comparison group (.068 vs. 11.54). We also note that the percentage of those rearrested during supervision is slightly lower for those who successfully completed the ATI program (.068) compared to those who did not (.115). However, we observed little

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[7] Officers perform the PTRA risk assessment on defendants to help inform their bail recommendation. The officer does not see the raw score, which ranges from 0 to 15, but rather the PTRA category (Categories 1 to 5). These categories inform the relative risk of a defendant (normed on the entire federal population), with Category 5 being the highest.

[8] Matching results are available upon request.

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

difference in FTA and technical violations among the four groups, and both events are relatively rare for the groups.

Sobriety and Employment Defendant Outcomes

In addition to rearrests, FTAs, and technical violations, for all ATI participants as well as those who successfully completed their ATI, we observed the differences in two commonly used indicators of favorable adjustment to pretrial supervision. These measures were chosen because these domains are known correlates to criminal behavior and are also readily available in PACTS. Results reveal (shown in Table 2) that defendants who successfully completed their program worked a greater proportion of days while on supervision (55.4 percent vs. 47.9 percent) and had significantly fewer positive drug tests measured as a percentage of all drug tests taken (8.65 percent vs. 18.3 percent). Overall, the results suggest that ATI program completion is associated with improved outcomes, such as increases in employment and fewer positive drug tests, and a lower probability of rearrest.

ATI Case Dispositions

After examining the association of ATI programs on improved outcomes during supervision, we assessed the impact of ATI programs on case dispositions and sentences imposed. Panel A of Table 3 presents the resultant case dispositions for the 758 defendants who participated in an ATI program and whose cases have been closed (regardless of whether they successfully completed the program). Of the 758 ATI participants, a sizeable proportion had their cases dismissed (34 percent) or received pretrial diversion leading to dismissal upon satisfaction of the terms of the pretrial diversion agreement (4 percent), for a total 38 percent dismissal rate. Of the group of *sentenced defendants* (regardless of ATI completion status), 59 percent of the ATI defendants received prison time while 40.1 percent received a probation term.

Contrasting the percentage of *successful completers* who received prison sentences with their matched counterparts, we see substantial differences. Of the *sentenced defendants* who *successfully completed* their program, only half (50.7 percent) were sentenced to prison (including those who received time served), as compared to nearly 80 percent of their matched counterparts (79.5 percent).

Importantly, there are substantial differences in the sentences imposed on those who successfully completed their

TABLE 2:

Average Treatment Effects (ATT) of ATI Participation on Pretrial Supervision Outcomes

Panel A: Assessment of Outcomes Among All ATI Participants				
Outcome	Matched ATI Participants (n=917)	Matched Defendants (n=917)	S.E.	T-statistic
New Charges / Rearrest During Pretrial Period	.115	.103	.014	0.75
Technical Violations	2.03	1.70	.241	1.36
Failures to Appear	.006	.008	.004	-0.28
Percentage of Drug Tests with Positive Result	11.72	19.33	1.20	-6.36*
Percentage of Days Worked on Supervision	52.83	46.37	2.25	2.86*
Panel B: Assessment of Outcomes Among All Successful ATI Participants				
Outcome	Matched ATI Participants (n=598)	Matched Defendants (n=598)	S.E.	T-statistic
New Charges / Rearrest During Pretrial Period	.068	11.54	.017	-2.81*
Technical Violations	1.43	1.60	.245	-0.66
Failures to Appear	.005	.007	.004	-0.38
Percentage of Drug Tests with Positive Result	8.65	18.32	1.40	-6.88*
Percentage of Days Worked on Supervision	55.40	47.96	2.83	2.63*

*Note: A total of 83 cases were lost of support in the analysis of all ATI participants, while 36 were lost in the analysis of successful ATI participants only. * p <.05. Full results of PSM analysis available upon request.*

TABLE 3.

ATI Case Dispositions for ATI Participants Across Districts

Panel A : ATI Participants		
	Cases	Percent
Dismissed	257	34%
Diversion Satisfied	33	4%
Diversion Still Pending	2	0%
Sentenced	456	60%
Fugitive / Other (Unknown) Outcome	10	1%
Total	758	100%
Panel B : Successful ATI Participants		
	Cases	Percent
Dismissed	249	40%
Diversion Satisfied	33	6%
Diversion Still Pending	2	0%
Sentenced	331	54%
Fugitive / Other (Unknown) Outcome	1	0%
Total	616	100%
Panel C : Unsuccessful ATI Participants		
	Cases	Percent
Dismissed	8	6%
Sentenced	125	88%
Fugitive / Other (Unknown) Outcome	9	6%
Total	142	100%

**There are 29 cases where the individual has completed or dropped out of the program but a disposition had not occurred when the data was extracted.

ATI program and those who did not. For example, as shown in Panel B of Table 3, 40 percent of successful defendants ultimately had their cases dismissed, while 49 percent received a probation term and 50.7 percent were sentenced to prison. Compare this to the unsuccessful group, of which 84.1 percent were sentenced to prison and 15.9 percent were given a probation term. These differences are shown in Panels B and C of Table 3.

ATI Participant Success and Sentences Imposed

Successful ATI Participants

As shown in Table 4, successful ATI participants *who were sentenced* (N = 331 of 616 sentenced defendants) were significantly less likely to receive a prison term than their matched counterparts (50.7 percent vs. 79.5 percent). Conversely, successful completers (Panel B of Table 4) were significantly more likely than their matched counterparts to receive a non-custodial sentence of probation (49.3 percent vs. 20.5 percent).

Also important are the sizeable differences in the length of terms received. As shown in

Table 5, successful ATI participants received an average prison sentence of 3.9 months, while their matched counterparts were sentenced to an average of 33.3 months. (Due to limitations in PACTS and inconsistent data entry practices, we are unable to ascertain with certainty whether the prison time recorded in the PACTS sentence segment reflects "time served,"[10] that is, time in pretrial detention

[10] Though this is no longer the recommended practice, some districts, particularly in earlier years of the cohort, record a time served prison sentence by entering "1 day" in the prison time for the

that is credited against the entire length of the prison term.[11] Probation terms, on the other hand, were more similar (35.4 months vs. 33.7 months), with successful participants receiving a slightly longer probation term.

Unsuccessful ATI Participants

sentence and "time served" in the remarks. We tabulate these cases in the disposition statistics as "time served"; however, we know that this is likely an under-representation of the number of cases sentenced to time served.

[11] 18 U.S. Code § 3585(b).

TABLE 4.
Likelihood of Prison Sentence for Sentenced Defendants, Post-Matching

Panel A : All ATI Participants and Matched Group		
Likelihood of Prison Sentence or Probation Term		
	Non-ATI	ATI
Probation	16.2%	40.1%
Prison Term	83.8%	59.9%
Chi-Square = 44.4, p < .000		
Panel B : Successful ATI Participants and Matched Group		
Likelihood of Prison Sentence or Probation Term		
	Non-ATI	ATI
Probation	20.5%	49.3%
Prison Term	79.5%	50.7%
Chi-Square = 55.29, p < .000		
Panel C : Unsuccessful ATI Participants and Matched Group		
Likelihood of Prison Sentence or Probation Term		
	Non-ATI	ATI
Probation	23.6%	15.9%
Prison Term	76.4%	84.1%
Chi-Square = 2.09, p > .100		

Prison sentences include those sentenced to time served.

TABLE 5.
Sentence Length for Sentenced Defendants, Post-Matching

All ATI defendants Who Were Sentenced and Matched Goup		
Post-Matching Differences in Sentences Received		
Prison Sentences	**Mean Prison Sentence**	**T-Statistic**
Non-ATI Pretrial Defendants	29.3	8.05*
ATI Participants	8.95	
Probation Terms	**Mean Probation Term**	**T-Statistic**
Non-ATI Pretrial Defendants	35.4	0.48
ATI Participants	34.3	
Supervised Release	**Mean TSR Time**	**T-Statistic**
Non-ATI Pretrial Defendants	41.3	1.52
ATI Participants	38.9	
Successful ATI defendants Who Were Sentenced and Matched Goup		
Post-Matching Differences in Sentences Received		
Prison Sentences	**Mean Prison Sentence**	**T-Statistic**
Non-ATI Pretrial Defendants	33.3	9.77**
ATI Participants	3.9	
Probation Terms	**Mean Probation Term**	**T-Statistic**
Non-ATI Pretrial Defendants	35.4	0.676
ATI Participants	33.7	
Supervised Release	**Mean TSR Time**	**T-Statistic**
Non-ATI Pretrial Defendants	40.8	-0.282
ATI Participants	41.4	
Unsuccessful ATI defendants Who Were Sentenced and Matched Group		
Post-Matching Differences in Sentences Received		
Prison Sentences	**Mean Prison Sentence**	**T-Statistic**
Non-ATI Pretrial Defendants	21.6	0.846
ATI Participants	18.6	
Probation Terms	**Mean Probation Term**	**T-Statistic**
Non-ATI Pretrial Defendants	37.8	-0.183
ATI Participants	38.4	
Supervised Release	**Mean TSR Time**	**T-Statistic**
Non-ATI Pretrial Defendants	42.9	3.13**
ATI Participants	34.8	

These tabulations only include the average sentence for those who were given each particular sentence (does not include zeros for those who were given probation over prison).

Prison sentences include those sentenced to time served.

As expected, among unsuccessful participants the differences were far less pronounced. Unsuccessful participants who were sentenced (N = 125 of 142) 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 (18.6 months vs. 21.6 months), this difference was not statistically significant. This finding suggests that defendants who fail to complete the ATI program are *not* sentenced more harshly than if they had not entered the program (shown in Table 5). This is significant because some defense attorneys and defendants may fear that entry and then failure in a program may result in punitive action in the form of a harsher sentence.

Comparison of Non-ATI cases to Dismissed ATI Cases

Given the major differences between the two groups in case dispositions and sentences imposed, we took a closer look at dismissed ATI cases (including those who were granted pretrial diversion and ultimately dismissed) who were matched to non-ATI cases on the matching dimensions described above. See Table 6. A total of 252 defendants who had their cases dismissed after participating in an ATI program were successfully matched to a group who did not. Of the 252 non-ATI comparison cases, the majority (162 or 64.3 percent) received a prison sentence, while 69 (27.4 percent) received probation. Further, the length of terms imposed on the comparison group illustrate that, had it not been for completion of the ATI program, custody terms would have been substantial. The average prison sentence was 25.75 months. The median prison term imposed was 13.5 months. The average probation term given was 30.8 months, with a median of 36 months. These results underscore the potential for ATI programs to provide significant cost savings in avoided prison time and are discussed below.

Racial and Gender Disparity Analysis

As we discussed in the background of this paper, the study districts felt it pertinent to assess demographic parity in their ATI programs. To do this, we first compared the demographic characteristics of those defendants who participated an ATI program to the entire population of federal defendants. Secondly, we used exact matching to cull those defendants who may not be considered comparable to the ATI group (due to extreme PTRA scores or violent offense types) to assess disparities between the two groups. More specifically, in the second portion of our analysis we first matched each ATI participant to a randomly selected non-participant on the following characteristics: offense type, PTRA score, and citizenship. The matching analyses employed a 1:k (or "one to many") matching procedure to maximize the matched sample size. Thus, the matched sample includes all possible exactly matched control cases in the comparisons presented. The results of this analysis are presented in Table 7.

Even after accounting for pertinent defendant and case characteristics, we observe potential racial and gender disparity in program participation, which may reflect unintended bias in the selection or entrance criteria of the programs. To this point, however, we note that we have no data on who was *offered* and subsequently *declined* entrance in an ATI program, and thus any differences in program participation may

TABLE 6.
Sentencing Outcomes for Defendants Matched to ATI Cases that were Dismissed

	n / %	Mean Sentence	Median Sentence
Acquited / Dismissed / Diverted	21	--	--
Sentenced to Probation	69	30.8 months	36 months
Sentenced to Prison	162	25.75 months	13.5 months

Note: Includes a total of 252 defendents who were successfully matched to the ATI defendants who were dismissed after completing the ATI program.

TABLE 7.
Race / Sex / Age and Risk Differences between ATI Participants and Non-ATI Defendants

Panel A: Differences Prior to Matching				
	Non-ATI Defendants	ATI Participants		
	n=26,283	n=1,000	Chi-Square / T-Test	Sig.
Race				
White	37.6%	45.7%	27.0*	<.001
Black	27.5%	19.4%	31.7*	<.001
Hispanic	22.9%	29.6%	24.7*	<.001
Non-Hispanic/ Other/ Unknown	12.1%	5.3%	41.7*	<.001
Sex				
Female	21.3%	45.6%	329.4*	<.001
Male	78.7%	54.5%		
Age	40.4	32.0	20.1*	<.001
PTRA Score	5.8	7.6	20.1*	<.001
Panel B: After Exact Matching on Offense Type, PTRA Score and Citizenship				
	Non-ATI Defendants	ATI Participants		
	n=26,283	n=1,000	Chi-Square / T-Test	Sig.
Race				
White	30.40%	45.70%	49.6*	<.001
Black	36.10%	19.40%	69.5*	<.001
Hispanic	26.50%	29.60%	2.4	>.05
Non-Hispanic/ Other/ Unknown	7.00%	5.30%	2.5	>.05
Sex				
Female	22.10%	45.60%	123.3*	<.001
Male	77.90%	54.40%		
Age	36	32	8.26	<.001

reflect reluctance on the part of non-White, male, or older participants. Further, we have no quantitative data on the relative weight of program stakeholders' say—either formal or otherwise—in nomination, selection, and denial of program participation. Additionally, federal prosecutors enjoy wide discretion on who they charge and for what offenses, which may have a downstream impact on the pool of program-eligible defendants. In federal ATIs, there appears to be no standardized process for vetting participants, and therefore such vetting ultimately depends on the individual courts' collaborative model. Nevertheless, the analysis (of pre-matched cohort) shows us that ATI defendants are more likely to be White (45.7 percent) or Hispanic (29.6 percent) than Black (19.4 percent), and that there is a higher proportion of females in these ATI programs (45.6 percent) as compared to the general defendant population (21.3 percent). We also observe that ATI defendants are younger in age (32.0 vs. 40.4 years old) and are at higher risk as measured by the Pretrial Risk Assessment (PTRA) (7.6 vs. 5.8 PTRA raw score).

After matching, these differences are mitigated in the non-ATI defendants, with White defendants comprising 30.4 percent; Blacks, 36.1 percent, and Hispanics, 26.5 percent. Table 7 also shows that, post-matching, females comprise 22.1 percent and males comprise 77.9 percent; the average age of non-ATI defendants is 36. These differences in risk and possibly age confirm that, generally, program participation is geared towards those most in need of the intensive services and structure afforded by a program.

Demographics in ATI Successful Completion Rates

While differences in program participation may be cause for further investigation, such differences do not appear when we examine which defendants successfully complete an ATI program. (See Table 8.) Although there are some small racial differences in program success rates, these are not statistically significant. Females are not significantly more likely than their male counterparts to be successful. There are also no significant differences across offense types in program success. As could be expected, we find that younger defendants are significantly less likely to be successful than their older counterparts, and finally, we find that actuarial risk as measured by the PTRA is consistent with program success, meaning that defendants with higher PTRA scores are less likely to successfully complete a program. For purposes of this study, we did not analyze each program individually; therefore, these results are presented in the aggregate. That said, however, we did observe significant differences among programs in both their participation and success rates by demographics (not shown).

Conclusion

Like the original study of the ATI programs across seven districts, this study uses an expanded dataset that includes the programs of six more districts and focuses on short-term outcomes that reflect improved conduct of defendants on pretrial supervision and the avoidance of conviction and custodial sentences.

Notwithstanding this current study and its predecessor, there remains limited evidence of long-term efficacy of federal ATI programs. As stated by the USSC in its 2017 report on ATIs in the federal system,

> Proponents of (these) programs have pointed to limited data showing low recidivism rates of graduates of certain programs, … Although important, such data needs to be supplemented with data showing both the long-term recidivism rate of participants who did not successfully complete the programs, and the long-term recidivism rate of a meaningful comparison group of similarly situated offenders who received traditional dispositions of their cases.

To this end, the study team was recently granted permission by the Federal Bureau of Investigation[12] to access criminal history

TABLE 8.
Race / Sex / Age and Risk Differences between Successful and Unsuccessful ATI Participants

	Unsuccessful ATI n=151	Successful ATI n=634	Chi-Square / T-Test	Sig.
Race				
White	62 (16.8%)	306 (83.1%)	4.30	> .05
Black	35 (24.5%)	108 (75.5%)		
Hispanic	47 (20.3%)	184 (79.7%)		
Other/Unknown	7 (16.3%)	36 (83.72%)		
Sex				
Female	62 (16.7%)	310 (83.3%)	3.00	> .05
Male	89 (21.5%)	324 (78.4%)		
Age				
18-24	59(29.2%)	143 (70.8%)	31.4*	<.01
25-30	47 (20.2%)	186 (79.8%)		
30-40	37 (18.3%)	165 (81.7%)		
40+	8 (5.4%)	140 (95.6%)		
Offense				
Drug Offense	94 (18.3%)	419 (81.7%)	4.51	>.05
Financial Offense	38 (18.7%)	165 (81.3%)		
Other Offense	2 (20.0%)	8 (80.0%)		
Violent Offense	4 (22.255)	14 (77.8%)		
Weapons Offense	13 (31.7%)	28 (68.3%)		
PTRA Risk Category				
Category 1	3 (4.4%)	66 (95.6%)	21.97*	<.01
Category 2	22 (13.5%)	141 (86.5%)		
Category 3	60 (19.9%)	241 (80.1%)		
Category 4	45 (24.9%)	136 (75.1%)		
Category 5	21 (29.6%)	50 (70.4%)		

[12] Requests for FBI criminal history record information (CHRI) for research purposes must be submitted in accordance with Title 28, Code of Federal Regulations (C.F.R.) Part 22.

data and is poised to perform a recidivism analysis of ATI participants who are no longer in the federal criminal justice system. Like the current study, results will be compared against similarly situated defendants who received traditional case dispositions. The FBI's permission allows the study team to move beyond the study of short-term outcomes into outcomes that reflect long-term criminal justice purposes, namely that of rehabilitation and desistance from crime. As ATI programs at their very core aim for rehabilitation, recidivism is a key measure of long-term efficacy, especially recidivism by those whose cases were dismissed or who did not serve a term of incarceration. That said, we also must not lose sight of the more qualitative indications of long-term positive changes in defendants' lives, such as relationships, employment, education, access to healthcare, and financial independence. This is an area ripe for future in-depth research.

Importantly, this study with a larger and more recent dataset essentially replicates the findings of its predecessor study: *successful completion of an ATI program is associated with more favorable case dispositions and less severe sentences.* Participants are more likely to avoid new arrests for criminal behavior, remain employed, and refrain from illegal drug use while their cases are pending in court. Such positive outcomes help defendants place their best foot forward while awaiting sentencing, demonstrating to the judge that they are on the path to rehabilitation, and thus deserving of more favorable disposition that imposes "a sentence sufficient, but not greater than necessary, to comply with the purposes set forth in paragraph (2)" of that provision. 18 U.S.C. § 3553(a).

Favorable case dispositions of defendants who benefit from enhanced rehabilitative services while remaining accountable also hold promise as cost-avoidance measures. As this study found, over a third (34 percent) of successful completers had their cases dismissed. Additionally, they are significantly less likely to receive a prison term than their matched counterparts; of those who were sentenced, a significantly smaller proportion receive a prison term compared to their matched sentenced counterparts (50 percent vs. 80 percent). Additionally, successful completers who did receive a custodial sentence were required to serve significantly shorter prison terms (mean of 33.3 months vs. 3.9 months.) This provides evidence that ATI programs can play a small but important role

in mitigating the crisis of over-incarceration facing our criminal justice system.

As we noted in the original study of seven districts, the Judicial Conference has taken no formal position on ATI courts in the federal system (Vance, 2016); thus 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. 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 (AO) encouraged research and evaluation of such programs.[13] Though this study did not evaluate individual programs, its aggregated results represent an advancement in the knowledge base about federal ATIs.

Though formal endorsement of ATIs in the federal system by the Judicial Conference remains pending, an important formal acknowledgement of their ubiquity and resource intensiveness occurred when the Judicial Conference adopted the most recent workload formula that specifically captures the probation and pretrial services staff time associated with all its activities.

