



HHS Public Access

Author manuscript

J Drug Issues. Author manuscript; available in PMC 2024 January 04.

Published in final edited form as:

J Drug Issues. 2023 April ; 53(2): 296–320. doi:10.1177/00220426221109948.

Medication-Assisted Treatment in Problem-solving Courts: A National Survey of State and Local Court Coordinators

Fanni Farago¹, Thomas R. Blue², Lindsay Renee Smith³, James C. Witte¹, Michael Gordon², Faye S. Taxman³

¹Department of Sociology and Anthropology, George Mason University, Fairfax, VA, USA

²Friends Research Institute Inc, Baltimore, MD, USA

³Schar School of Policy and Government, Center for Advancing Correctional Excellence, George Mason University, Fairfax, VA, USA

Abstract

Problem-solving courts (PSCs) are a critical part of a societal effort to mitigate the opioid epidemic's devastating consequences. This paper reports on a national survey of PSCs (N = 42 state-wide court coordinators; N = 849 local court coordinators) and examines the structural factors that could explain the likelihood of a local PSC authorizing medication-assisted treatment (MAT) and MAT utilization. Results of the analyses indicate that MAT availability at the county level was a significant predictor of the likelihood of local courts authorizing MAT. The court's location in a Medicaid expansion state was also a significant predictor of local courts allowing buprenorphine and methadone, but not naltrexone. Problem-solving courts are in the early stages of supporting the use of medications, even when funding is available through Medicaid expansion policies. Adoption and use of treatment innovations like MAT are affected by coordinators' perceptions of MAT as well as structural factors such as the availability of the medications in the community and funding resources. The study has important implications for researchers, policymakers, and practitioners.

Keywords

problem-solving courts; medication-assisted treatment; utilization; substance use disorder; opioids; treatment adherence; Medications for Opioid Use Disorder (MOUD) and Medications for Alcohol Use Disorder (MAUD); drug courts; Medicaid expansion

Introduction

Problem-solving courts (PSCs) are critical for providing an integrated legal and health response to substance use problems, including the opioid epidemic (CDC, 2020; Office of National Drug Control Policy, 2018). PSCs¹ are a well-known specialty court innovation

Corresponding Author: Fanni Farago, Department of Sociology and Anthropology, George Mason University, 4400 University Drive, MSN 1D7, Fairfax, VA 22030, USA. ffarago@gmu.edu.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

that seek to rehabilitate criminal justice-involved individuals through a mix of treatment, drug testing, and responding quickly and with certainty to progress on court requirements. The drug court model is the oldest and most common type of problem-solving court that facilitates access to behavioral substance use therapies for people with non-violent, and/or involvement in, drug-related crimes (Marlowe, Hardin, & Fox, 2016). Drug courts, and other types of PSCs, subscribe to the same 10 key practice components developed by the National Association of Drug Court Professionals (NADCP). These components broadly include: authorizing supervised treatment programming, conducting drug testing to monitor abstinence, using frequent court check-ins for judicial monitoring, and using incentives and sanctions to ensure compliance of participants (see U.S. Department of Justice and NADCP, 1997 for a full discussion of these 10 components). Different types of PSCs address various types of offending related behaviors that are rooted in underlying social issues, such as substance misuse, homelessness, or mental health disorders (Bermann & Feinblatt, 2001; Marlowe, Hardin, & Fox, 2016), or that exist among special populations such as veterans or individuals reentering society from prison.

Unlike traditional criminal courts, drug courts are designed to provide participants with customized substance use disorder (SUD) treatment services and recurring judicial monitoring of the participant's progress within a collaborative court context (Kaiser & Holtfreter, 2016). Traditional behavioral therapy is an expected service in PSCs, but judges and PSC staff can also allow participants with alcohol and opioid disorders to be referred to treatment providers that provide medications for SUDs. That is, a PSC can recognize the value of medications as a treatment option by allowing PSC participants to take the medications while involved in the PSC or refer participants to qualified providers and/or clinics that offer medications. Since courts do not deliver treatment per se (i.e., run treatment groups, administer medications, etc.), a PSC cannot mandate that individuals take treatment medications. Rather the question is whether the PSC supports the use of medications as a tool to address substance and alcohol use disorders given the effectiveness of the medications in reducing drug use, cravings for illicit drugs and/or alcohol, and improving recidivism outcomes (Amato et al., 2005; Evans, et al. 2022; Garcia et al., 2007; Johnson, 2008).

The term medication assisted treatment (MAT)² is frequently used to refer to medications for alcohol and illicit drugs, although some prefer the term medications for opioid use disorder (MOUD) or medications for alcohol use disorder (MAUD). In this paper, we will use the term MAT. MAT is an evidence-based medication with federal approval for *Disulfiram*, *Acamprosate*, and *Naltrexone* for treating alcohol use disorder (AUD) and *Methadone*, *Buprenorphine*, and *Naltrexone* for treating opioid use disorders. Medications can be combined with behavioral health and counseling services (Friedman & Wagner-Goldstein, 2015; Kresina, 2007), although there is ongoing debate about whether behavioral

¹-Problem-solving courts are also commonly referred to as treatment courts and drug courts. We use problem-solving courts to denote that not all of these courts are only dealing with substance use disorders but rather address an array of issues such as reentry, mental health, etc.