Due to the expansion of this study, progress has been made in the standardization of protocols for recording ATI participation in the Probation and Pretrial Services Automated Case Tracking (PACTS). Prior to the original study, no protocols had been shared—or even developed—to record important information about program entry, exit, session attendance, and critical dates. Districts not participating in the study or who have yet to begin an ATI can now benefit from standardized data entry procedures, which will help ensure accurate and consistent data collection.

Equally important is keen awareness by federal criminal justice stakeholders, including judges, of the potential for racial and gender disparity. This awareness should pervade every aspect of program selection, operation, and disposition. Concerted ongoing discussion among program stakeholders should be incorporated into all facets of program operation, particularly as they relate to the selection and success criteria for ATI

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

participation, as a substantial body of research now indicates that problem-solving courts should focus their efforts on high-risk/high-need defendants. Research indicates that programs that focus on this population reduce crime approximately twice as much as those serving less serious defendants (Lowenkamp et al., 2005; Fielding et al., 2002). How can programs ensure demographic fairness within this paradigm? The racial and gender analysis portion of this study is an incremental—though important—step in raising awareness of demographic parity in all programs, especially for those who have such strong impact on defendants' liberty.

As in all aspects of community corrections, defendants' perception of fairness, respect, and attention to their specific needs is critical to maximizing success in an ATI. Research supports that procedural justice is a critical component of problem-solving courts (MacKenzie, 2016). It is well known that treatment response is colored by differences in cultural, demographic, and experiential factors, and that these often vary significantly among groups. Because of these differences, perceptions of fairness and appropriateness will vary as well. In 2018, a qualitative study was conducted using focus groups of 70 African American drug court participants' views on drug court programs and their perceptions of any service or treatment disparities related to a participant's race. Perhaps surprisingly, many reported favorable perceptions about the accountability aspects of the program and judicial involvement, but most reported unfavorable views of their counselors and the quality of treatment they received for their substance-use disorders. They indicated that their treatment was not tailored to their individual needs, particularly mental health and employment needs. Though the authors of the study acknowledge that the findings of this study are not necessarily generalizable to other drug courts, the report recommends that program evaluations incorporate qualitative methods to assess participants' perceptions, which provides valuable insight generally, and may reveal racial, gender, or cultural differences in perceptions (Gallagher & Nordberg, 2018). Although the current study did not reveal demographic disparities in graduation rates in the federal ATI programs examined, stakeholders may consider pursuing similar qualitative studies to optimize program benefits. Further such studies may inform stakeholders as to the extent intervention modalities are appropriately tailored, e.g.,

culturally sensitive, trauma-informed, family-involved, etc.

It remains a goal of future study 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. Capturing some of these data points in the staffing formula moves us a step closer to understanding the resource requirements, if limited to probation and pretrial services. Though much more research on federal ATI programs is clearly needed, the results of this study support the concept that these programs provide rehabilitative benefit to their participants and offer a viable alternative to a strictly punitive model of criminal justice.

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Assessing the Impact of Federal Support Court Using Propensity Score Analysis[1]

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FEDERAL AND STATE correctional populations, and particularly the number of individuals incarcerated or supervised for drug-related offenses, are a nationwide concern. At the federal level, recent data indicate there are over 222,000 individuals held in secure confinement, with nearly 162,000 sentenced to the Federal Bureau of Prisons and the other 60,000 being housed in pretrial detention (Motivans, 2021). Of the Federal Bureau of Prison population, nearly half (48 percent) exhibited a drug charge for their most serious offense. In comparison, about 6 percent were imprisoned for violent offenses, about 5 percent were incarcerated for property crimes, and around 18 percent were in federal prison for weapons crimes. In addition to the incarcerated population, the total number of adults under federal supervision in the community stands at 150,000 (Motivans, 2021). Of these individuals, about 15,500 (or 10 percent) are on federal probation, while approximately 111,000 (74 percent) are on supervised release following a period of incarceration. As with federal incarceration, nearly half of adults under federal supervision were convicted of a drug crime as their most serious offense.

The recidivism of known offenders also has come to the forefront in discussions of criminal justice policy and reform (Johnson, 2017). Overall, research indicates persistently high recidivism rates among known offenders. To illustrate, one study tracked over 25,000 federal offenders over an 8-year period, beginning in 2005 (Hunt & Dumville, 2016). About half were rearrested, almost one-third were reconvicted, and one-quarter were reincarcerated. Of those individuals who reoffended, most did so within the first 2 years of release (the median time to rearrest was 21 months). Those who were released from incarceration had a rearrest rate of 52 percent, while those given a probationary sentence had a rearrest rate of 35 percent. Moreover, it is safe to say that many other inmates and supervised individuals present a history of drug and alcohol problems, regardless of their official criminal record (SAMHSA, 2014). Research also indicates that drug and alcohol use and abuse are likely factors in repeat offending (Banks & Gottfredson, 2004, Mumola & Karberg, 2006). For example, a 2016 Survey of Prison Inmates survey found that nearly 4 in 10 state prisoners and 3 in 10 federal prisoners reported using drugs at the time of their offense; similarly, 31 percent of state prisoners and 25 percent of federal prisoners reported drinking alcohol at the time of their offense (Bureau of Justice Statistics, 2021).

In modern times, these research findings have contributed to various legislative efforts and programs directed at justice-involved individuals exhibiting drug and alcohol problems. The current study evaluates one federal initiative to provide support and structure to individuals in the criminal justice system who struggle with these issues. Specifically, this evaluation examined a federal Support Court created in 2009 by the United States District Court for the District of Connecticut. This specialty court operates in three locations: Bridgeport, Hartford, and New Haven. Propensity score analysis was employed to closely match individuals in treatment and control groups, to compare their recidivism outcomes across three measures: arrest, drug test failure, and revocation.

Literature Review

In an effort to respond more effectively to criminal offenders with drug and alcohol problems, the first drug court in the United States was established in Miami, FL, in 1989 (Goldkamp et al., 2001). Over the next two decades, drug courts were implemented in all 50 states (Finigan et al., 2007). Among the more than 3,000 drug courts operating in the U.S. today, roughly half are adult drug courts (Marlowe et al., 2016). Annual enrollments in these courts have been estimated at around 55,000 individuals (Bhati et al., 2008).

In general, drug courts were designed to put treatment and rehabilitation ahead of punishment. In contrast to a traditional

administrative court process that prioritizes adjudication and the role of the judge in resolving a legal outcome, drug courts adhere to a collaborative process, whereby the judge coaches a treatment team to work on alternative legal resolutions favoring therapeutic results. For most drug courts, the target population includes offenders charged with a substance-involved offense (Mitchell et al., 2012a). This usually includes drug charges, but may include other non-violent offenses committed by defendants with substance abuse issues (Peters & Murrin, 2000). Screening criteria vary between drug courts and depend on local policies, but most include some measure of the individual's motivation for treatment, in addition to considerations of the person's criminal and substance use histories (Evans et al., 2014).

Concerning effectiveness, adult drug courts have been shown to reduce 2-year rearrest rates by an average of 8 percent to 14 percent (Marlowe et al., 2016), although some studies show rates of recidivism reduction as high as 35 percent to 80 percent (Carey et al., 2012; Lowenkamp et al., 2005; Shaffer, 2011). Most drug court studies assess recidivism 1 or 2 years after program participation. However, some meta-analyses (Mitchell et al., 2012a, 2012b) and randomized control trials (Gottfredson et al., 2005, 2006) have shown that the positive effects of adult drug courts on recidivism may last for 3 years after program completion. In fact, one study reported effects on recidivism lasting a remarkable 14 years (Finigan et al., 2007). Overall, the results of a 2012 meta-analysis of 154 drug courts (92 evaluations of adult drug courts, 34 of juvenile drug courts, and 28 of DWI drug courts) revealed that drug court participants consistently have lower recidivism rates than non-participants, with an average difference in recidivism of 50 percent for non-participants and 38 percent for participants (Mitchell et al., 2012b).

Numerous individual studies and meta-analyses also show that adult drug court is highly cost effective (Drake, 2012; Mayfield et al., 2013; Rossman et al., 2011). Studies on cost effectiveness generally report a 200-400 percent return on investment. Specifically, for every dollar spent, an average of $2 to $4 in future court and related costs is saved, or somewhere between $3,000–$22,000 net economic savings per participant (Marlowe et al., 2016).

The federal government also has demonstrated strong support for the drug court model, primarily through financial support of drug court programs, research, and other initiatives. For example, each year the Bureau of Justice Assistance (BJA) and the Substance Abuse and Mental Health Administration (SAMHSA) distribute grants to states and localities to support the creation and enhancement of drug courts. In fiscal year 2017, over $100 million in federal funding was appropriated for drug courts (Sacco, 2018). Additionally, in 2017 the President's Commission on Combating Drug Addiction and the Opioid Crisis also recommended that the DOJ establish a federal drug court in every federal judicial district. Relatedly, enacted in 2016, Section 14003 of the 21st Century Cures Act (the Cures Act; P.L. 114-255) required the DOJ to establish a pilot program to determine the effectiveness of federal drug courts and mental health courts. More recently, the Biden administration publicly committed to end all incarceration for drug use alone and divert these individuals to drug courts and other treatment (Lekhtman, 2020), and to expand available funding for federal, state, and local drug courts (JoeBiden.com, 2021).

Despite existing research findings and governmental support for drug courts, little empirical research exists that focuses on federal drug courts. A quasi-experimental process and impact evaluation was completed in 2009, which examined the Federal District Court of Massachusetts Court Assisted Recovery Effort (CARE; Farrell & Wunderlich, 2009). This program used a modified drug court model to provide enhanced supervision to 46 offenders (divided into three separate groups), while addressing the problems that accompanied their addiction. Results from the study, in which CARE participants were compared with 68 similar individuals under regular supervision, revealed that CARE participants were more successful than non-participants during a 12-month follow-up (success was measured as a combination of no new charges, employed, and no positive drug tests). Specifically, the odds of success for CARE participants were 2.6 times greater than for comparison group members. However, these findings should be treated with caution, as there were a small number of participants in the treatment and control groups, and the study only covered a 12-month follow-up period for each of the groups. In addition, other experimental and quasi-experimental research on specialized federal court programs has revealed limited and mixed evidence of beneficial effects on supervision outcomes and recidivism (Crow & Smykla, 2021; Meierhoefer & Breen, 2013; Rauma, 2016; Taylor, 2013). Accordingly, there remains considerable need for further evaluation of federal drug courts and other specialized court programs. The current study aims to address this gap in the literature.

The Program

The current study entailed an evaluation of one federal initiative to provide support and structure to individuals in the criminal justice system who struggle with drug and alcohol issues. Specifically, this research examined the federal Support Court created by the United States District Court for the District of Connecticut. The specialized drug court originated in 2009 and currently operates in three locations: Bridgeport, Hartford, and New Haven. Each divisional court is capped at 16 participants at any point in time. Support Court participants include individuals in the pretrial or pre-sentencing stage of court processing, as well as those who have been convicted and sentenced. The target population includes individuals who are struggling with substance abuse, who are at heightened risk for drug/alcohol use relapse, or whose past or current criminal conduct is attributed reasonably to drug and alcohol addiction (Connecticut Support Court Policies and Procedures Manual, 2016). Disqualifying criteria include individuals with mental health problems or serious medical issues as well as those with histories of sex-related crimes, arson, serious firearm charges, violent crime, or any pending state felony charges.

Initial research activities centered on conducting a process evaluation of Support Court operations and services, along with a descriptive assessment of various participant outcomes (Dule et al., 2021). Current analyses were based on comparing recidivism measures of Support Court participants with similar federal justice-involved individuals who did not participate in Support Court. The comparison group members experienced post-conviction supervision in the United States District Court for the District of Connecticut at some time during the period of 2010 through the first 6 months of 2018, and they had drug and alcohol treatment ordered as part of their supervision conditions. However, they did not experience Support Court during their pretrial services or post-conviction supervision periods. In general, the 232 individuals in this non-Support Court group were compared to the 182 Support Court participants from 2009 to 2017 who had

progressed to post-conviction supervision by the start of 2018 (i.e., recidivism was assessed during the post-conviction supervision period for both groups). Three outcome measures were assessed (arrest, drug test failure, and revocation of supervision) via data contained in PACTS, the federal Probation and Pretrial Services Automated Tracking System.

Analytic Strategy

Following initial examination of the entire treatment and comparison groups, propensity score analysis was employed to closely match individuals from each group and assess their recidivism outcomes. Propensity scores offer a statistical alternative to account for confounding factors when random assignment to a treatment condition is not possible (Beal & Kupzyk, 2014). This constitutes a quasi-experimental approach that allows "treatment" participants to be matched with comparison group members on a number of variables, through using a single measure known as the propensity score (Apel & Sweeten, 2010; Beal & Kupzyk, 2014; Rosenbaum & Rubin, 1983). In the current study, the propensity score represents the probability or likelihood of a federal court participant being selected for Support Court. In the absence of a randomized experiment (i.e., random assignment to treatment and control groups), propensity score analysis allows for the estimation of a "treatment effect" while taking into account a variety of possible confounding factors that make the treatment and comparison groups different.

In the current study, propensity score matching was used to create two groups that were statistically equivalent on measured demographic and legal variables (Apel & Sweeten, 2010; Beal & Kupzyk, 2014; Rosenbaum & Rubin, 1983). The first step in this process was to estimate a logistic regression equation that predicted group membership in Support Court (yes or no). This model contained 22 independent variables, of which 7 were significant predictors (p < .05) of Support Court membership: Sex of participant, number of prior arrests, total offense level from federal sentencing guidelines, married or cohabitating, prior criminal patterns and violence, age at which drug use began, and prior hard drug use. Predicted probabilities of Support Court membership (i.e., propensity scores) for each of the individuals in both groups subsequently were used to closely match Support Court participants with similar comparison group members.

Using one-to-one matching procedures with a caliper width of 0.025 for the matched propensity scores, 116 Support Court participants were closely matched with 116 comparison group members. This technique was used to produce individually matched subjects in the treatment and comparison groups, whereby each pair of matched subjects had nearly identical propensity scores. One-to-one matching generally is considered to be the best method of propensity score analysis for producing two groups that are statistically equivalent, thereby approximating a randomized experimental design (Apel & Sweeten, 2010; Beal & Kupzyk, 2014; Rosenbaum & Rubin, 1983).

Results

The results presented in Tables 1 and 2 indicate the one-to-one matching procedure was successful in creating statistically equivalent treatment and comparison groups. Table 1 reveals the variables that were

significantly different, at the bivariate level, between the initial Support Court (n=182) and non-Support Court (n=232) group members. Following the propensity score matching procedure, the 116 Support Court participants and 116 comparison group members were not significantly different in their average propensity scores (i.e., the probability of being in Support Court), along with the other demographic and legal variables that were used to predict Support Court group membership (see Table 2). In other words, for the 232 matched individuals, there were no significant differences between the Support Court participants and comparison group members in terms of their demographic characteristics, legal variables, and propensity scores.

Next, various measures of recidivism were reassessed for the 232 matched individuals. As revealed in Table 3, based on a chi-square analysis of the 116 Support Court participants and 116 comparison group members, during

TABLE 1
Pre-Matching Baseline Statistics (N=414)

Variable	Non-SC Comparison Group (Mean or %)	SC Treatment Group (Mean or %)
Sex of participant	Males: 96%; Females: 4%	Males: 80%; Females: 20% ***
African American Non-Hispanic	50%	43%
Hispanic	33%	27%
Age at post-conviction supervision	36.36	36.71
Number prior arrests	6.66	5.42 *
RPI score	4.59	4.27
Hartford participant	41%	37%
New Haven participant	31%	27%
Guideline prison minimum	87.92	72.75
Guideline TSR minimum	40.89	35.22
Total offense level from guidelines	23.30	20.69 **
Criminal history points from guidelines	7.77	6.46
Convicted of a drug charge	77%	75%
Post-conviction supervision time in months	28.54	30.89
Divorced or Separated	11%	15%
Married or Cohabitating	19%	25% *
Medical Issue or Disorder	34%	36%
High School Diploma or GED	53%	49%
Above High School Diploma or GED	13%	19%
Prior Criminal Patterns and Violence (CPV) total score	2.05	1.29 **
Age drug use began	15.70	14.65 *
Prior Hard Drug Use	68%	82% **

Note: Sample sizes: Non-Support Court group = 232; Support Court group = 182
* p < .05; ** p < .01; *** p < .001

the post-conviction supervision period the Support Court participants:

- Were *insignificantly* more likely to have their supervision revoked (22 percent versus 13 percent; p = .082), primarily due to being *insignificantly* more likely to be revoked on technical violations (13 percent versus 5 percent; p = .109).
- Were significantly less likely to fail a drug test (42 percent versus 56 percent; p < .05).
- Were significantly less likely to be arrested (33 percent versus 47 percent; p < .05).

Further analyses of arrest data considered time to rearrest, or whether Support Court participants experienced significantly longer times to rearrest, as compared to matched non-participants. The results of a Kaplan-Meier survival analysis (see Figure 1, next page) and a Cox regression model (see Table 4, next page) indicated that Support Court participants did in fact experience significantly longer survival times (i.e., a lower hazard rate, associated with longer times to rearrest). More specifically, the hazard ratio from the Cox regression model

indicated that being in Support Court lowered the hazard of rearrest by about 44 percent (p < .01). In addition, further Cox regression analysis revealed that participating in Support Court had a significantly increasing effect on reducing the hazard of rearrest over time (p = .01). This is depicted visually in the Kaplan Meier analysis (see Figure 1), which shows the two groups initially had similar hazard rates for about 24 weeks (or 6 months), after which the comparison group experienced a significantly greater hazard rate over time.

An additional set of analyses considered whether there were differences in recidivism outcomes for successful Support Court participants (i.e., those who formally graduated or otherwise left Support Court successfully) and unsuccessful Support Court participants (i.e., those who were terminated or otherwise left Support Court unsuccessfully), as compared to members of the comparison group. As presented in Tables 5–7 (page 19), based on the matched treatment and comparison groups (N=232), odds ratios from the logistic regression models indicate:

- Unsuccessful Support Court participants were significantly more likely to have their supervision revoked (over 3 times more likely) compared to non-Support Court group members (p < .01).
- Successful Support Court participants were significantly less likely to fail a drug test (approximately 65 percent less likely) compared to non-Support Court group members (p < .01).
- Successful Support Court participants were significantly less likely to be arrested (approximately 61 percent less likely) compared to non-Support Court group members (p < .01).

Discussion and Conclusions

The current evaluation sought to assess the effect of federal Support Court on recidivism, by using a comparison group of individuals who had experienced post-conviction supervision in the United States District Court for the District of Connecticut during the same time period that Support Court was being offered. These individuals had some type of drug and alcohol treatment ordered as part of their post-conviction supervision conditions, but they did not experience Support Court during their pretrial services or post-conviction supervision periods. The 232 individuals in this group were compared to the 182 Support Court participants from

TABLE 2

Post-Matching Baseline Statistics (N=232)

Variable	Non-SC Comparison Group (Mean or %)	SC Treatment Group (Mean or %)
Predicted probability of being in Support Court	45.69%	47.26%
Sex of participant	Males: 92%; Females: 8%	Males: 89%; Females: 11%
African American Non-Hispanic	53%	45%
Hispanic	27%	34%
Age at post-conviction supervision	36.78	36.67
Number prior arrests	6.04	5.95
RPI score	4.53	4.35
Hartford participant	38%	39%
New Haven participant	25%	26%
Guideline prison minimum	83.91	83.58
Guideline TSR minimum	36.93	37.26
Total offense level from guidelines	22.35	22.02
Criminal history points from guidelines	7.57	6.92
Convicted of a drug charge	76%	76%
Post-conviction supervision time in months	30.42	30.68
Divorced or Separated	15%	10%
Married or Cohabitating	24%	22%
Medical Issue or Disorder	33%	32%
High School Diploma or GED	53%	55%
Above High School Diploma or GED	13%	16%
Prior Criminal Patterns and Violence (CPV) total score	1.62	1.5
Age drug use began	14.68	14.91
Prior Hard Drug Use	72%	77%

Note: Sample sizes: Non-Support Court group = 116; Support Court group = 116
All differences between groups were statistically insignificant (p > .05)

TABLE 3
Recidivism Results (N=232)

Variable	Non-SC (Control) n = 116	SC (Treatment) n = 116	P-Value
Post-Conviction Revocation	12.9%	21.6%	.082
Post-Conviction Failed Drug Test	56.0%	42.2%	.036
Post-Conviction Arrest	47.4%	32.8%	.023

2009 to 2017 who had progressed to post-conviction supervision by the start of 2018.

Following an initial examination of the entire two groups, propensity score analysis was employed to closely match 116 individuals from each group and compare their recidivism outcomes. Overall, the results were quite favorable for Support Court participants. Compared to the matched non-Support Court individuals (N=116), the Support Court participants (N=116) were significantly less likely to be arrested and significantly less likely to have failed a drug test, and they experienced significantly longer times to rearrest. Successful Support Court participants were also approximately 65 percent less likely to fail a drug test and approximately 61 percent less likely to be arrested than non-Support Court group members.

In contrast to these positive findings, Support Court members were more likely to have their supervision revoked (22 percent versus 13 percent; p = .082) as compared to the matched non-Support Court individuals, but this difference was not statistically significant. The findings concerning a greater likelihood of revocation for Support Court participants, particularly for technical violations, is in line with prior research (Brewster, 2001; Gill, Hyatt, & Sherman, 2010; Hyatt & Barnes, 2017; Jalbert & Rhodes, 2012; Petersilia & Turner, 1993; Rodriguez & Webb, 2007; Sevigny et al., 2013). Overall, programs such as drug courts and intensive probation and parole, which increase supervision standards and the amount of contact with participants, typically uncover higher numbers of technical violations, thereby increasing the likelihood of revocation.

Providing context for the current research, a 2013 meta-analysis of 19 studies investigating the effects of adult drug courts on incarceration outcomes found that drug courts significantly reduced sentences of incarceration for the precipitating offense, corresponding to a reduction in confinement from 50 percent to 42 percent for jail sentences and from 50 percent to 38 percent for prison sentences (Sevigny et al., 2013). Most of the programs in this meta-analysis operated on a strictly post-plea basis, although some enrolled only pre-plea defendants. This study also revealed that, on average, drug courts did not significantly reduce the total amount of time offenders spent behind bars, suggesting that benefits realized from a lower incarceration rate may be offset by longer periods of incarceration imposed on participants when they fail in the program

(Sevigny et al., 2013, p. 420). Although this specific finding was not investigated in the current research, future studies should expand on how to reduce revocation rates effectively and ultimately protect all participants from any collateral consequences generated by their involvement in the program (Dollar et al., 2018; Gibbs et al., 2019; Taylor, 2013).

Future drug court initiatives also should strive to embrace recognized "best practices," many of which have been established in state and local drug court evaluations. Programs that emphasize these strategies and techniques consistently demonstrate stronger positive effect sizes (Marlowe et al., 2016). For instance, over the past two decades, the National Association of Drug Court Professionals (2015) has worked with governmental agencies at the federal, state, and local levels to help guide improvements in drug court policies and practices. The following 10 Best Practice Standards were published first in 2013 (Vol. 1) and updated in 2015 (Vol. 2).

1. Use empirical evidence to guide decisions of drug court eligibility and exclusion criteria, as well as evidence-based assessment tools and procedures to determine which court-involved individuals should be admitted to drug court.

2. Provide equal access to drug court participation and systemic support for success to individuals who have historically experienced sustained discrimination.

3. Ensure that drug court judges are knowledgeable about current drug court laws and best practices.

4. Provide incentives and consequences that are predictable and fair.

5. Implement evidence-based interventions that are documented in treatment manuals.

6. Provide drug court participants with complementary treatment and social services for conditions that co-occur with substance use.

7. Implement accurate, timely, and comprehensive assessment of unauthorized substance use throughout individuals' participation in drug court programs.

8. Engage a dedicated multidisciplinary

FIGURE 1
Kaplan-Meier Survival Analysis Results (N=232)
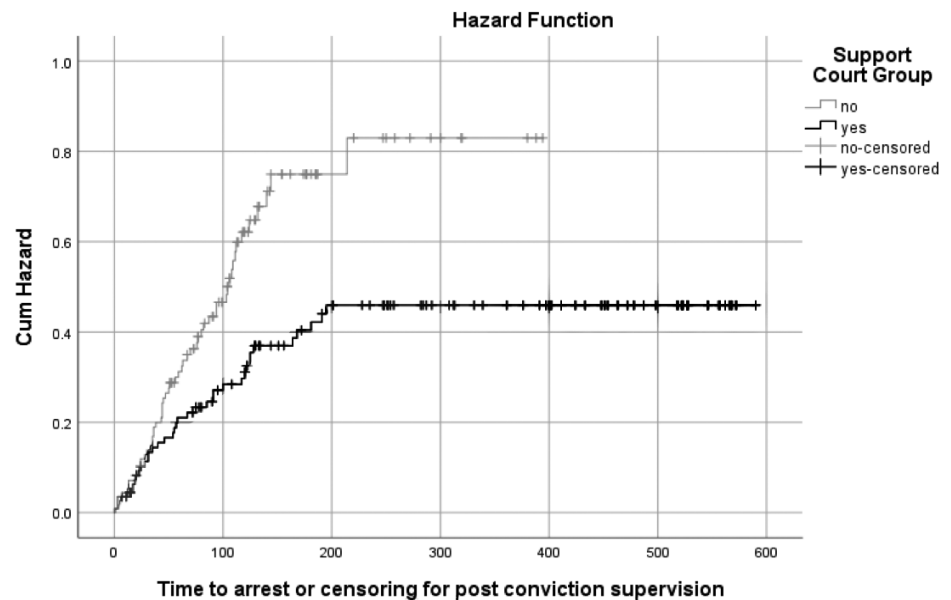
Note: Tests of equality of survival distributions for the two groups: Log-Rank (Mantel-Cox), p < .01; Breslow (Generalized Wilcoxon), p < .05; Tarone-Ware, p < .01.

TABLE 4
Cox Regression Survival Analysis Results (N=232)

Variable	B (SE)	Hazard Ratio Exp(B)	P-Value
Support Court Participation	-.576 (.214)	.562	.007

team of professionals to manage day-to-day drug court operations.

9. Serve as many eligible individuals as practicable, while maintaining continuous fidelity to best practice standards.

10. Routinely monitor the drug court's adherence to best practice standards and employ scientifically valid and reliable procedures to evaluate its effectiveness.

While the current study did not report on how well the United States District Court for the District of Connecticut Support Court adheres to best practices, this was assessed in a previous process evaluation (Dule et al., 2021), which uncovered strong adherence to NADCP best practices. Thus, it is important to recognize that the positive outcomes identified in the current evaluation likely are influenced by the Support Court's close adherence to recommended best-practices.

Finally, in interpreting and using the findings discussed above, it is also important to consider the various research limitations associated with this evaluation. First, although random assignment to experimental and control groups was not possible, access to extensive service record data helped to generate a strong quasi-experimental design with well-matched treatment and comparison

groups. Nevertheless, it is possible that some key variables related to Support Court selection were not considered. Separately, due to the limited sample size, this study could not adequately assess how different aspects of the Support Court program (e.g., type of substance abuse treatment, drug testing procedures, court location, preferences of judge, incentives, and punishment) impacted the various outcome measures. Future research should expand on these components to help identify additional best practices for program success. Finally, it is important to note that recidivism measures were drawn from official data sources. Official data sources pertaining to offending do not fully capture actual rates of offending, as official measures are impacted by decisions to report, record, prosecute, and ultimately to convict (Lloyd et al., 1994).

Despite these limitations, the findings of the current research add to those of previous studies that found beneficial effects from drug court participation. Use of propensity score analysis strengthened the evaluation design and lowered concerns about confounding factors and selection bias. Future research should investigate the key factors that contribute to the success of participants in completing drug court programming, along with assessing general strategies and focused efforts to reduce the likelihood of revocation

in programs that increase supervision intensity and tend to uncover greater technical violations (Dollar et al., 2018; Gibbs et al., 2019; Taylor, 2013).

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TABLE 5

Logistic Regression for Post-Conviction Revocation with Matched Support Court and Comparison Group Members (N=232)

Variable	B (SE)	Exp(B)	P-Value
Support Court Failure	1.188 (.393)	3.28	.003
Support Court Success	-.252 (.512)	.777	.622

Note: Reference group is the comparison group.

TABLE 6

Logistic Regression for Post-Conviction Failed Drug Test with Matched Support Court and Comparison Group Members (N=232)

Variable	B (SE)	Exp(B)	P-Value
Support Court Failure	-.104 (.323)	.901	.746
Support Court Success	-1.041 (.340)	.353	.002

Note: Reference group is the comparison group.

TABLE 7

Logistic Regression for Post-Conviction Arrest with Matched Support Court and Comparison Group Members (n=232)

Variable	B (SE)	Exp(B)	P-Value
Support Court Failure	-.316 (.327)	.729	.333
Support Court Success	-.950 (.353)	.387	.007

Note: Reference group is the comparison group.

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Surfing the Three Waves of CBT in Community Supervision

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COGNITIVE BEHAVIORAL THERAPY and techniques (CBT) are considered evidence-based in the field of criminal justice (and psychology, social work, and most helping professions). In 1990, Andrews and colleagues found that correctional programs that used CBT had superior reductions in recidivism compared to those that used other therapeutic approaches. This finding has been replicated in numerous meta-analyses that summarize the "what works" literature (see Cullen & Jonston, 2012; Landenberger & Lipsey, 2005; Sherman et al., 1997). The recognition of the effectiveness of CBT in correctional settings led to the integration of CBT-based approaches in community supervision. The adaptation of CBT to the work of community corrections officers contributed to a number of special initiatives that underscore the importance of core correctional practices (see EPICS, Smith et al., 2012; PCS, Taxman, 2008; STARR, Lowenkamp et al., 2014; STICS,

Bonta et al., 2021; SUSTAIN, Toronjo, 2020). Currently, CBT is recognized by the National Institute of Corrections as part of their eight principles of recidivism reduction (https://nicic.gov/implementing-evidence-based-practice-community-corrections-principles-effective-intervention).

Despite its effectiveness with forensic (i.e., justice-involved) populations, implementing CBT in community corrections settings is complex. Probation officers (POs) using these techniques must be familiar with (1) criminogenic thinking and other leading factors for future criminality; (2) behavioral, cognitive, and social learning theories; and (3) effective communication skills. Implementing CBT techniques requires POs to take on the role of a behavioral manager and/or change agent, office visits require role-playing and practicing skills, and case planning involves a recidivism reduction strategy centered around changes in client thinking and behavior. This can be very different from traditional approaches that are concentrated on "checking in" and surveillance around court-mandated requirements. Once officers are trained, agencies wrestle with strategies to ensure that the newly learned CBT skills are integrated into routine practice and become the new norm for case planning and office visits.

Another challenge is that defining the nebulous concept of CBT can be difficult, especially regarding the assortment of activities POs might incorporate into their office visits. In this paper, we review the three distinct historical waves of CBT, describe activities in each wave that POs can use to help clients change thinking and behavior patterns likely to drive offending, and provide some tips for integrating CBT activities into office visits in community corrections settings.

Making Sense of the CBT Landscape

CBT has undergone considerable evolution and expansion as a form of treatment. Since the 1960s, the term CBT has come to encompass a plethora of models, interventions, and techniques for altering thinking and behavior, making this treatment approach appear amorphous and indistinct. A review of popular CBT books and websites, for instance, suggests that a consensus definition of CBT does not currently exist. In the forensic area, in particular, scholars have noted conceptual confusion about what exactly constitutes CBT (Mitchell et al., 2018; Seeler et al., 2014), a lack of clarity on what type of activities should be included under the CBT umbrella (Eckhardt & Schram, 2009), and little consistency in

operationalizing CBT principles in real-world forensic programs (Wong & Bouchard, 2021).

In an attempt to organize this confusing landscape, some have characterized the CBT "package" as evolving from three distinct intellectual waves (DiGiuseppe, 2008; Leahy, 2008): *Behaviorism*, *Cognitive*, and *Mindfulness/Values*. We will look at applications of CBT to community corrections from the perspective of these three waves. Each wave has a different emphasis, and different set of steps (and common missteps) when it comes to implementation. We also provide small portions of PO-client dialogue to distinguish between these three waves of CBT in their real-world application. These sample conversations are directed at the criminogenic need area of *criminal companions*—managing the client's relationship with a friend who engages in substance use, drug selling, and breaking into houses.[2]

The CBT dialogue presented would normally occur after the client recognizes the friendship as problematic and shows some willingness to take steps to reduce the friend's negative influence. In terms of strategy, CBT-oriented conversations are best placed after the officer-client relationship has been established and clients have acknowledged the factors that put them most at risk for future justice involvement. Since POs are not psychotherapists, the CBT conversations presented below are brief and can typically be conducted in less than 30 minutes.

The first dialog provides some context and sets the stage for conversations related to the three waves of CBT that follow.

PO: Last time we met, you talked about your friend Tavis and how you sometimes feel pressured to do things that might get you jammed up with the police and probation.

Client: Yeah. I sometimes feel pressure to do stuff with him. I know he can be a bad

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[2] In addressing criminal companions, it is often preferable to have clients identify relationships likely to increase the likelihood of future criminal justice interactions and take steps towards distancing from such individuals, while strengthening existing healthy relationships that are more prosocial. However, in some cases, it may be unrealistic or counterproductive to push a client to cease all contact with such a companion. The strategy of assisting clients to develop skills to manage specific features of a friendship that are likely to lead to future arrest, while maintaining the relationship, may be more acceptable. This is the approach taken with the case example.

influence on me, but I don't want to end the friendship. I've known him for as long as I can remember; he's like family. Even if I did try to end things, we live in the same neighborhood. I just don't want him to cause trouble for me.

PO: It sounds like we should talk about managing your friendship with Tavis and the pressure you sometimes feel to do things with him that can get you in trouble again. Can you tell me where you're most likely to see Tavis and when things are most likely to get out of control?

Client: Well, I normally see him when I go over to this house up the street. He gets in trouble a lot, but mostly at night on the weekends. Sometimes he asks me to join him in doing things that are probably a bad idea.

First Wave: An Emphasis on Behaviorism

From a *first wave* perspective, criminal behavior is largely viewed as a function of environmental influences such as reinforcement history (i.e., which behaviors have been rewarded?), associative learning (i.e., connections between stimuli resulting in automatic-like reactions), and modeling (i.e., copying the actions of others). Interventions that developed from this wave were based on operant and classical conditioning models originally derived from animal learning experiments of the early twentieth century (e.g., Thorndike, Watson, Pavlov, Watson, & Skinner). Traditional behavioral principles include positive and negative reinforcement, punishment, and exposure and response prevention.

From a behaviorism perspective, correctional case planning is centered around understanding the relationship between risky stimuli in a client's life (e.g., a friend who steals cars) and the client's dysfunctional seemingly automatic reactions to those stimuli (e.g., spending time with that friend when he is likely to steal a car). Interventions are designed to alter a client's observable behavior (as opposed to internal processes such as thoughts) and typically emphasize the teaching, rehearsal, and adoption of new behaviors that will decrease criminal risk and subsequently become reinforced in the client's natural environment. Well-known interventions based on behaviorism include

contingency management (progressive rewards for program attendance, adherence, and completion); skills training (vocational, social, and emotional); behavioral activation (supporting first steps in a prosocial direction); and relaxation techniques (to slow down impulsive automatic reactions and improve emotion regulation). A mantra that captures the spirit of the behavioral approach is to "get clients off their autopilot reactions."

Applying a Behavioral Approach to the Case Example

This brief dialogue is focused on developing skills for distancing oneself from a companion who might lead to trouble, as well as behavioral activation (first steps) in that process. Notice how the office visit ends with coaching and rehearsal of a concrete skill. Subsequent appointments might incorporate additional skills-building components related to avoiding that person and/or changing the larger social network.

PO: How do you usually end up at Tavis's house? What starts it off?

Client: He texts me to come over. And if I have nothing to do, I say yes. Also, I don't want him thinking I'm lame or that I'm not up for hanging out.

PO: You mentioned weekend nights are the riskiest times to hang out with him? Does he want to get together at other times?

Client: Sometimes. We might hang out and watch a movie on a weekday afternoon after work. Problems occur when I go over there on Friday or Saturday nights and he has other friends over. Then things can get messed up.

PO: It sounds like there are certain times and situations when you get more pressure to do things that might get you in trouble.

Client: Yeah. There's definitely a pattern.

PO: How can you minimize your exposure to those situations that put you at risk for getting in trouble again while still staying in touch with your friend?

Client: Well, I could stop going over there on Friday and Saturday nights. I could just hang out with him after work on the weekdays.

PO: That sounds like a good step. Sort of staying away from situations where you feel pressure to do things that could get you in trouble. Let's talk about steps you can take when you get a text from Tavis to hang out on a Friday or Saturday evening. Next time he texts you at one of the risky times, how could you respond?

Client: I could tell him I'm hanging out with my girlfriend. Then I could mention that I'll catch up with him during the week.

PO: That sounds good. Let's practice some ways you can respond to his texts. What exactly would you type as a response?

[PO and client practice different scenarios for responding to texts from Tavis. Future office visits would also focus on developing skills for "leaving the situation" when things seem to be headed towards committing a crime, as well as ways to stay occupied with other activities that do not involve Tavis.]

Making Behavioral Approaches Work in Office Visits

Below we highlight several tips to use when trying brief behavioral interventions and point out some common missteps that occur.

Tip 1: Emphasize rewards where possible. Criminal justice agencies often focus on sanctions or punishments to dissuade behavior to the exclusion of incentives; however, sanctions are not always effective for changing behaviors and/or attitudes. Evidence-based practices suggest a ratio of incentives to sanctions of about 4 to 1 (Wodahl et al., 2011). This means that positive reinforcers for behavior change must be identified and used as much as possible. Positive reinforcers can include small things such as a compliment or case note about the person's progress, to more formal actions such as a reduction in community service hours, or early discharge from probation. From a behavioral standpoint, threats and sanctions should only occupy a small role in the case plan.

Tip 2: Individualize case plans and interventions; Avoid a one-size-fits-all "cookie cutter" approach. Analyzing discreet behavioral events that unfold naturally in the client's life is at the heart of a behavioral approach. Interventions are then tailored to a particular problem, person, and situational context (Hofmann & Hayes, 2019). Obviously,

many clients will have similar risk factors (e.g., problematic friends) but addressing that specific area will differ at least slightly from client to client based on their reinforcement history and response to new reinforcers.

Tip 3: Be consistent and immediate in offering rewards/punishers. Change agents will sometimes delay a reward for a targeted behavior until the behavior seems "set it stone," or postpone a punisher "to wait and see how things shake out next time." But rewards and punishers work most effectively when they are applied consistently and when they are applied soon after the target behavior. The practice of delaying and/or inconsistently applying rewards/punishers only serves to undermine the power of reinforcement contingencies.

Tip 4: Pay attention to your own nonverbal cues to ensure that your interpersonal style isn't becoming a sanction. Nonverbal behaviors (e.g., rolling eyes, facial expressions of disapproval, closed body language) can inadvertently interfere with reinforcements. Nonverbal behaviors can send signals that the officer disapproves of the client, which may affect the working relationship. When clients express/engage in antisocial or self-destructive thoughts/behaviors, POs need to be mindful that it is sometimes best if their internal reactions of frustration and disappointment remain below the surface.

Tip 5: Clarify the client's readiness and capacity to meet a behavioral goal before it's set. Not all clients are equally motivated, have the intellectual know-how, or are capable of managing their own behavior to the same degree. Recognizing an individual's motivation and capability to change can help establish a realistic goal, as well as the appropriate rewards/punishers that will affect the behavior change.

Tip 6: Attend to basic needs that drive behavior. Often, behavior is driven by basic needs such as food, housing, employment, or the desire to be a good spouse/parent/friend. Recognizing these needs can go a long way to facilitating behavior change. Survival needs often interfere with decision-making due to food insecurity, lack of housing, financial stress, and absence of social supports. Attending to these basic needs can help clients address other issues.

Second Wave: An Emphasis on Cognitions

From a *second wave* perspective, it is thinking that directs criminal behavior. Therefore, the goal of forensically oriented cognitive

interventions is to (1) change the thinking patterns that drive criminal decisions, and (2) increase thinking that leads to productive decisions and prosocial outcomes (Morgan et al., 2018; Tafrate et al., 2018).

The second wave traces its origin to the ancient Stoic Greek and Roman philosophers (e.g., Zeno, Seneca, Epictetus) who believed that disturbances in emotion and behavior could be changed by testing one's thoughts through evidence and logic. These ideas were later formalized by Ellis (1957, 1962) and Beck (1963, 1967) into a set of intervention procedures. Ellis's model became known as rational emotive behavior therapy and Beck's model became cognitive therapy. A related intervention, known as self-instructional training, emphasizes verbal self-statements as a means of directing new behaviors and interrupting learned maladaptive patterns by replacing them with more adaptive internal self-instructions (Meichenbaum & Cameron, 1973). Currently, the term "cognitive restructuring" is frequently used to describe interventions that target thinking and self-talk. A quote attributed to the Roman stoic philosopher Epictetus (55-135 C.E.) is frequently cited to emphasize the spirit of the cognitive approach: "Men are not disturbed by things, but by the views which they take of them" (Higginson, 1890).

Understanding the impact that specific thinking patterns have on decisions to engage in criminal behavior is at the centerpiece of forensic case planning. In this way of working, thought patterns are viewed as the stimulus that influences clients' reactions. Interventions are designed to weaken the kind of thinking that leads to risky/criminal decisions and to develop and strengthen the kind of thinking that results in non-criminal outcomes.

Common interventions from this wave include self-monitoring (becoming aware of thoughts that occur prior to poor decisions); exploring the accuracy, evidence, and functionality of certain cognitive "rules" and "assumptions" (e.g., "My life must always be exciting" or "I have nothing in common with people living a conventional life"); developing specific self-statements that clients can use to guide behavior in challenging situations (e.g., "Let it go. He wants to fight and I'm on probation. I don't want to go back to jail. Just walk away."); and fostering improved problem-solving skills when faced with challenges (e.g., considering alternatives, thinking through consequences, choosing the option most likely to produce a positive outcome).

Applying a Cognitive Approach to the Case Example

In this sample dialog, the officer challenges the client's view that he is "not a good friend" if he chooses not to hang out with his companion on weekend nights. The office visit ends with an example of what the client can say to himself when he is tempted to engage in behavior likely to lead to legal problems.

PO: What's going through your mind when Tavis asks you to hang out on Friday or Saturday nights?

Client: Well, I want to say no. But I also don't want to turn my back on him.

PO: Walk me through your thought process. What goes through your mind when you consider saying no?

Client: I'm worried he will think I'm lame or that I don't care about him.

PO: Do you think Tavis is a real friend and cares about you and wants what's best for you?

Client: Yes. But not always. Sometimes he can be selfish.

PO: When you got in trouble last time, was Tavis there to help you? Did he help you with money? Calm things down with your family? Talk to you about what happened in court?

Client: No. He just texted me afterwards to keep hanging out, like nothing happened.

PO: Even though he is a friend and does some good things, it doesn't sound like Tavis is always concerned about what's best for you. He's thinking more about himself. So, the next time you say no to hanging out with him, how can you counter your own thoughts that you are not a caring friend?

Client: I guess I could tell myself that I'm trying to make changes in my own life—getting in trouble isn't who I want to be, and it could have bad consequences for me. If Tavis was a good friend, he would respect that. Also, I'm not cutting him out of my life. I can still hang with him at times.

PO: That's good insight. So, the next time you get a text to hang out with Tavis on a Friday or Saturday night, I want you to take the time before saying "no" to have a discussion with yourself about why you are saying no. Challenge the thought that you are abandoning your friend by saying "no," and encourage yourself to remember your reasons for making changes in your life. What are some things you could say to yourself to reinforce a better way of thinking when you feel under pressure hang out with him?

Client: Oh, like stuff I can say to myself.

PO: Yes. Exactly.

Client: I could say that I'm trying to change my life for the better and if I'm not careful he can drag me down. He won't help me when things go bad. I'm not abandoning him. Also, if I get my life on track, I'll be better able to help him.

PO: Wow! All excellent points.

[PO and client practice self-statements to use when responding to texts from Tavis. Future office visits would focus on new thinking and self-statements to help guide the client to leave situations with Tavis when a new arrest seems likely.]

Making Cognitive Approaches Work in Office Visits

Below we highlight some tips to get brief cognitive interventions off to a good start.

Tip 1: Maintain a positive (or at least neutral) attitude and delivery style. Conversations about clients' views of themselves and others can sometimes take on a tone of scolding, arguing, or ridiculing, especially when the client expresses criminogenic thinking. In this case, the style itself can cause the client to disengage in the process. Although cognitive interventions are traditionally described as "active-directive" (led by the practitioner), they still assume that clients are engaged in the conversation and collaborating with the PO to identify better ways of thinking. When clients feel judged and get defensive, the opportunity to explore both criminogenic and healthier ways of thinking diminishes. Being upbeat and nonjudgmental can give clients the safety to say what's really on their mind.

Tip 2: Elicit and collaborate. Don't lecture and interrogate. The original models of Ellis and Beck emphasized Socratic questioning that helps clients reflect on their own thought processes. This requires open-ended questions that elicit the client's thoughts and decisions, and reflections (repeating back the gist of what the person is saying) that help clients hear their thoughts in a different way. Rapid-fire closed-ended questions can produce an atmosphere of interrogation that shuts down communication. Similarly, we have seen well-meaning POs shut down cognitive interventions because they adopt a purely didactic, lecturing style that puts the client in the back seat. An emphasis on shared decision-making—with the client in the driver's seat, and you as the navigator—can help to build interest and engagement.

Tip 3: Make manualized or scripted interventions your own. POs may sometimes follow manualized or scripted cognitive interventions (e.g., programs such as Carey guides; CBT with Justice-Involved Clients). Scripts are useful for launching into productive conversations and providing a structure for focused and efficient sessions. But it is important to try to deliver scripted material in a way that is as natural as possible. Being too bound to scripts can result in a loss of the flexibility that is useful in real-world discussions. Scripts and manuals are best viewed as starting points, like training wheels on a bicycle. With practice and repetition, POs will become more natural and competent in using CBT interventions. We also recommend, when initially using scripts, that POs tell clients they are trying out a new worksheet and will be looking at the worksheet while interacting with the client. We have never received a client objection when a new activity is presented in this manner.

Third Wave: An Emphasis on Mindfulness and Values

From a *third wave* perspective, criminal behavior results from unskilled attempts to fulfill personal values and cope with life's challenges. Thus, antisocial and self-destructive behaviors are the result of strategies clients adopt in pursuit of their values. With repetition, these strategies become entrenched and automatic as people navigate their lives.

The third wave interventions incorporate elements of Buddhist philosophy and emphasize mindful awareness and values-based actions (Hayes, 2008). The best-known model in this area is acceptance and commitment therapy (ACT). The acronym ACT stands for (A)ccept thoughts and feelings, (C)hoose directions, and (T)ake action (Hayes & Smith, 2005). The focus is not on eliminating or changing one's thoughts and feelings, but

rather on learning to accept those thoughts and feelings as they are, while only acting on those that will move the client in a productive direction. The identification of the client's personal values is used to establish anchor points to guide future behavioral choices. This in turn helps the client to develop behavioral activation plans that will lead to a happier and more meaningful life (Amrod & Hayes, 2014).

Embedded in third wave principles is the idea that people do not—and do not have to—act on every thought, emotion, or urge. In fact, during a typical day, all of us have impulses that do not automatically translate into behaviors (e.g., "I'm hungry" or "I wish he would shut up" or "I'd love to take a nap right now," etc.). From a third wave perspective, the problem is less about the thoughts and more about behavioral expression (e.g., "This is a frustrating situation and I'm angry. Maybe I should take a quick 'time out' before I decide what to do."). This is particularly relevant in areas like substance use, sexual attraction to children, and problematic anger reactions. Probation clients may have destructive internal impulses (e.g., thoughts, feelings, and urges) without needing to act on them. Other foundational principles include the idea that everyone has at least some underlying prosocial values, and alignment of those values with behaviors will reduce the risk of future criminality (Fortune & Ward, 2014).

In this way of working, POs take the time to explore what clients want out of life. Case planning is centered around identifying values and life priorities. Values are big life directions that require ongoing attention across a lifetime (e.g., being a nurturing and involved parent, excelling at work, being actively involved in community organizations, maintaining physical health). Common interventions from this wave include values clarification; acceptance of difficult thoughts, emotions, and urges; exploring the degree to which everyday decisions are consistent with core values; and fostering values-based actions (setting goals that are consistent with values). From a wave three philosophy, a meaningful life is defined by deliberately living in accordance with one's own values.

Applying a Mindfulness/Values Approach to the Case Example

While mindfulness/values approaches can seem unfamiliar, in this brief sample dialog, exploring the connection between values and behaviors leads naturally to a productive conversation.

PO: So it seems like friendship is something that you care about. [value]

Client: Yes. Very much.

PO: What else do you value?

Client: I guess family. It's important to me that I do right by them. I also value my future. I want to have a career and my own family someday. Getting in trouble just takes me further away from those things.

PO: So how does hanging out with Tavis during weekend nights undermine your value of family and your future goals?

Client: If I follow his lead and get in trouble again, my family will be disappointed in me. They may stop supporting me. Also, getting arrested again sure doesn't help my future.

PO: Our goal is to bring your values and everyday decisions into alignment. You value friendship, family, and your future. But what I hear you saying is that sometimes the friendship with Tavis can be in conflict with those values. I want you to be mindful of these values, and to think about actions you can take that will support all of them. Are there ways you can be a good friend while also doing right by your family and your future?

Client: Yes. I can still be there for Tavis and listen to him when he needs to vent. But I can't go hang with him at times when he wants to do stuff that can lead to getting arrested.

PO: That makes sense. It's important to remember the temptation to seem like a good friend by joining him when he asks will often be there. But it's also important to remember that you do not need to automatically act on those thoughts—in the moment—because it doesn't align with your other values. Your family and your future are also important. You've got to balance those things.

[In subsequent office visits, PO and client discuss everyday decisions that are consistent with the values of family and future and those that are not, emphasizing decisions that support the client's valued life directions.]

Making Mindfulness and Values Approaches Work in Office Visits

Below we highlight several tips to get values conversations off to a good start.

Tip 1: Focus on approach (rather than avoidance) goals. In community corrections, it is common to focus on stopping or reducing negative behaviors (e.g., lying, skipping school, quitting jobs, hanging out with certain friends, and so on). This usually means increasing client awareness of the costs of actions and pursuing a series of avoidance goals. However, this begs the question: If clients are not engaging in self-defeating activities, what will they be doing instead? Helping clients develop a better life requires awareness of "approach" goals, for instance adopting new behaviors, social groups, hobbies, etc. Working from this perspective helps to identify positive steps clients can take to live their lives in line with their core values.

Tip 2: Use values clarification exercises to explore client inconsistencies, but resist the urge to say "gotcha." There is sometimes a temptation for POs to point out an inconsistency between what clients state they value and their actual actions. This can take on a "gotcha" feel that focuses on the person's character, as opposed to the behavior (e.g., "If you really valued being a good parent, then you wouldn't have been on the street corner."). Rather than pointing out contradictions, a more useful stance is to help clients explore the degree to which their actions are taking them in the direction they truly want (e.g., "How did that fit with your obligation as a parent?" or "Considering that you value being a good parent, what would you do differently in the future?"). This allows clients to identify inconsistencies on their own and fosters internal motivation for change.

Tip 3: Link mindfulness/values activities to risk-relevant behaviors. In some forensic programs, clients are taught mindfulness skills such as yoga or transcendental meditation, or they may be asked to engage in spiritual practices. While these efforts may be useful, they are not by themselves considered a form of CBT, nor could they be expected on their own to reduce reoffending. Third-wave CBT, in the forensic arena, is not simply a recommendation that clients engage in various forms of mindfulness. Instead, mindfulness and values-based activities are adapted to counter patterns related to the client's offending history. Returning to the case example, a values-oriented discussion was used to aid the client in distancing from an antisocial companion.

Conclusion

CBT is a big umbrella that contains different ways of thinking about change. We offer a review of three historical waves that clarify the underlying principles of CBT approaches and provide examples of how they might look in a probation context. Within each wave there are multiple CBT interventions; it's not necessary to stick to only one CBT approach. They can be used alongside one another or combined with other treatment approaches (e.g., motivational interviewing). Once POs become familiar with different CBT techniques, they can be delivered flexibly; CBT does not have to be overly manualized. Interventions from different waves can be combined; however, we recommend introducing different techniques gradually over the course of multiple office visits (doing too much within one meeting can dilute the intended effects of any one intervention).

The migration of CBT techniques from the mental health arena to probation office visits is a relatively new phenomenon. Current adaptations of CBT to community corrections rest on the foundation of the three intellectual waves discussed in this article. Although CBT-oriented probation is still in its infancy, the techniques will continue to be adapted and refined to reduce criminal behavior and improve probation outcomes. When officers understand the advantages of different CBT approaches, they will be better able to choose the specific techniques that will be of most benefit to their clients.

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Pretrial Detention and the Sentencing Variance: An Analysis of Fixed Effects Across U.S. District Courts

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IN THIS ARTICLE, we examine the effect of pretrial detention status on a primary vehicle found in federal sentencing: the sentencing variance. Although a substantial amount of previous work has examined the influence of pretrial detention on sentencing decisions, few studies to date have considered this question at the federal level, and no previous work has specifically considered how pretrial detention affects variances from the federal sentencing guidelines. Using a technique known as multilevel modeling, we examine, across judicial districts, the fixed effect of pretrial detention on the likelihood that a downward variance will be granted at sentencing and on the size of downward variance granted.

Pretrial Detention and Sentencing

The research conducted to date on the effects of pretrial detention on case outcomes, which has focused almost exclusively on state criminal case processing, generally concludes that compared to released defendants, those ordered confined while their cases await adjudication experience more adverse outcomes, both legally and personally.

For example, there is evidence that defendants detained pretrial are quicker to plead guilty than their released counterparts. Petersen (2020), examining felony defendants across large urban areas between 1990 and 2004, found that those detained pled guilty 2.68 times faster than released defendants. Detained defendants are also more likely to be convicted and imprisoned than their released counterparts. Lee (2019), using a large sample of felony defendants in Florida, determined that being detained pretrial increased the odds of conviction by 1.67, controlling for various factors. Sacks and Ackerman (2014), studying defendants in New Jersey, concluded that although pretrial detention did not appear to have an effect on the imprisonment decision, detained defendants received longer prison sentences than those released pretrial. Similar findings about the adverse consequences of pretrial detention have been offered by Tartaro & Sedelmaier (2009), LaFrentz & Spohn (2006), Williams (2003), and Clarke & Kurtz (1983).

To date, only a few studies have examined the effects of pretrial detention in the federal system. In examining over 90,000 cases sentenced in federal court between 2010 and 2011, Oleson et al. (2017) found that upon controlling for factors including defendant age, race, gender, prior criminal record, and offense of instant conviction, being detained pretrial was associated with both the increased likelihood of a sentence of imprisonment and increased sentence length. Using a similar method to study sentencing outcomes in two federal districts, Oleson et al. (2016) found that pretrial detention (and revocation of pretrial release) was associated with longer prison sentences, while successfully completing a term of pretrial supervision was associated with a shorter sentence length.

Notably, the effects of pretrial detention extend beyond the obvious legal consequences of sentencing. While detained, defendants are unable to work and provide for their children and may experience the severing of familial and other social ties (Demuth & Steffensmeier, 2004). Holsinger & Holsinger (2018), for instance, found that even brief periods of pretrial detention (more than three days) negatively impacted defendants in each of these ways. Moreover, to the extent that pretrial detention is associated with a greater likelihood of imprisonment and longer sentences, it contributes to mass incarceration, the harmful effects of which on both individuals and communities have been well-documented (Rose & Clear, 1998; Sykes & Pettit, 2014; Western & Pettit, 2010).

In a 2017 article that appeared in the *Federal Sentencing Reporter*, Judge James G. Carr of the Northern District of Ohio lamented this contribution of pretrial detention to mass incarceration. In doing so, he termed the pretrial release decision "the most important and consequential decision in any federal criminal case except the decision at sentencing—which the release/detention decision directly affects" (p. 219).

Given the potential harmful consequences of imprisonment to defendants, their families, and communities, a greater understanding of the processes by which pretrial detention influences criminal sentencing is warranted. To that end, this study examines the effect of pretrial detention status on sentencing using a nationwide dataset. In particular, we examine the effect of pretrial detention on a primary vehicle of federal judicial decision-making: the sentencing variance.

The Guidelines and Sentencing

As many readers of *Federal Probation* know, in 1984, Congress passed the Sentencing Reform Act, which, among other things, created the Federal Sentencing Guidelines. Application of the guidelines, largely intended to reduce disparity in sentencing by providing a framework for sentencing decisions, was required by law for nearly 20 years following enactment of the Act. Today, judges seeking to impose a sentence outside the proscribed guideline range have two mechanisms for doing so: *departures* and *variances*.

Departures are grounds for deviation from the guidelines for reasons specifically authorized in the guidelines. For instance, Chapter 5 of the U.S. Sentencing Commission's *Guidelines Manual* allows for downward departures (sentences below the recommended guideline range) for substantial assistance to authorities and if unusual circumstances surround the offense of conviction. Many personal characteristics of defendants, such as educational history, drug or alcohol dependence, employment history, family ties and responsibilities, and lack of guidance as a youth are "not ordinarily" to be considered grounds for departure (U.S. Sentencing Commission, 2018).

The Supreme Court's ruling in *U.S. v. Booker* (2005) that mandatory application of the guidelines is a violation of the Sixth Amendment created additional opportunity for judges to fashion sentences outside the guideline range. Prior to *Booker*, judges who wished to impose a sentence outside the range recommended in the guidelines could rely only upon guideline-authorized departures to do so. Now, by analysis of the sentencing factors outlined at 18 U.S.C. Sec. 3553(a), judges may impose a sentence outside the recommended guideline range for reasons not specifically authorized by the guidelines; i.e., a variance.

A substantial amount of research has examined the extent to which various legal and non-legal factors, both those authorized and those not authorized by the guidelines, have influenced sentencing decisions. Much previous work, for instance, has suggested that differences persist across racial lines with regard to imprisonment decisions. In particular, some research has concluded that judges impose sentences of imprisonment for Black male defendants at higher rates than for White male defendants. A recent study conducted by the Sentencing Commission found that Black male defendants received sentences 19 percent longer than

similarly-situated White male defendants. Notably, the Commission stated that these different sentences are primarily arrived at through the use of sentencing variances (U.S. Sentencing Commission, 2017). Similar conclusions using federal sentencing data have been reached by Yang (2015), Rehavi and Starr (2014), Ulmer, Light, and Kramer (2011), Doerner and Dumuth (2010, 2014), and Mustard (2001), among others.

Disparities in sentencing have also been found between the sexes. Farrell (2004), for instance, found that from 1999 to 2005, sentence lengths for women in federal courts were on average 16 percent shorter than those for men. Moreover, between 2000 and 2002, female defendants were more likely to be released on bail compared to men and less likely to receive a sentence to a term of imprisonment.

Variations in sentence length may also occur across age ranges. In the federal system, defendants over age 50 have been found to be more likely to receive downward sentencing departures (Burrow & Koons-Witt, 2004).

With regard to legal factors that influence sentencing, it has been well-documented that judges consider the severity of the crime of conviction (Spohn, 2009) and the extent of the defendant's prior criminal record (Johnson, Ulmer, & Kramer, 2008; Mitchell, 2005; Vigorita, 2003) when fashioning a sentence. Additionally, defendants who have exercised their constitutional right to a trial generally receive sentences that are harsher than those who have pled guilty (Bushway, Redlich, & Norris, 2014; Ulmer, Eisenstein, & Johnson, 2010). Of note, the federal sentencing guidelines are structured in a way which promulgates this "trial penalty"; defendants who plead guilty are generally eligible for a reduction in their guideline range, whereas defendants who are convicted via trial typically are not.

To date, most of the work which has examined federal sentencing has used guideline departures as either the dependent variable or a predictor in models containing many of these legal and extra-legal factors. However, because judges may invoke variances without consideration of the relatively narrow confines of the guidelines, variances provide a greater opportunity for judges to consider many more aspects of a defendant's background and characteristics than do departures and therefore allow for broader use of discretion. Indeed, variances are common in the federal system; 25 percent of all defendants sentenced

in federal courts in fiscal year 2019 received variances at sentencing (U.S. Sentencing Commission, 2019). Despite this, rarely have variances been used as the outcome of interest in studies of federal sentencing, and we are aware of no prior work that has examined how the pretrial release decision influences federal sentencing variances specifically. For these reasons, as well as because our independent variable, pretrial detention status, is not authorized by the guidelines as grounds for a departure, we choose to use sentencing variances, rather than departures, as the outcome of interest.

The study considers the effect of pretrial detention status on two outcomes, controlling for assorted individual-level variables previously found to be associated with sentencing decisions. Specifically, the following two research questions were asked:

> *Research Question 1: What is the effect of being released pretrial (compared to being detained) on the likelihood that a downward variance will be granted at sentencing?*

> *Research Question 2: Among a sample of defendants granted downward sentencing variances, what is the effect of being released pretrial (compared to being detained) on the size of the variance granted?*

Method

The study uses generalized linear mixed models to answer the research questions. Multilevel analysis is appropriate when data are grouped in a hierarchical structure, or "nested," as such grouping may violate the assumption of independence of observations, resulting in biased estimates and incorrectly estimated standard errors (Raudenbush & Bryk, 2002). Multilevel modeling has infrequently been used in studies involving federal sentencing data but is wholly appropriate given the fact that individual-level defendants are nested within judicial districts. Multilevel modeling provides not only the opportunity to discern the effects of individual-level variables such as defendant status pretrial, age, race, gender, prior record, and crime of conviction on sentencing outcomes, but also allows us to control for the possible effects of higher-order contextual factors, such as the characteristics of judicial districts (Hamilton, 2017).

Data were gathered from the U.S. Sentencing Commission's individual level datafile for 2019, containing information on the 76,538 sentences imposed that fiscal year

in U.S. district courts. The datafile is publicly available at the Commission's website. All analyses were conducted using SPSS (Field, 2009; Heck, Thomas, & Tabata, 2012; Heck, Thomas, & Tabata, 2014).

The models contained assorted covariates found to predict sentencing outcomes at the individual level. These included defendant age in years (a natural log transformation was used because the data were positively skewed and the variable were grand-mean centered) (Enders & Tofighi, 2007). Variables reflecting defendant race (non-Black = 0, Black = 1) and gender (male = 0, female = 1) were also included as covariates.

The instant offense of conviction was also included as a moderating variable. Seven categories of offenses were developed: drug offenses, weapons offenses, violent crime, financial crime, sex offenses, immigration offenses, and a category for miscellaneous "other" offenses. Drug offenses served as the reference category.

Also included was a variable capturing the extent of each defendant's prior criminal record. This was a categorical variable comprising the Criminal History categories I through VI as determined by the Sentencing Guidelines, with Criminal History Category I serving as the reference.

Of the 76,538 cases in the sampling frame, valid data on variances were available for 76,034 of them. Of these, below-range variances were granted on 17,608 (23 percent), making downward variances the most common mechanism for arriving at a sentence outside the recommended guideline range. Removed from this dataset were all cases which were subject to a statutory mandatory minimum sentence. Notably, mechanisms exist which allow judges to impose sentences below the mandatory minimum required by statute, usually by finding grounds for a downward departure or through the application of certain guidelines. And judges may certainly find that any given defendant is eligible for both a departure *and* a variance. However, for the sake of conceptual clarity and due to certain ambiguities in the dataset, we decided to remove from the analysis cases which were subject to mandatory minimum sentences by statute. Also removed was any case in which both a sentencing departure and variance were found. Because the dataset does not specify how much of a given sentence reduction was attributable to a departure and how much was attributable to a variance, it is impossible to disentangle the effect of each of these when both are present in the same case. Finally, removed from the sample were cases which had a minimum guideline range of zero months in custody, because, by definition, there is no room in these cases for judges to vary downward. These steps produced a final sample consisting of 43,392 cases.

Answering the first research question, examining the effect of pretrial detention status on the likelihood that a downward variance will be granted, began with development of an unconditioned model. This null model is designed simply to answer the question of whether the likelihood of receiving a downward variance varies across judicial districts and allows us to examine the extent of any variability. A significant finding justifies the use of multilevel modeling.

The second step in the analysis involved adding individual-level (Level 1) predictors to explain the influence of each of these on the likelihood of being granted a downward variance, allowing for the "nested" nature of the data.

Similarly, answering the second research question—pertaining to the size of downward variances granted considering pretrial status—began with construction of a null model. This analysis was limited to the 11,569 defendants in the sample who were awarded downward variances at sentencing. A Level 1 model was then constructed that examined the fixed effects of each of the variables of interest on the size of downward variance granted. It is noted that in this case, the dependent variable was the percent reduction in the length of sentence imposed, from the bottom of the otherwise applicable guideline range. Thus, for example, a defendant who faced a guideline range of 12 to 18 months and received a sentence of six months in custody (six months below the minimum of the guideline range) was awarded a 50 percent reduction (i.e., downward variance) in sentence. A defendant who faced a guideline range of 18 to 24 months and received a sentence of 12 months in custody (also six months below the minimum of the guideline range) was awarded a smaller (33 percent) reduction in sentence.

Results

Of the 43,392 cases comprising the final sample, 27 percent received variances downward from their sentencing range as determined by the guidelines. The mean age of defendants in the sample was 37. Twenty-two percent of the defendants were Black and 12 percent were female. The plurality of defendants (30 percent) were classified in Criminal History Category I, and 43 percent of the convictions were for immigration-related

TABLE 1.
Descriptive statistics for cases in full sample (n=43,392)

	Mean	SD	Min.	Max.	Valid N
Dependent Variable					
Downward Variance	.27	.44	0	1	43,392
Level 1 Variables					
Age	37.11	11.19	18	86	43,392
Female	.12	.32	0	1	43,392
Black	.22	.41	0	1	43,392
CH Category I	.30	.46	0	1	43,392
CH Category II	.20	.40	0	1	43,392
CH Category III	.21	.41	0	1	43,392
CH Category IV	.12	.33	0	1	43,392
CH Category V	.07	.26	0	1	43,392
CH Category VI	.09	.29	0	1	43,392
Drug Offense	.14	.34	0	1	43,392
Violent Offense	.06	.23	0	1	43,392
Weapons Offense	.17	.38	0	1	43,392
Financial Offense	.14	.35	0	1	43,392
Sex Offense	.03	.16	0	1	43,392
Immigration Offense	.43	.50	0	1	43,392
Other Offense	.04	.19	0	1	43,392

offenses. Descriptive statistics are presented in Table 1 (previous page).

Answering the first research question—designed to determine the effect of being detained pretrial on the likelihood that a downward variance will be awarded at sentencing—began with construction of a null model. This unconditioned model, presented in Table 2, reveals the intercept variance varies between judicial districts ($z = 6.42$, $p < .001$), and the significance of this value justifies the development of a multilevel model. The intraclass correlation (Hedeker, 2007) suggests

that 12 percent of the variability in whether a downward variance is granted lies between judicial districts.

A Level 1 fixed effects model was then constructed to determine the effect of pretrial detention status and the other individual-level covariates on the likelihood that a downward variance would be granted. The results are presented in Table 3. Because the variance components in this model were found to be significant ($p < .001$), we are able to conclude that the likelihood of being granted a downward departure varies across

districts given the Level 1 predictors included in the model. The effect of being detained pretrial (compared to being released) was to reduce the likelihood of being granted a downward variance at sentencing by nearly 49 percent, controlling for the other covariates. Of additional note, female defendants were 28 percent more likely than male defendants to receive a variance downward. Defendants convicted of financial crimes were 26 percent less likely than those convicted of drug offenses to receive a downward variance, and those convicted of immigration offenses were 52 percent less likely. Interestingly, defendants guilty of sex offenses were 51 percent more likely than those convicted of drug crimes to receive variances downward.

Answering the second research question—assessing the effect of pretrial detention on the size of downward variance among defendants who received a downward variance—was necessarily limited to those defendants who were awarded downward variances. This was 11,569 (27 percent) of the defendants in the larger sample. Of this subsample, 17 percent of the defendants were female, 29 percent were Black, and the average age was 39 years. The average downward sentencing variance amounted to a 49 percent reduction in sentence from the bottom of the otherwise applicable guideline range. Descriptive statistics are provided in Table 4 (next page).

As with Research Question 1, answering this question also began with construction of a null model. The model presented in Table 5 (next page) indicates the intercept variance varies between judicial districts (Wald $z = 5.509$, $p < .001$). The intraclass correlation is .563, suggesting that approximately 56.3 percent of the variability in the size of downward variances lies between judicial districts.

The fixed effects model (Table 6, next page) suggests that among defendants who receive downward sentencing variances, those detained pretrial receive variances approximately 26 percent smaller than defendants who are released pretrial. We also note that defendants convicted following trial receive variances 8 percent smaller than those who pled guilty. Defendants convicted of violent, weapons-related, and financial crimes all received variances smaller than those convicted of drug crimes. Of note, no significant difference in size of downward variance was found across defendant gender or race.

TABLE 2.
Unconditioned model of likelihood of downward sentencing variance

Fixed effect	Coefficient	Std. error	T-ratio	Odds Ratio	df
Intercept	-.671	.071	-9.488	.511***	93
Random effect	Estimate	Std. error	z-test		
Var (Intercept)	.447	.070	6.42***		
Intraclass correlation	.120				

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

TABLE 3.
Multilevel fixed effects model of likelihood of being granted a downward sentencing variance.

Fixed effect	Coefficient	Std. error	Odds Ratio
Intercept	.141	.106	1.151
Pretrial Status (Detained = 1)	-.682	.051	.505***
Age, logged	.020	.013	1.021
Gender (Female = 1)	.246	.045	1.278***
Race (Black = 1)	.038	.052	1.039
Type of Conviction (Trial = 1)	.446	.084	1.562***
CH Category (I = 0)			
CH Category II	-.400	.061	.670***
CH Category III	-.424	.085	.655***
CH Category IV	-.407	.059	.665***
CH Category V	-.317	.076	.729***
CH Category VI	-.183	.068	.833**
Offense type (Drugs = 0)			
Violence	-.155	.109	.857
Weapons	-.080	.078	.924
Financial	-.296	.084	.743***
Sex Offense	.411	.110	1.508***
Immigration	-.742	.190	.476***
Other	-.050	.082	.951

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

Discussion

The present study examined the effect of pretrial detention on the likelihood that a defendant will receive a downward variance from the federal sentencing guidelines. It also examined, among a subsample of defendants who received downward variances, the influence of pretrial detention status on the size of the variance granted. Using multilevel analysis of nationwide federal sentencing data, we conclude that defendants detained pretrial are 49 percent less likely to receive a downward variance at sentencing than those released. Among a subsample of defendants who do receive downward variances, variances are 26 percent smaller for those defendants who are detained pending sentencing.

Consistent with other studies, female defendants were more likely to receive variances downward. Interestingly, defendants convicted of sex offenses were more likely to receive downward variances than those convicted of drug crimes, the reference category. It may be that judges view the guideline penalties for sex offenders to be overly harsh, but further study is needed to support this proposition. By contrast, defendants convicted of financial crimes and immigration offenses were less likely than those convicted of drug offenses to receive downward variances. Because the guidelines typically recommend relatively brief terms of imprisonment for immigration offenses, it may be that judges see less need to vary downward in those cases. We also found that defendants convicted following trial were more likely than those who have pled guilty to receive the benefit of a downward sentencing variance. This finding is somewhat contrary to previous work examining the "trial penalty," which has found that defendants who exercise their right to a trial often receiver harsher sentences than those who have pled guilty. Under the federal sentencing guidelines, defendants who plead guilty are generally eligible for a reduction in their guideline range, whereas defendants who are convicted via trial are generally not. Again, we suggest this finding may be an indication that federal judges view at least some guideline ranges to be excessively punitive and perhaps try to mitigate the "trial penalty" inherent in the guidelines by awarding variances downward.

When it comes to explaining the extent of downward variance granted, of all the variables in the model, pretrial detention status exerted the greatest influence. Defendants released

TABLE 4.
Descriptive statistics for cases granted downward variance (n=11,569)

	Mean	SD	Min.	Max.	Valid N
Dependent Variable					
% of Downward Variance Granted	48.67	31.21	.43	100.00	11,431
Level 1 Variables					
Age	38.50	12.48	18	86	11,569
Female	.17	.37	0	1	11,567
Black	.29	.45	0	1	11,569
CH Category I	.45	.50	0	1	11,569
CH Category II	.14	.34	0	1	11,569
CH Category III	.15	.36	0	1	11,569
CH Category IV	.10	.29	0	1	11,569
CH Category V	.07	.24	0	1	11,569
CH Category VI	.10	.30	0	1	11,569
Drug Offense	.19	.39	0	1	11,569
Violent Offense	.07	.26	0	1	11,569
Weapons Offense	.21	.41	0	1	11,569
Financial Offense	.23	.42	0	1	11,569
Sex Offense	.05	.21	0	1	11,569
Immigration Offense	.20	.40	0	1	11,569
Other Offense	.05	.22	0	1	11,569

TABLE 5.
Unconditioned model of extent of downward variance granted (percent downward)

Fixed effect	Coefficient	Std. error	T-ratio	df
Intercept	49.758	.914	54.752	93
Random effect	Estimate	Std. error	**Wald z**	
Var (Intercept)	64.146	11.644	5.509***	
Intraclass correlation	.563			

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

TABLE 6.
Multilevel fixed effects model of extent of downward variance granted (percent downward)

Fixed effect	Coefficient	Std. error
Intercept	13.832**	4.934
Pretrial Status (Detained = 1)	-26.098***	.616
Gender (Female = 1)	-1.853	1.301
Race (Black = 1)	-.287	.628
Age, logged	.633**	.227
Type of Conviction (Trial = 1)	-8.034***	1.352
CH Category (I = 0)		
CH Category II	-.469	.574
CH Category III	-4.629***	.799
CH Category IV	-8.703***	.966
CH Category V	-7.879***	1.133
CH Category VI	-6.181***	.983
Offense type (Drugs = 0)		
Violence	-4.710***	1.124
Weapons	-3.037***	.849
Financial	-3.328***	.841
Sex Offense	-1.853	1.301
Immigration	5.021***	.973
Other	10.127***	1.262

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

pretrial enjoyed downward variances 26 percent larger than those detained. Defendants convicted at trial received variances 8 percent smaller than those who pled guilty. Defendants convicted of violent, weapons-related, and financial crimes all received smaller variances than those convicted of drug offenses, but the differences in the size of the downward variance amounted to no more than a few percentage points in any case. Even though all the effects appear to be modest (no more than 4 percent difference in size of variance), this may be taken as some evidence that many judges believe the sentencing guidelines for drug offenses to be too punitive.

Although the results of this study suggest significant difference in both the likelihood and extent of downward variances awarded to defendants detained pretrial and those released, the results do not explain *why* these differences in sentencing outcomes occur. It may be, as Judge Carr suggested in his 2017 article in the *Federal Sentencing Reporter*, that defendants released pretrial—unlike their detained counterparts—have the opportunity to engage in positive behavior and present evidence of that behavior to the court in mitigation of sentencing. Our understanding of this potential dynamic would be furthered by research that seeks to identify the precise mechanisms through which pretrial release affects the sentencing decision.

Regardless, because of the apparent downstream effect of pretrial detention on the length of sentence imposed, it is not difficult to see how, as Judge Carr has argued, the decision to detain pretrial contributes to mass incarceration. Clear and Austin (2009), for instance, have suggested there exists an "iron law of prison populations," in which the size of the prison population is a direct function of the number of people imprisoned and the length of sentences imposed.

We believe meaningful reduction in the prison population can and should be accomplished, in part, through more widespread use of pretrial release. To this end, the United States Probation and Pretrial Services system's 2017 Strategic Plan expressed the goal of identifying alternatives to incarceration that address the purposes of sentencing in low-risk, non-violent cases. We believe this can be done without introducing any significant risk to public safety through the appropriate use of pretrial conditions. In a 2017 study, for instance, Wolff et al. compared defendants released pretrial with conditions of location monitoring to a group

of defendants released absent a location monitoring condition, matched on propensity scores. The defendants placed on location monitoring were significantly less likely to be rearrested for a new crime while awaiting sentencing.

Finally, we note that although the present study makes use of multilevel analysis because significant differences exist between federal districts with regard to the use of and extent of downward variances granted, this study only examines fixed effects at the level of the individual defendant and not differences that may occur across higher-order constructs. Future work in this area may consider, for example, the characteristics of judicial districts (Johnson, Ulmer, & Kramer, 2008) and even judges (Anderson & Spohn, 2010; Steffensmeier & Herbert, 1999). Nonetheless, we believe the present study contributes to our understanding of the effects of pretrial detention on sentencing outcomes and underscores the implications of the detention decision for not only individual defendants, but their families, communities, and society at large.

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The Use of Location Monitoring at the Post-Conviction Stage of Supervision

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THE LOCATION MONITORING program within the U.S. probation and pretrial services system has played a significant role in the supervision process for several decades. In 1986, the federal system launched the home confinement program, using a special curfew of approximately 60 days (Gowen, 2000). In 1989, the program was expanded when the Federal Judicial Conference authorized the use of electronic monitoring for federal supervisees in 12 districts, and a couple of years later the program was expanded nationally (Cornish & Whetzel, 2014). The agency next began to explore the possible implementation of various technologies as a tool for the home confinement program. Monitoring technology by that time offered equipment that would allow officers an increasing ability to remotely monitor the location of supervisees. Today, the three location monitoring technologies that are used in pretrial and post-conviction supervision are radio frequency (RF), global positioning system (GPS), and voice recognition. Location monitoring is imposed as a condition of supervision for a variety of reasons, including as an alternative to pretrial detention or custodial sentences or as a means of addressing high-risk behaviors/violative behavior or noncompliance during supervision (Gowen, 2001).

An ancillary advantage is cost savings. The Administrative Office of the U.S. Courts reported in 2020 that the daily cost of incarceration per person was $108.00, while the daily cost of GPS location monitoring was $4.15.[1] Since GPS is the most expensive form of location monitoring, it is apparent that location monitoring results in substantial savings as an alternative to incarceration.

In this study we sought to develop a better understanding of location monitoring as a major component within the federal system. More specifically, we first provide an overview of location monitoring in the federal supervision system and then explore several topics, including the characteristics of those who receive the condition, the application of the risk principle to location monitoring (hereafter referred to as LM), and the relationship between LM and recidivism outcomes.

History of Location Monitoring in the Federal System

In the late 1990s, U.S. probation and pretrial service officers began to assess the types of technologies for the LM programs. The first awarded contract for LM services was in 1993, and the initial program solely used RF and voice recognition technology (Cornish

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[1] Costs for incarceration are calculated based on information received by the Administrative Office of the U.S. Courts (AO) and the Bureau of Prisons (BOP). Location monitoring costs are based on information received from the AO's Budget Division for fiscal year 2020.

& Whetzel, 2014). New technology paved the way for advancements in monitoring equipment that would use GPS. This level of monitoring offers degrees of intensity (for example, real-time monitoring) to pinpoint exact locations that are instrumental in the surveillance of higher risk cases and participants with third-party risk factors, such as a victim or co-defendant. Noting the evolution of the "home confinement program," the *Guide to Judiciary Policy* (Vol. 8, § 160(a)) notes the evolution of the "home confinement program," including the renaming of program as the "location monitoring program." The new name provided a better description of all the monitoring capabilities of the program, emphasizing that it was more than just monitoring at a residence.

The court has the authority to impose a period of LM under 18 U.S.C. § 3563(b)(19) for probation cases and 18 U.S.C. § 3583(d) for supervised release cases as an alternative to incarceration. LM is a multifaceted condition that can be imposed for a variety of reasons. When LM is imposed at the time of sentencing, for example, it tends to be used in place of a custodial sentence. As will be shown, the imposition of LM at the time of sentencing tends to be associated with individuals at low risk of re-offending. When an individual is deemed low risk, the LM sentence is not intended to promote behavior change or risk reduction; in such cases LM is satisfying a

period of a custodial sentence (Cornish, 2010). Conversely, LM conditions can be imposed during supervision; when this occurs, its imposition tends to be based on risk, when an individual on post-conviction supervision demonstrates noncompliant behavior and receives a modification of supervision conditions from the court. For some, the modification includes a period of LM to address offending behavior or for punitive purposes (Cornish, 2010; Belur et al., 2020).

In addition, LM can be used for post-conviction cases during prerelease at a residential reentry center. Although the supervisee in this scenario is under the authority of the Federal Bureau of Prisons, the individual is supervised by a post-conviction officer to increase the likelihood of successful community reintegration. Finally, the imposition of LM occurs in instances of compassionate release, based on a criterion set forth in the *Guide to Judiciary Policy* for elderly and terminally ill offenders under 34 U.S.C. § 60541(g).

While LM has been subjected to extensive empirical investigations (see Bonta et al., 2000; Downing, 2006; Erez & Ibarra, 2004; Finn & Muirhead-Steves, 2002; Wolff et al., 2017; Yeh, 2010), there is relatively little empirical data on the imposition of LM on persons placed on federal post-conviction supervision. Moreover, the few federal studies that exist often examine LM imposed during the pretrial stage of the judicial process or fail to distinguish between LM conditions imposed at sentencing or during supervision when exploring whether LM is associated with a reduction in recidivism outcomes (Wolff et al., 2017; Gowen, 2000; Cadigan, 1991). The failure to disentangle when an LM condition is imposed—that is at the start of or during supervision—has the potential to skew results when examining the association between LM and recidivism, because this condition is often imposed during supervision to address noncompliant and violative behavior. This study sought to address this methodological issue by examining the imposition of LM within the federal system at either the time of sentencing or during a supervisee's post-conviction supervision term. Other key issues this research explored include who on post-conviction supervision receives LM, the characteristics of persons on LM, the different types of LM imposed, and the relationship between LM and recidivism outcomes. We did not examine the imposition of LM at the pretrial stage.

Three Primary Types of Location Monitoring in the Federal System

Location monitoring within the federal system is primarily accomplished using RF, GPS, or voice recognition technology. RF technology uses a receiver that is placed in the center of the participant's residence. This receiver can either be connected to a landline telephone or cellular-based, working off nearby cellular towers. The supervisee is required to wear an ankle bracelet, which is referred to as a transmitter. This technology only monitors the supervisee when in range of the receiver (located in the residence), which reports when the supervisee enters or leaves the residence. Violations (e.g., tampers, unauthorized stops) cannot be detected when the supervisee is out of range of the receiver. Overall, RF equipment only reports the supervisee's range to the home-based receiver (Gowen, 2001).

Unlike RF, GPS has the capacity of locating supervisees in real-time using a network of 24 satellites that link to cellular networks providing the location (Gowen, 2001). The GPS technology requires the participant to wear an ankle bracelet, referred to as a tracker, and to charge the tracker daily. Additionally, GPS has the software capability to create exclusion zones (prohibited areas) and inclusion zones (permitted areas). An officer will receive immediate notification of any violation (e.g., tampering) and zone crossing. This technology is the most labor-intensive form of monitoring for officers.

Voice recognition differs from both RF and GPS in that no equipment is worn by the supervisee. This type of monitoring is conducted using an automated telephone system that requires supervisees to receive random or scheduled telephone calls to verify their presence at an approved location, which is typically their residence. The automated system uses a stored voice print to authenticate the supervisee's identity (Gowen, 2001). Recent technological advancements have initiated the use of smart phones by allowing supervisees to download a supervision application that has voice recognition capabilities.

Data and Methods

The data for this study was extracted from the Probation and Pretrial Automated Case Tracking System (PACTS) and uploaded into Stata, a statistical software package, for analysis. We used a combination of descriptive and matching techniques for analysis to answer the research questions below. The following

research questions guided this analysis.
- What types of supervisees are most likely to receive LM?
- Is the imposition of LM associated with the risk of recidivism as measured by the federal Post-Conviction Risk Assessment instrument (or PCRA for short)?
- What other supervisee-related factors, including the most serious conviction offense, are associated with LM?
- What types of LM technologies (e.g., RF, GPS) are employed on supervisees?
- How does the imposition of the LM condition vary depending upon whether the condition was imposed at the time of sentencing or during supervision?
- Are supervisees who are placed on LM at the time of sentencing less likely to recidivate compared to similarly situated supervisees who are not placed on LM?

Sample Population

The study data included the 94 U.S. federal judicial districts and comprised persons placed on post-conviction supervision during fiscal years 2012 through 2019 (*n*= 428,440 see Table 1). About 84 percent of these supervisees were placed on supervised release, meaning they had finished an incarceration term under the Federal Bureau of Prisons, while most of the remainder had been sentenced to a term of straight probation. Provided in Table 1 are the descriptive statistics of the sample by race/ethnicity, gender, type of supervision, most serious conviction offense, and PCRA risk category. Table 1 also provides an overview of the number of supervisees and the mean of each category. The majority of the study sample were males (82 percent) and were convicted of a drug offense (42 percent). In addition, over half of the supervisees had a PCRA score of low or low/moderate.[2] The sample included non-LM supervisees (n= 362,793) and LM supervisees (n= 65,647) further categorized by imposition of the condition; LM imposed at sentencing (n= 38,785) and during supervision (n= 26,862). It should be noted that a relatively small component of our sample (less than 1 percent) encompasses persons released from the Federal Bureau of Prisons (BOP) to a residential reentry center with an LM condition. Although these persons are technically under the jurisdiction of the BOP, U.S. probation officers are given authority to monitor these cases prior to commencement

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[2] For a brief explanation of the PCRA, see Findings section.

of their post-conviction supervision term and oversee their LM condition.

Methods

The initial steps to the data analysis involved a descriptive overview of persons placed on LM supervision either at the time of sentencing or during supervision. We conducted this analysis to determine the extent to which those who receive LM differ from supervised persons who did not receive an LM condition. Afterwards, we investigated whether LM conditions imposed at the time of sentencing were associated with lower rearrest activity compared to the rearrest activity of persons who were not placed on LM. As will be shown, because of differences in the risk characteristics between the LM and non-LM groups, we employed matching techniques (e.g., propensity score matching) to reduce the potential for bias between the LM and non-LM groups. The PSM criteria were based on the following: PCRA domain scores of criminal history, education and employment, substance abuse, social networks, and cognitions, gender, race/ethnicity, most serious offense, and judicial districts.

Provided in Appendix 1 (page 42) is the statistical breakdown of LM imposed at sentence and non-LM supervisees from the unmatched groups as well as from the post-matched groups. An example of PSM (see Appendix 1) for most serious offense is demonstrated with the financial offenses: for the unmatched group LM was 35 percent and for the non-LM 18 percent. After matching, the groups are nearly equally balanced; for example, once the matching is completed, nearly equal percentages of supervisees with and without an LM condition were convicted of financial offenses (34 percent).

Findings

Imposition of Location Monitoring

The purpose of the initial examination was to develop an understanding of the reasons for imposing a LM condition on supervisees and the characteristics of those supervisees with (*n*= 65,647) and without (*n*= 362,793) a LM condition. Supervisees with a LM condition are further disaggregated by whether this condition was imposed at sentencing (*n*= 38,785) or during supervision (*n*= 26,862). Table 2 details the distribution of LM conditions for post-conviction supervisees based on a variety of characteristics. We first examined the association between LM and risk as measured by the PCRA (see Table 2, next page). The

PCRA is the risk assessment instrument used by the federal probation system to gauge the likelihood that a supervisee will recidivate while on supervision. Officers use the PCRA to determine the appropriate level of supervision intensity while persons are on federal supervision. The PCRA works by classifying supervisees at different risk levels (low, low/moderate, moderate, or high); for more information about the PCRA, see Johnson et al., 2011; Lowenkamp et al., 2013; Lowenkamp et al., 2015; and Cohen & Bechtel, 2017.[3]

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[3] In 2016, the PCRA 2.0, which includes a violence trailer, was implemented. Because violence information for the entire sample was not available, the decision was made not to include that component within the analysis.

Among those placed on federal supervision from fiscal years 2012 through 2019, about 15 percent received an LM condition. Of the 65,647 supervisees placed on LM, about 60 percent received LM at the time of sentencing, while the remainder were placed on LM during their supervision term. Although high-risk supervisees were 6 percentage points more likely to receive LM than their lower risk counterparts, the association between LM and risk depended upon whether it was imposed at sentencing or during supervision. Specifically, persons designated low risk by the PCRA at sentencing were 1.5 times more likely to receive an LM condition (13 percent placed on LM at sentencing) than persons

TABLE 1.
Descriptive statistics of federal supervisees in study sample

Variable	n	% or mean
Race/ethnicity*		
White, non-Hispanic	149,925	35.0 %
Black, non-Hispanic	148,058	34.6
Hispanic, any race	102,377	23.9
Other/a	26,820	6.3
Gender*		
Male	352,311	82.2 %
Female	76,114	17.8
Type of Supervision		
Term of supervised release	358,350	83.6 %
Probation	63,321	14.8
Other/b	6,769	1.6
Most serious conviction offense*		
Drugs	181,003	42.3 %
Financial	84,135	19.7
Weapons/Firearms	67,202	16.0
Violence	31,691	7.4
Immigration/Customs	21,161	4.9
Sex Offenses	14,769	3.5
Traffic/DWI	11,577	2.7
Obstruction/Escape	10,928	2.6
Public Order	5,756	1.3
PCRA risk categories		
Low	129,784	30.3 %
Low/Moderate	156,286	36.5
Moderate	101,096	23.6
High	41,274	9.6
Number of supervisees	428,440	

Note: The * by the variable denotes data will not sum to the total due to missing data. a/ Includes American Indians and Alaska Natives, Asian or Pacific Islander. b/ Includes people on civilian or military parole, etc.

classified as high risk by the PCRA (9 percent placed on LM at sentencing). The nexus between LM and risk manifested a different pattern, however, when LM was imposed at the supervision stage. High-risk supervisees were six times more likely to receive LM than lower risk counterparts if this condition was imposed during supervision.

Figure 1 details the distribution of PCRA scores for non-LM supervisees and those who received an LM condition at the sentencing or supervision stage. Among those receiving LM at sentencing, almost half were classified in the low-risk category, showing a pronounced downward staircase effect; rarely is LM at sentencing imposed on higher risk individuals (9 percent). LM imposed during supervision, however, manifested a different pattern. Over half (56 percent) of persons receiving LM during supervision were classified by the PCRA into the moderate or high-risk categories.

Table 3 (next page) examines the characteristics of persons placed on LM at sentencing or during supervision by supervision type and most serious conviction offense. Similar to the previous table, the use of LM depended upon whether this condition was imposed at sentencing or during supervision. Nearly a third of those receiving LM at sentencing were sentenced directly to probation, meaning that they had no incarceration term imposed prior to being sentenced. Conversely, 92 percent of persons receiving LM during supervision were on a term of supervised release, meaning that they had been incarcerated prior to being placed on federal supervision. By most serious conviction offense, 34 percent of supervisees placed on LM at sentencing were convicted of financial offenses, and another 31 percent were convicted of drug offenses. In comparison, two-fifths of supervisees placed on LM during supervision were convicted of drug offenses, and another fifth recorded an instant conviction offense for weapons/firearms.
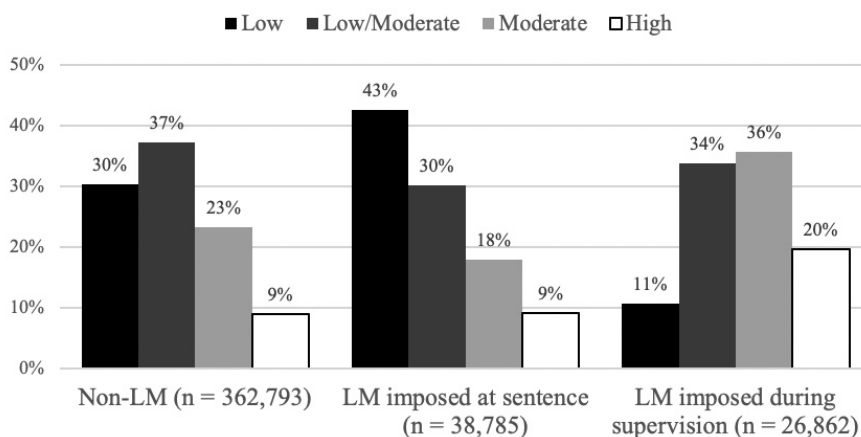
Types of Location Monitoring

Figure 2 (next page) examines the types of LM equipment used, while Figure 3 (page 40) explores the types of equipment used by PCRA risk levels. The most used types of technology were radio frequency (RF) at 70 percent and global positioning satellite (GPS) at 25 percent. An examination of the imposition of RF vs. GPS by the PCRA risk levels shows that the use of GPS is more closely associated with risk when imposed at sentencing rather than at supervision. Specifically, supervisees classified into the high-risk category by the PCRA were 17 percentage points more likely to receive GPS monitoring than their low-risk counterparts for LM conditions imposed at sentencing (see Figure 3). Supervisees receiving LM during supervision witnessed an eight-percentage-point difference in the use of GPS monitoring across the highest and lowest PCRA categories. The use of GPS also varied by the most serious conviction offense. The percentage of supervisees placed on GPS varied from less than 20 percent for persons convicted of immigration or traffic offenses to over 50 percent for persons convicted of sex offenses (see Figure 4, page 41).

Examining Recidivism

We then examined recidivism of supervisees who were placed on LM compared to supervisees who were not placed on LM. Table 4 (page 40) provides the percentages of case closures by type and imposition of the LM condition. The data display higher revocation rates for those on LM compared to their non-LM counterparts; however, these findings are primarily driven by those placed on LM during supervision, since nearly three-fourths (72 percent) of these had a revocation. Among those placed on LM at sentencing, revocation rates were relatively similar (27 percent) to those of the non-LM supervisee population (29 percent). The arrest rates were slightly higher for non-LM supervisees (17 percent) than they were for those who receive LM at sentencing (14 percent). However, supervisees who received LM during supervision were 2.5 times more likely to be arrested (43 percent arrested) than non-LM cases (17 percent arrested).

Next, we further examined the relationship between LM and rearrest outcomes. Specifically, we looked at the association between LM conditions and rearrest activity for only those who receive LM at sentencing (*n*= 35,951). Omitted from the analysis are those supervisees receiving LM during

TABLE 2.
Percent of supervisees with location monitoring condition, by PCRA risk levels and imposition time

PCRA characteristics	Number of supervisees	Percent with location monitoring condition		
		Any	At sentencing	During supervision
Any	428,440	15.4%	9.1%	6.3%
PCRA 1.0 risk categories				
Low	129,784	15.0%	12.7%	2.2%
Low/Moderate	156,286	13.3	7.5	5.8
Moderate	101,096	16.4	6.9	9.5
High	41,274	21.4	8.6	12.8

Note: Includes 428,440 supervisees placed on post-conviction supervision between fiscal years 2012–2019.

FIGURE 1.
Post-Conviction Risk Assessment (PCRA) 1.0 Risk Distribution for Supervisees Placed on Location Monitoring (LM)

supervision, because this use of LM is likely related to violative behavior driving rearrest outcomes. In this part of our research, we compared the arrest behavior of supervisees who receive LM at sentencing to the arrest activity of supervisees who were not placed on LM supervision, tracking arrests for a 12-month time frame from the start of supervision. In general, results show similar arrest rates for both groups of supervisees. For example, about 10 percent of supervisees with no LM condition were arrested within 12 months of their supervision start date, while 8 percent of supervisees with an LM condition were arrested within the same time frame.

While the results show similar arrest rates for the LM and non-LM groups, it is useful to accurately assess the data accounting for the imbalance of risk characteristics between the groups through propensity score matching (PSM). For this study, the method of PSM generated groups of supervisees balanced on the following criteria of PCRA domain scores of criminal history, education and employment, social networks, and cognitions, gender, race/ethnicity, most serious offense, and federal judicial district. (An example of the results of PSM is highlighted in Appendix 1, which shows how matched groups were created between supervisees without LM (n= 34,923) and with LM at sentencing (n= 34,923).) Table 6 (page 41) shows recidivism outcomes of these similarly matched groups. After PSM was completed, we analyzed arrest rates categorized by PCRA risk levels for the 12 months after supervision commenced; these arrests included any arrest and violent arrest. There was no discernible difference in rearrest outcomes of supervisees who received LM at sentencing compared to supervisees without the condition. The same matching and analysis was also completed for arrest rates for supervisees on GPS at sentencing compared to those without the condition, and results indicated no difference in rearrest outcomes (data not shown).

Conclusion

In this study we sought to examine LM for supervisees under federal post-conviction supervision. We were interested in comparing similarly matched groups of supervisees, with and without the LM condition, to help provide a clearer picture of who receives the condition, imposition of the condition, and recidivism outcomes.

Throughout this research, there were two emerging themes of the data. The first is that

LM comports with the principle of risk in certain circumstances, such as when imposed during supervision on higher risk supervisees. This denotes that the condition is used during supervision to address problematic behavior, as a sanction. The use of LM as an intermediate sanction allows an officer to hold the individual accountable without a custodial sentence. The other theme was that the imposition of LM at sentencing likely occurred in lieu of incarceration. This use of LM affords the court the opportunity

to place a supervisee on probation, who might otherwise have received a term of imprisonment.

When provided as part of the sentence, LM tends to be imposed on low-risk supervisees convicted of financial crimes. Relatively few high-risk supervisees received LM at the time of sentencing. Imposing LM in place of a custodial sentence can be viewed favorably as a means to salvage the individual from an incarceration environment with more criminally inclined peers (Lowenkamp et

TABLE 3.
Distribution of supervision types and most serious conviction offense for supervisees, by imposition of a location monitoring condition

| | Percent location monitoring condition imposed | | | |
	Any	At sentencing	During supervision	Non-LM
Supervision types				
Terms of supervised release	76.3%	65.9%	91.3%	85.0%
Probation	21.9	31.8	7.6	13.5
Other/a	1.8	2.3	1.1	1.5
Most serious conviction offense				
Drugs	35.5%	30.6%	42.4%	43.5%
Financial Offenses	25.3	34.1	12.5	18.6
Weapons/Firearms	17.2	12.9	23.4	15.4
Violence	7.0	5.5	9.2	7.5
Immigration/Customs	5.1	6.8	2.7	4.9
Sexual Offense	4.0	3.1	5.3	3.4
Obstruction/Escape	3.2	3.5	2.8	2.4
Traffic/DWI	1.6	2.0	0.9	2.9
Public Order	1.2	1.6	0.8	1.4
Number of supervisees	65,647	38,785	26,862	362,793

Note: Includes 428,440 supervisees placed on post-conviction supervision between fiscal years 2012–2019.
Other/a includes parole, military supervision, prerelease cases from the Bureau of Prisons.

FIGURE 2.
Types of Location Monitoring Programs Imposed
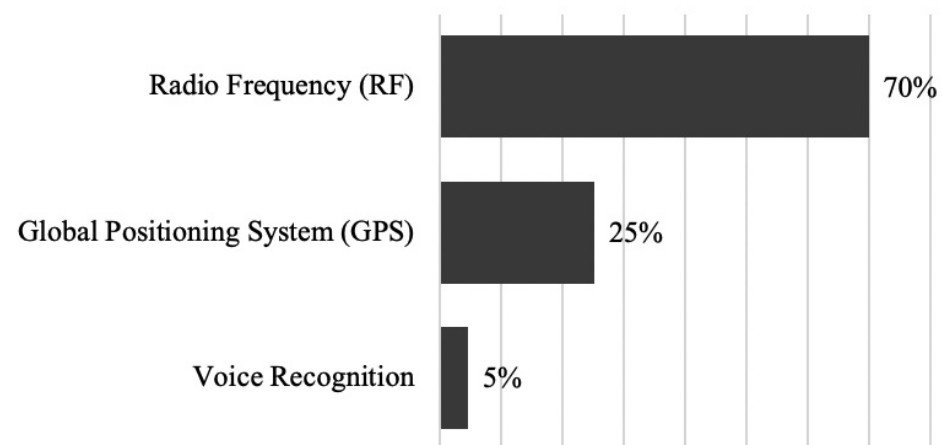
al., 2006). However, the other result is that many low-risk supervisees receive potentially more intensive levels of supervision through monitoring, which could be more detrimental to their chances of success under supervision. We also noted the underutilization of voice recognition, especially for low-risk supervisees. Voice recognition for this population of cases provides monitoring with a reduced need for equipment inspections and community contacts. Some researchers assert that LM is equally if not more intrusive than incarceration for the individual, potentially causing even more harm (Weisburd, 2021). While the use of LM in lieu of incarceration is potentially positive, it has also resulted in many low-risk supervisees receiving this potentially intrusive condition. Whether a more refined balance between the use of LM and risk could be obtained is beyond the scope of this article; however, it should perhaps be further considered in the federal probation system. Specifically, it prompts the question of how and when to best use different technologies, such as a supervision application on a smart phone for voice recognition.

This research differs from prior empirical efforts to examine LM, as we were able to distinguish the imposition of LM by whether it was imposed at sentencing or during supervision. This provided a more nuanced examination of recidivism outcomes. The results showed little discernible difference in rearrest outcomes of supervisees who received the condition at sentencing compared to non-LM supervisees. While it is not evident that LM aids in reducing rearrest, we also did not see an increase—essentially, using LM showed no effect on rearrest. These findings provide further evidence that the use of LM does not aid officers in intercepting noncompliant behavior before it occurs, but does afford the opportunity to gather information on the supervisees' behavior patterns. The technology is intended as a tool in the supervision process to make the individual more accountable, thus potentially

FIGURE 3.
Types of Location Monitoring Imposed by PCRA 1.0 Risk Levels
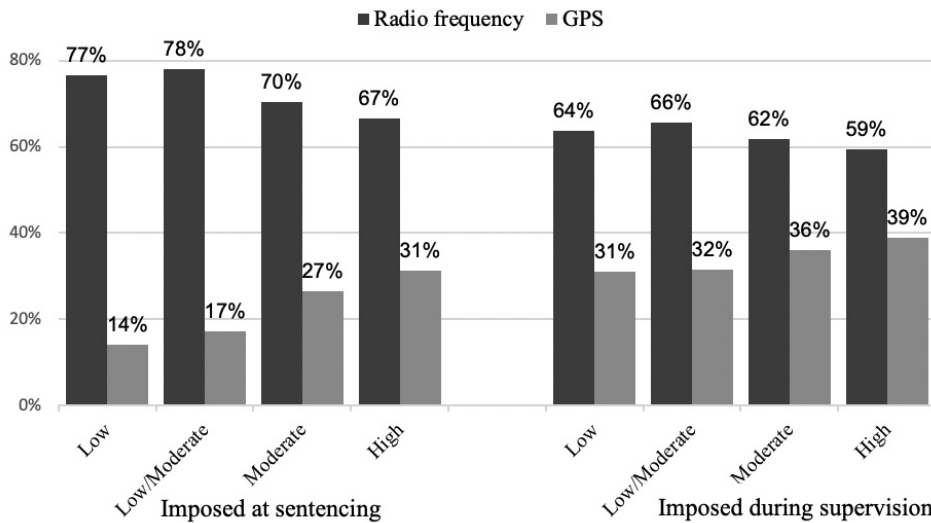
Note: Percentages will not sum to 100% as voice recognition is LM

TABLE 4.
Distribution of types of case closures for supervisees by imposition of a location monitoring condition

Imposition of LM condition	Number of supervisees	Types of case closures				
		Early termination	Successful termination	Any other closure/a	Revoked from supervision/b	Percent arrested
No location monitoring imposed	217,199	15.5%	44.1%	11.6%	28.8%	17.2%
Any location monitoring	43,127	8.5%	39.4%	7.0%	45.1%	26.1%
At sentencing	25,338	12.8	52.1	8.5	26.5	14.2
During supervision	17,789	2.3	21.3	4.9	71.6	43.3

Note: Includes 260,326 supervisees placed on post-conviction supervision between fiscal years 2012 - 2019 with a case closure. Supervisees with open cases omitted from case closure calculations but included in rearrest statistics.
a/ Transfers, deaths, and all other closures included in the other category. b/ Unsuccessful terminations included in revocation rates.

TABLE 5.
Arrest percentages for location monitoring

| Imposition of LM condition	Number of supervisees	Any Arrest During 12-Month Period	
		Percent with no arrest	Percent arrested
No location monitoring imposed	358,152	89.6%	10.4%
Location monitoring at sentencing	35,951	91.9	8.1
Imposition of LM condition	Number of supervisees	Violent Arrest During 12-Month Period	
		Percent with no arrest	Percent arrested
No location monitoring imposed	358,152	97.4%	2.6%
Location monitoring at sentencing	35,951	98.0	2.0

reducing opportunity to engage in maladaptive behavior. The information from LM offers the officer insight into the individual that is intended to create teachable moments for skill-building on behavior change between the officer and supervisee.

LM will continue to be a key component within the federal community corrections system, especially with the use of this condition for persons incarcerated and who are released in keeping with the policy of compassionate release. Future research would benefit from evaluating recidivism outcomes for compassionate release supervisees due to COVID-19 that were placed on LM compared to those that were not. Subsequent research efforts should also consider examining whether lower risk supervisees receiving LM could perhaps be provided with a less intensive form of supervision.

FIGURE 4.
Types of Location Monitoring Imposed by Most Serious Conviction Offense
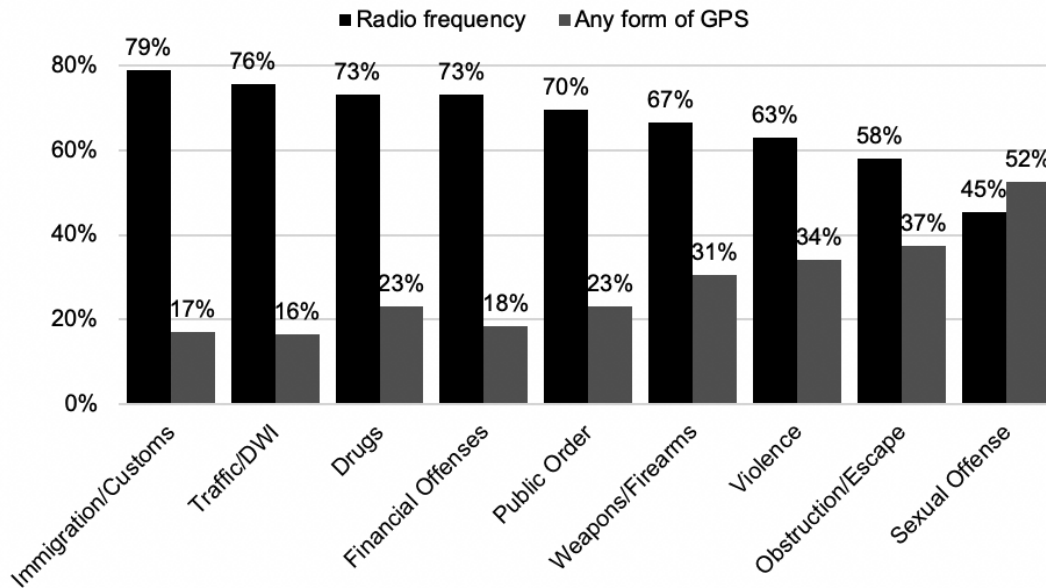
Note: Percentages will not sum to 100% as voice verification LM conditions not shown.

TABLE 6.
Percent of supervisees with new arrests or violent arrest within 12 months of assessment using matched sample, by PCRA risk levels

PCRA 1.0 risk categories	No location monitoring		Location monitoring at sentencing	
	Number	Percent arrested	Number	Percent arrested
	Any arrest			
All supervisees	34,923	8.8%	34,923	8.3%
Low	14,670	2.3	14,913	2.0
Low/Moderate	11,376	9.0	10,609	7.9
Moderate	6,247	17.5	6,214	16.0
High	2,630	23.8	3,187	23.8
	Violent arrest			
All supervisees	34,923	2.2%	34,923	2.1%
Low	14,670	0.4	14,913	0.3
Low/Moderate	11,376	2.1	10,609	1.6
Moderate	6,247	4.3	6,214	4.5
High	2,630	7.3	3,187	7.6

Note. Supervisees on and not on location monitoring were matched using PSM techniques. The following covariates were used to match the LM and non-LM supervisees: PCRA domain scores of criminal history, education and employment, social networks, and cognitions, gender, race/ethnicity, most serious offense, and federal judicial district. Excluded from the matching was supervisees who received LM during supervision.

APPENDIX 1.

Equivalent Groups Generated by Propensity Score Matching — Location Monitoring Imposed at Time of Sentencing

Matching covariates	Panel A: Unmatched Group of Supervisees				Panel B: Post-matching group of Supervisees				
	Supervisees with LM (n = 35,951)	Supervisees without LM (n = 358,192)	T-statistic	p Value	Supervisees with LM (n = 34,923)	Supervisees without LM (n = 34,923)	T-statistic	p Value	% Bias reduction
PCRA domain scores									
Total score	6.61	7.65	-50.08	0.000	6.67	6.63	1.48	0.138	95.7
Criminal history	3.81	4.52	-53.12	0.000	3.85	3.82	1.53	0.126	95.9
Employment/education	1.11	1.30	-32.90	0.000	1.12	1.11	1.08	0.280	95.6
Drugs/Alcohol	0.42	0.49	-18.78	0.000	0.42	0.43	-0.09	0.372	93.8
Social networks	1.08	0.17	-20.01	0.000	1.09	1.08	1.02	0.306	92.8
Cognitions	0.19	0.17	11.11	0.000	0.19	0.18	1.71	0.087	78.1
Gender (female = 1)	0.03	0.17	46.45	0.000	0.26	0.25	0.94	0.347	96.8
Race									
White	0.39	0.35	15.84	0.000	0.39	0.39	-0.91	0.364	92.0
Black	0.30	0.35	-18.35	0.000	0.30	0.29	2.22	0.027	84.1
Hispanic, any race	0.24	0.24	-0.07	0.992	0.24	0.25	-2.32	0.020	-31304.8
Other	0.07	0.06	4.74	0.000	0.07	0.06	1.73	0.083	49.3
Most Serious Offense									
Drugs	0.31	0.44	-47.01	0.000	0.31	0.31	-0.47	0.642	98.7
Financial Offense	0.35	0.18	73.05	0.000	0.34	0.34	-0.74	0.462	98.4
Immigration/Customs	0.07	0.05	15.96	0.000	0.07	0.07	-0.98	0.328	90.2
Obstruction/Escape	0.04	0.02	11.63	0.000	0.04	0.03	0.37	0.710	95.0
Public Order	0.02	0.13	4.01	0.000	0.02	0.02	0.39	0.694	85.5
Sexual Offense	0.03	0.03	-4.92	0.000	0.03	0.03	0.59	0.556	84.8
Traffic/DWI	0.02	0.03	-7.29	0.000	0.02	0.02	-0.18	0.856	96.9
Violence	0.05	0.08	-14.47	0.000	0.06	0.05	1.50	0.133	87.7
Weapons/Firearms	0.13	0.16	-15.83	0.000	0.13	0.12	0.85	0.398	93.3

Note: In addition to matching on the above covariates, supervisees were matched across the 94 judicial districts (not shown in table).

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Making the Conversation a Little Easier for Probation and Parole Officers: Using Motivational Interviewing to Discuss Client Suicidal Ideation and Attempts[1]

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APPROXIMATELY 4,357,000 ADULTS are under community supervision in the United States, with the majority (3,492,900) under county probation systems (Oudekerk & Kaeble, 2021). Studies in the United States as well as other countries have found that adults on probation are at three to eight times greater risk for suicide ideation, attempts, or death by suicide, depending on the outcome studied, than those in the general population (Clark et al., 2013; Gunter et al., 2011; Sirdifield, Brooker, & Marples, 2020; Yu & Sung, 2015). For example, Philips and colleagues (2015) found an annual death by suicide rate of 118 per 100,000 of those under community supervision as compared to 13.6 per 100,000 in the general population, aged 30-49, and the rate was even higher for females under probation supervision at 146 per 100,000 in the same age category.

Current criminal justice reform efforts present probation and parole officers (POs) in community corrections with expanding responsibilities. These reforms include an

increased focus on a working alliance with clients and the use of evidence-based practices as alternatives to more traditional surveillance and custody strategies (Bogue, 2020; Bonta & Andrews, 2017; Clark, 2021; Gunter et al., 2011). POs are in a position to identify clients who may be at risk for suicide and make appropriate referrals, if needed, both in the assessment process and beyond, during routine supervision (Borrill, Cook, & Beck, 2017; Mackenzie et al., 2018). Discussion of suicide, however, is often uncomfortable for both clients and POs. Clients themselves may be reluctant to disclose their suicidal thoughts or behaviors because of stigma, the possibility of an unsupportive reaction, or unwanted treatment (Hom, Stanley, Podlogar, & Joiner, 2017; Mayer et al., 2020; Sheehan et al., 2019). Like other helping professionals, POs may avoid discussion of suicide due to fear of increasing the likelihood that suicide might happen, anxiety about how to handle a situation where a client discloses suicide ideation or attempts, a sense of operating outside the person's scope of expertise, or lack of skill in knowing how to guide the discussion (Freedenthal, 2018; McCabe, Sterno, Priebe, Barnes, & Byng, 2017).

This article explores suicide ideation and suicide attempts in probation and parole clients and discusses the potential benefit of using motivational interviewing (MI) as a communication method to provide a framework for helping POs move past avoidance of the topic, particularly if it emerges in routine visits. We are mindful that it is beyond the scope of practice of POs to treat clients who are struggling with these issues. Given the high rate of suicide behavior and ideation in clients, however, a PO may perhaps be the first person to recognize that someone is considering suicide and can intervene in a way to get that person to the appropriate treatment provider. To illustrate how MI might fit into this process, a sample vignette and dialogue are presented.

Suicide in Probationers/Parolees

It is helpful to begin with definitions of suicide, suicide attempts, suicidal ideation, and suicide preparation. Death by suicide is a death caused by self-injury with the intent to die. Suicide attempts are those acts to injure oneself that may or not be severe enough to cause death, if no intervention is given.

Suicidal ideation are thoughts about death or wanting to die that may be fleeting or longer lasting but do not involve any steps towards preparation. Suicide preparation involves determining or securing a method for death by suicide (O'Connor et al., 2013).

In the U.S., suicide is the tenth leading cause of death and the second leading cause of death for people in the age range of 10 to 34 years old (Stone, Jones, & Mack, 2021). Men are 3.5 times more likely to take their own lives than women, and firearms account for more than half of all suicide deaths in the U.S. (Silverman et al., 2020). There is a myriad of risk factors for death by suicide: previous suicide attempts, mood disorders, serious mental illness, alcohol misuse, opioid use, family history of suicide, problems in intimate relationships, grief and loss, poor physical health, employment problems, financial problems, or having access to lethal means (Clark, et al., 2013; Conner & Bagge, 2019; NIMH, 2021; Schmutte, Costa, Hammer, & Davidson, 2021; Silverman et al., 2020; Wilcox, Conner, & Caine, 2004). Suicide rates are higher in males than females, and are highest among American Indian/Alaskan Native persons and among males aged 25-34 (Stone et al., 2021).

Only recently has the issue of suicide with probationers received attention (Gunter et al., 2011; Sirdifield, Brooker, & Marples, 2020). An early study found increased suicide risk and mental health issues in both recently released prisoners and probationers (Gunter et al., 2011; Kariminia et al., 2007; Pratt et al., 2010). In a sample of 2,077 probationers in Texas, 13 percent scored as high risk for suicide. While mental health is not necessarily related to death by suicide, suicide attempts, or suicide ideation, in this study those who screened positive for a mental health disorder were two to eight times more likely to screen positive for suicide risk. Women were twice as likely to screen positive for high suicide risk (Cardarelli et al., 2015).

In a large retrospective study of 18,260 probationers, multivariate analyses found prior history of suicide to be the second largest independent predictor of overall mortality after taking into account age, race, gender, and substance dependence. White race, older age, and a hospitalization for a physical condition also related to shorter length of time to mortality (Clark et al., 2013). A large study of parolees found increased risk of suicidal ideation in comparison to the general population (8.6 percent versus 3.7 percent, Yu

et al., 2014). Similarly, an evaluation of 3,014 male and 1,306 female probationers found an average annual suicidal ideation prevalence rate of 9.7 percent among probationers in comparison to 3.6 percent in non-probationers (Yu & Sung, 2015). Sociodemographic variables were largely similar between male and female probationers with one exception: race within the group of female probationers. Black female probationers were twice as likely to experience suicidal ideation (Yu & Sung, 2015).

While risk factors and pathways to suicide specific to probationers and parolees have been examined less, a qualitative study of seven probationers who had made near-fatal suicide attempts while under community supervision revealed that experiencing bereavement, a sense of losing control over their lives, or important legal events such as upcoming court dates preceded suicide attempts. While a general lack of trust in the criminal justice system created a barrier to disclosing feelings of suicidality to probation officers, when a strong relationship was established, this served as a protective factor (Mackenzie, Cartwright, & Borrill, 2018).

Content analysis of the records of 28 probationers who completed suicide while under supervision identified missed appointments, warnings from the court or breach of terms, and changes in probation officer or supervision routine (e.g., meeting times, location of services) as risk factors associated with suicide (Borrill, Cook, & Beck, 2017). The need for suicide prevention training, close collaborative relationships with mental health professionals, and use of a process for uniformly noting suicide risk in shared case management records for comprehensive communication were suggested as needed changes to prevent suicide during the probation supervision process.

Discussing Suicidal Ideation and/or Attempts Using MI

Many community corrections organizations and staff have been trained and routinely conduct SI screening with their clients during the intake process using tools validated for use with justice-involved populations such as the Columbia Suicide Severity Rating Scale (C-SSRS) (Posner et al., 2011; Wilson, 2017). Training regarding the use of this scale discredits the commonly held myth that speaking directly about suicide can actually produce suicidality. This, and the fact that screening for suicidality is a routine practice that not only provides safety for the client, but at the same time minimizes risk and liability for the PO and organization, has assisted

in its implementation. Nonetheless, suicide is a topic that reasonably produces a level of anxiety, especially when it arises outside the initial screening and assessment phase and during the ongoing relationship of community supervision (Nagdimon, McGovern, & Craw, 2021).

Due to a focus on evidence-based practices, increasingly, POs are being trained in Motivational Interviewing (MI), a conversation style to increase clients' motivation to change habits and behaviors in positive directions (Bogue, 2020; Clark, 2021; Miller & Rollnick, 2013). Drawing on internal motivations that are more likely to promote lasting change, MI has been used regarding substance use, health concerns, and prosocial behavior, and has recently been tested as a helpful method when clients may be suicidal. The goal is not to provide treatment for suicidal thoughts/intentions but to motivate clients to seek help (Britton, 2015; Britton, Conner, Chapman, & Maisto, 2020).

MI is used for areas where clients are ambivalent. Suicidal thoughts fall into this category, as clients often struggle between wanting to live and wanting to die (Brown, Steer, Henriques, & Beck, 2005; Britton, 2015; Mackenzie, Cartwright, & Borrill, 2018). Discussing such thoughts with an authority figure can be difficult, and clients may be wary to do this (Frey, Fulginiti, Lezine, & Cerel, 2018; Hom et al., 2017; Mackenzie et al., 2018; Sheehan et al., 2019). However, the focus on positive relationships, acceptance, and respect that are the foundation of the MI spirit enable PO staff to develop a working alliance that can open the door for difficult conversations (Clark, 2021; Frey & Hall, 2021; Stinson & Clark, 2017).

Besides the focus on a working alliance, the technical skills of MI that guide conversations include the use of open-ended questions, affirmations, reflective listening statements, and summaries (OARS) (Miller & Rollnick, 2013; Stinson & Clark, 2017). Simple reflections restate what the client has said, and complex reflections are statements from the PO that go beyond the words and into the possible meaning of what clients are verbalizing (Hohman, 2021; Miller & Rollnick, 2013). Reflections are used to engage clients by showing that the PO is truly listening and concerned. Reflections also encourage or evoke clients' change talk, or their statements about change, that includes the desire, ability, reasons, and need for change, on the topic under discussion. Sustain talk is the opposite of change talk and includes reasons why clients can't change. Sustain talk can be acknowledged by the PO, but the goal

is to have clients hear themselves talking about positive change, so the conversation is guided toward change talk. In instances of suicidal thoughts, this is considered "life talk," with a focus on reasons for living (Britton, 2015; Miller & Rose, 2015; Stinson & Clark, 2017). Usually, an MI interview also covers four processes: engaging the client, focusing on a topic around which to evoke change talk; evoking of the change talk; and then planning next steps (Miller & Rollnick, 2013).

Clients may be formally assessed for suicide at intake, which may be the last time it is mentioned, especially if the person is considered as low in psychiatric risk. Clients may also downplay any suicide ideation or attempts in an assessment or decide to keep it hidden (Mayer et al., 2020; Nagdimon, McGovern, & Craw, 2021). However, suicide ideation, planning, or previous attempts may come up in routine, run-of-the-mill conversations between the PO and client. Table 1 presents a model of how the four processes of MI can be a guide for addressing these topics, or hints at them, should they arise in a routine conversation. As noted, the OARS skills should be used throughout, although there may be times to ask closed-ended questions.

In the Engaging process, establishing a trusting relationship between the PO and client allows for more open conversations (Jobes, 2016). POs should be listening for client concerns that may put the client at high risk

for suicide, as noted in Table 1, and be alert for client statements that may be indicative of suicidal ideation and follow up on them, even if the client does not seem to be depressed or at risk. Events may have preceded a meeting with the PO that seemingly have no significance but might increase suicidal ideation in a client. Clients may state suicidal ideation or planning directly or may be more vague, stating something such as: "I am not sure if I can go on," "It seems like there isn't much point anymore," "People would be better off without me," or "I'm not sure how much more of this I can take" (Freedenthal, 2018; Ryan & Oquendo, 2020; Sheafor & Horejsi, 2015).

This can raise anxiety in the PO, but it is most helpful to be direct and focus on the client's suicide ideation or preparation: "Is it ok that we take a moment to discuss what you just mentioned? Are you thinking of killing yourself?" It is better to be direct than use vague language such as, "Are you thinking about hurting yourself?" (Singer & Erreger, 2016). Sometimes anxiety regarding suicide causes POs and even mental health therapists to "soften" the question (Nagdimon et al., 2021; NIMH, 2021). Directly asking may even help reduce suicide ideation (Dazzi et al., 2014; Frey & Hall, 2021). If the client answers "No," then the conversation can move on to some other topic of focus.

If the client answers "Yes" or "Maybe" or "Not really," the PO can move into the

Evoking process, to explore what the client is thinking. An open-ended question, such as "Tell me more," helps to explore what the client is thinking along with the use of reflections. The next step is to ask, "What is your plan?" and make a lethality evaluation. Clients may have had thoughts with no plan or vague plans, or have very specific plans, some of which are more lethal than others, especially if they involve firearms, hanging, or drug overdose (Conner, Azrail, & Miller, 2019; Freedenthal, 2018). MI has also been proposed as a communication method for means restriction (eliminating access to various suicide means), wherein clients create their own plan to protect themselves (Britton, Bryan, & Valenstein, 2016).

As noted, in MI the focus is on "change talk" or "reasons for living" (Britton, 2015). For example, the PO could ask, "If you were to consider continuing to live, what might be the reasons for this?" Encouraging clients to give multiple answers through reflective listening and asking, "Why else?" with all of the answers summarized, allows clients the opportunity to hear themselves, multiple times, speaking to living and continuing to do so, in a compressed time frame. The PO does not tell clients why they should want to live, but works to evoke what matters to the client, including protective factors—whether they are relationships, family, religion, culture, or personal values. These are individualized to the particular client.

TABLE 1.
Use of MI to Discuss Suicidal Ideation/Preparation/Attempts

MI Process/ Skills		Suicide Assessment/Discussion	PO role
Engage	O A R S	Establish trusting relationship Listen for concerns around high-risk psychosocial stressors: job/ housing loss, isolation, divorce, family deaths, illness Listen for specific or vague statements of suicide ideation (SI), preparation (SP) or attempts (SA)	Awareness of risk factors: · General population: past attempts, family history of suicide, depression, anxiety, loss, alcohol and drug use, poor health · Specific to probation clients: release from jail, upcoming court appearance, change in PO, lack of control over life, missed appointments
Focus	O A R S	If hear specific or vague statements, Ask directly: "Are you thinking about killing yourself?"	Manage own anxiety Discussing SI/SP/SA does not cause it Avoid vague language such as "Are you thinking about hurting yourself?"
Evoke	O A R S	Plan: "What is your plan?" Lethality assessment (means) Reasons for living/Values Protective factors Confidence to engage in life-sustaining activities	Build motivation to live/hope/confidence Understand contexts for SI/SP/SA: · Fear of hospitalization · Gender /Culture/Religion · Past discrimination in MH services · Fear of stigma
Plan	O A R S	If Lower risk: · Safety planning/ Means restriction · Life-sustaining activities · Seek mental health or other counseling support Higher risk: · Follow agency guidelines · Possible hospital assessment	Strengthen commitment to living Know agency protocol Seek MH consultation "Warm hand-off"/collaboration with client & MH or other services Document conversation and outcome

Asking about other areas in their lives where clients have shown accomplishment as well as providing affirmations can help instill hope (Miller & Rollnick, 2013).

Of course, sustain talk can arise whereby clients can minimize their concerns or give reasons for not seeking help due to fear of forced hospitalization, gender roles, their religion, prior negative experiences with the mental health system, stigma around mental health in general, or just wanting their problems to end (Misra et al., 2021; Nagdimon et al., 2021). These can be discussed with guiding toward more change talk. Clients can be asked about life-sustaining activities or how they picture a life worth living and previous examples of success that give them confidence that they can achieve it (Britton, 2015).

In the Planning stage, clients are asked to make a commitment to living (Britton, 2015). For those who are willing to do so and are at a lower risk of suicide, this can also involve safety planning, which involves identifying social and community supports as well as restricting means of suicide (Britton, et al., 2016; Freedenthal, 2018; Stanley et al., 2018). The PO should provide a "warm hand-off" of the client to mental health services (if appropriate), which could include calling for an appointment with the client or even accompanying the client to the meeting (Nagdimon et al., 2021). The process of a "warm handoff" is fully consistent with the case management aspect of the PO, employing the balanced approach philosophy of supervision (i.e., equal focus on accountability and rehabilitative behavior change). Additionally, this process serves to facilitate "engagement" in treatment services as opposed to simply referring a client to services. Mental health professionals can also engage in a more formal safety planning process if need be. If clients are at high risk for suicide and cannot move forward in the Planning process, then agency protocol should be followed. This may involve a hospital-based assessment. As always, the PO should document the conversation and outcome.

Case Vignette and Dialogue

The following client vignette represents a composite of clients. We provide a sample MI conversation that a probation officer (PO) might have with the client. Louis is a 28-year-old biracial man who is on probation for a second Driving Under the Influence (DUI) offense and possession of a controlled substance. Louis had been drinking with his friends when they finished at their restaurant job, left, and drove into a tree. He had a blood alcohol level of .15 at the time, about twice the legal limit. Some non-prescribed oxycodone pills were found in his car. Louis stated that he had fallen asleep right before the accident. He sustained a concussion, lacerations, broken ribs and a fractured leg. He needed extensive surgery with a follow-up stay at a rehabilitation center.

Louis had been living with his girlfriend and their daughter, but she had left him several months previously, taking their daughter to another state. Upon discharge from the rehabilitation center, he moved in with his mother, as he couldn't live alone. Louis unknowingly contracted COVID-19 while at the center, which was then spread to his mother. She required hospitalization and later passed away. Louis lost his job due to his injuries and then the pandemic but received some unemployment benefits. He was able to remain in his mother's home, which he now owns along with his two sisters, who allow him to live there. Now he is well enough to go back to work and has recently found a job in the food service industry. Louis also has chronic pain from his injuries that he tries to manage with over-the-counter medication.

Because this was his second DUI along with the drug charges, Louis was placed on probation and was ordered to attend an 18-month DUI program of individual and group counseling, to remain substance and alcohol free, to give up his drivers' license, and to participate in random drug testing. His probation assessment indicated that he is at medium risk due to antisocial associates, antisocial cognitions, family history (his father had been involved with the legal system and killed himself when Louis was 8 years old), a sporadic work history, and substance use. His PO is having a follow-up meeting with him to discuss his compliance with the probation plan. MI skills are noted in brackets. Change talk is highlighted in bold.

PO: How are you feeling, Louis? How is your leg these days? [Open question]

CLIENT: I'm doing ok. I still limp when I get tired but I feel like I'm getting better. I can't take any pain meds, you know, but I am only in pain when I walk too much.

PO: You can tell that you've made progress. [Simple reflection]

C: Yeah, I'm doing a lot better. **I'm going to all those DUI meetings** too and doing it over Zoom makes things a little easier. It's ok. The people in my group are nice enough. Some of their problems make mine seem pretty small.

PO: Great, I'm glad to hear that you are attending, and I get reports that all your drug tests have been negative. I imagine you hear some interesting stories from the other clients in your group at the DUI and you've had some tough experiences too. [Affirmation; sharing information; simple reflection]

C: Yeah, well, it's been a rough couple of years for everyone, right?

PO: That's for sure. My job is to touch base with you and support you and it seems like you are doing ok with following your plan. I'm wondering what you might want to talk about while we are together today? We could talk about your [probation] plan or anything else that's important to you. [Providing information; Affirmation; Open question, focusing]

C: I'm good, nothing really. **I'm just trying to stay out of trouble. I'm not seeing my old friends and I've started a new job.** It's not the best but it got me a foot in the door.

PO: Even though the job isn't what you wanted, it's still good to be back to work. [Simple reflection]

C: The job is ok. I don't go out and I only basically see people at work, you, and the people in my group and my counselor, so it's a little depressing. I really don't know the people at work. But **I want to get off probation and also work on getting my girlfriend and daughter back.**

PO: It's important for you to move forward and have a relationship with them. [Complex reflection]

C: Yes, I miss them so much. My daughter will talk to me a little. She's only 2 so it's hard over the phone and her mom doesn't want me to call that often.

PO: You would like to talk more often. [Simple reflection]

C: Yeah, maybe then she would see that **I'm doing what's right**. You know, I never told anyone this, but that night of the accident? I was so depressed over her leaving me that I tried to kill myself. I ran into that tree on

purpose. I couldn't even do that right.

PO: Thanks for sharing that with me, that took some guts. You were that upset. Can I ask, are you thinking about killing yourself now? [Affirmation; Simple reflection; Closed question; Suicide assessment]

C: No, not really. That car accident was just so stupid, look what happened to me. **So I won't try anything else either.** Sometimes though I just feel so alone. And responsible for what happened to my mother. I know I was told it wasn't my fault but still, did she have to die? And die alone? If she were here, she'd be proud of me for what I am doing now. But she's not here. And she'd be so disappointed in me if I did try to kill myself again, after what she went through with my dad. She was Filipino and church stuff was very important to her. But sometimes I feel like that even if I do all this, stay sober and get off probation, that my girlfriend still won't take me back. And then how will I ever see my daughter?

PO: You feel alone and have lots of grief about your mom and maybe even your dad. One of the things that keeps you going is hoping that you can get back with your girlfriend or even just stay in a relationship with your daughter. You also want to be someone who would have made your mom proud. What are some other things that you might live for? [Complex reflection; open-ended question to evoke life talk]

C: I don't know. (pause) This job is really just doing dishes and some cleaning so it's not really what I want. **I'm hoping that I can get a chance to do cooking, so they can see my skills. I would like to really make a career out it.** I probably could now that I'm not using. It's just that it is a tough industry to work in when you are trying to stay clean. But I know some people who are clean. Maybe they could even help me out.

PO: So a career in food service is motivating you, especially if you can be with other people whom you trust. Why else might you want to live? [Simple reflection; open-ended question]

C: My two nephews really look up to me. I see them when they come visit with my sister. They are about the same age as I was when my dad died. My sister is single and **I want to be here to help her out as well.**

And I don't want them to go through what I did.

PO: So you have these two little guys as well as your sister. Let me see if I got it all—and there may be more. You have been through a lot and feel pretty isolated and are hanging in there and doing what you need to do. You hope to re-establish a relationship with your girlfriend, and if that doesn't happen, at least still be involved in your daughter's life. You want to honor your mother's memory. You are going to work on getting a career going. You also want to stay involved with your sister and nephews and be a help for them. [Summary]

C: Yeah, that's right.

PO: You have felt suicidal at times but right now you don't have a plan to carry it through. [Simple Reflection to confirm]

C: Yes that's right. **I'm not going to do anything crazy** like before.

PO: What else might help you right now to stay on this forward path? [Open-ended question]

C: I don't know. What do you think I should do?

PO: Sometimes my clients talk to their DUI counselor or other times they work with a therapist in individual counseling, especially to focus on grief and loss. You have been through a lot and someone with a background in this can be helpful. [Providing information with choices]

C: **A therapist who specializes in grief might work.** I really don't want to talk about this stuff with my DUI group. The counselor, maybe. She might know of a good person for me to work with. Or do you?

PO: I have some names I can give you and we could make a few calls together now. It takes guts to talk about this stuff and to get some help. [Providing information; Affirmation]

The PO in this example has already established a prior relationship with the client, Louis, and did not need to spend a lot of time in engaging him. He (the PO) used an open-ended question to ask about his health, instead

of beginning with the probation plan. This signaled to Louis that the PO was concerned about him as a person, not just his compliance. He also provided an affirmation about Louis' positive work on his probation plan.

The PO then moved to a focusing question, to see what Louis would want to talk about with him. The PO can always return to the topics he needs to cover, if needed. For instance, if Louis had missed a random drug screen test, the PO could have brought this up once the conversation covered what Louis wanted to talk about (Stinson & Clark, 2017). Providing choice to clients is one way to honor their autonomy, which is important in MI conversations (Hohman, 2021). Louis gave a hint that he wanted to talk about his isolation and depression by bringing up his lost relationship with his girlfriend and then revealed that his DUI accident was really a suicide attempt. The PO was not surprised, as grief and loss, family history, trauma, chronic pain, and alcohol misuse, and substance use are often related to suicide ideation and attempts (Mackenzie et al., 2018; Ryan & Oquendo, 2020). New research also indicates that suicide attempts are also more common in repeat DUI offenders, with the DUI event itself often as the method (Edson, Gray, Nelson, & LaPlante, 2020).

Because Louis disclosed that he had attempted suicide, the PO asked him if he was currently thinking about an attempt again. Louis indicated that he wasn't, "not really," which is a bit lukewarm of a denial. He went on to state he had no means or plan. The PO confirmed this later on. Louis gave a few reasons for wanting to die, or sustain talk, which the PO acknowledged and he then evoked or asked for reasons why Louis might want to live. Louis was able to talk about relationships and work that might be meaningful for him. He began to set into place a plan of his own. The PO summarized the reasons for living and the beginnings of Louis' plan. He then asked for other next steps or planning. Louis asked for ideas. The PO provided him with two choices and Louis thought that he might want to work with someone around grief and loss. Not framing Louis as having depression but as someone who has gone through a lot of loss was most likely less stigmatizing and more appealing to Louis. Of course, it is not the PO's job to diagnose Louis.

If Louis had admitted that he was still having suicidal thoughts or was preparing for another attempt, the PO would need to discuss with him next steps to keep him safe, which could include an assessment by a mental

health professional or possibly inpatient hospitalization. The PO would need to not jump too quickly to one of these types of plans and instead seek supervisory guidance around agency policy. Moving quickly out of fear for the client can result in worsening the situation (Freedenthal, 2018).

Louis might be seen as an "easy" probation client in that he is compliant with his probation plan, is attending DUI counseling, is employed, and has stable housing. He is however at risk for suicide, as well as drug use, due to his family history of death by suicide, his own prior suicide attempt, significant grief and loss over his relationship with his partner and death of his mother, prior substance use, and history of hospitalization for a traumatic physical injury (Borrill, Cook, & Beck, 2017; Cardarelli et al., 2015; Clark et al., 2013; Cook & Borrill, 2015; Henden, 2017; Mackenzie et al., 2017; Sirdifield et al., 2021). Louis is in counseling already at his DUI program but has chosen not to disclose his past attempt but to do so with his PO where he must feel some sort of safety, that is, that his disclosure will be handled without judgment (Frey et al., 2018). It is important that the PO makes sure that Louis follows through on his plan to see a therapist and perhaps even be able to communicate with that therapist about his concerns.

Discussion

Those in the criminal justice population have a higher rate of suicide attempts and deaths than the general population (Yu & Sung, 2015). MI has already been introduced into probation work (Stinson & Clark, 2017) and provides a method of communication when clients are experiencing suicidal thoughts or have attempted suicide. The goal in an MI conversation between a PO and client where this is the focus is to motivate clients to seek help, as most clients are experiencing ambivalence about wanting to live versus wanting to die (Britton, 2015). Discussion of suicidal thoughts and/or attempts is intimidating and sensitive, but these conversations can be extremely influential in moving clients in a positive direction (Dazzi et al., 2014). PO staff may be concerned about liability (Viglione, 2019) or believe that engaging in such a conversation is beyond their scope of practice. Use of MI by POs may also be uncomfortable, particularly for those who are used to more directive communication methods (Viglione, Rudes, & Taxman, 2017). The presented model, however, provides a guide for using MI in

these difficult conversations. Although it may not always make these discussions "easier," it provides a framework to instill hope as well as options to access more professional assistance, paving a new way forward for staff. POs also need to know community mental health resources. Co-location of, or inclusion of, mental health professionals as routine team members promotes a more comprehensive interprofessional approach to meeting the complex needs of the large population under community supervision.

POs may want to be especially attentive to establishing and maintaining a structure to their work with clients as well as approaching them with the spirit of MI. This assists in developing a trusting relationship as well as a sense of predictability and safety for the client (Clark, 2021). Maintaining regular meeting times, location, referred providers, and assigned PO whenever possible also create a sense of control over one's life and a sense of connection (Borrill, Cook, & Beck, 2017). Missed appointments at a job site, with a mental health provider, or an actual PO meeting may signify emotional distress and require follow-up. Risk is still possible even if the client denies suicide ideation or preparation, especially in the context of psychosocial stressors (Nagdimon et al., 2021). These stressors can be addressed with assistance with housing, employment, financial issues, and the like (Yu et al., 2014).

Interprofessional training between probation and mental health providers could include MI to help enhance PO engagement skills as they seek to develop behavior change with probationers and parolees. It can also simultaneously provide necessary support to POs responding to mental health needs, including suicide ideation and attempt risk, which maximizes the safety and successful reentry of probationers and parolees (Twitchell, Hohman, & Gaston, 2021). Training should also include professionals' personal attitudes towards suicide ideation and attempts. Stigma and shame around suicide are prevalent in our culture and often quiet the voices of those who need to speak about it (Mayer et al., 2020).

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Corrigendum to "Examining Federal Pretrial Release Trends over the Last Decade" [*Federal Probation, September 2018*]

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THE AUTHORS REGRET that due to previously unknown data issues present in the administrative case management data system (known as PACTS) upon which all data were drawn for this study, the criminal history measures shown in Figures 3 and 4 and in Tables 3 and 4 examining prior arrests, convictions, and missed court appearances and the relationship between these factors and pretrial release decisions were deemed unreliable. Specifically, PACTS stores the number of prior arrests, convictions, and missed court appearances as integers in its database. The database management system stores integers as zero by default. This made it impossible for the researchers to distinguish a missing value from a true zero (or to remove cases that were missing data on this measure). The study authors learned of this issue only after publication. Accordingly, we will attempt to address this issue by updating the pretrial trends report within the next several months. In the update, we will utilize criminal history information extracted from the FBI rap sheets and apply the rap sheet data to revise the criminal history factors highlighted in this report. Through this process, we believe that the FBI rap sheet data will provide a more accurate portrait of the criminal history profiles of federal defendants and the relationship between these profiles and pretrial release/detention decisions. Notwithstanding that the data errors which necessitated these upcoming revisions were outside of our control, the authors would like to apologize for any inconvenience caused to the readers of *Federal Probation.*

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