²-This paper uses MAT versus other emerging terminology in the field (i.e., MOUD/MAUD) to stay consistent with our survey instrument's wording. We acknowledge that MAT may be seen as outdated by some professionals in the field and that some argue MAT suggests that medication only "assists" versus constitutes treatment for substance use disorders.

therapy affects outcomes (Amato et al., 2011a; 2011b; Carroll & Weiss, 2017; Schwartz et al., 2012).

Despite MAT's well-documented effectiveness for treating SUDs, they remain a widely underutilized treatment option overall, especially in justice settings (National Academies of Sciences, 2019). Underutilization of MAT in PSCs is particularly concerning given its effectiveness in reducing recidivism (Aos, Miller, & Drake, 2006; Cross, 2011; Dirks-Linhorst & Linhorst, 2012; Mitchell et al., 2012; Shaffer, 2011; Kearley & Gottfredson, 2020; Kinlock et al., 2009; Gordon et al., 2008, 2014, 2017), although there are no randomized trials examining the efficacy of MAT in PSCs. Available evidence suggests that adding MAT to the treatment regime may improve outcomes beyond recidivism (i.e., treatment retention, reduction of illicit substance cravings and use, quality of life) and may accelerate recovery. For example, Gallagher et al. (2019a, 2019b) conducted two qualitative studies with 38 drug court participants with OUDs and found that participants reported MAT helped them improve their treatment attendance and engagement. Moreover, participants conveyed that MAT (i.e., methadone, buprenorphine, and naltrexone) reduced their cravings for substances (2019a, 2019b). Other research shows that providing access to MAT for PSC participants with OUDs is one important factor in bolstering their graduation rates from court treatment programs (Gallagher et al., 2018).

Given the need for a greater understanding of support for authorizing the use of MAT within PSCs, this study reports on a national survey of the structural factors that affect MAT authorization in PSC settings. The results are based on a representative sample of state and local court coordinators involved in administering PSCs. There were approximately 4,368 problem-solving courts nationwide in 2014 (i.e., 3,057 drug courts and 1,311 other problem-solving courts) (Marlowe, Hardin, & Fox, 2016), serving nearly 100,000 individuals annually (Taxman et al., 2018). Specifically, this paper is designed to answer three research questions: (1) Do local PSCs authorize access to MAT for appropriate SUDs, such as opioid use disorders, in their courts? (2) What state, court, and individual level factors explain the number of PSC participants authorized to access MAT in a particular court? and, (3) How does the availability of Medicaid expansion and provider/facility availability affect the likelihood of a court authorizing access to use MAT in their court? This study fills a gap by examining PSC-specific factors, as well as availability of MAT in the community, to understand whether and how much the use of MAT is supported by the court.

Medication-Assisted Treatment (MAT) Authorization within Problem-solving Courts (PSCs)

Limited studies identify structural and programmatic factors that affect whether PSCs support the use of medications to treat SUDs, although studies have documented that justice and health actors' negative perceptions and limited knowledge of MAT can be barriers to gaining access to MAT in justice settings (Andraka-Christou et al., 2019; Fendrich & LeBel, 2019; Friedmann et al., 2012; Friedmann & Wagner-Goldstein, 2015; Matusow et al., 2013; Mollman & Mehta, 2017; Richard et al., 2020). For example, justice actors can stigmatize the use of MAT for treating SUD/OUD through professing negative attitudes like "clients will divert the medication," "MAT is simply substituting one drug for another," or "MAT medications should not be lifelong forms of treatment" (Fendrich & LeBel, 2019; Richard

et al., 2020). Given that court staff's attitudes inform the development of court treatment policies, stigmatization of MAT may result in a court excluding access to MAT as part of their treatment regimen for participants with SUDs (Andraka-Christou et al., 2020; Matusow et al., 2013; Richard et al., 2020). Although, a recent qualitative study by Gallagher and colleagues (2021) suggests that PSC staff attitudes may be shifting in favor of integrating MAT into PSC programming (Gallagher et al., 2021). Additionally, justice actors' limited knowledge of the robust evidence base for MAT's efficacy is another potential barrier to increasing MAT uptake among PSCs (Friedmann et al., 2012). Below we will explore the existing reasons for authorizing MAT, using Miller's (2020) typology of pragmatic reasons, including legal and social structural factors, and selective participation in PSCs.

Reasons for Authorizing Medication-Assisted Treatment (MAT)

PSCs emerged from the pragmatic necessities of: (1) a demand for effective methods to treat individuals with SUDs in an overcrowded legal system; (2) the need to ensure that justice wraparound services supported treatment-related goals in punishment environments; (3) availability of federal funding to support PSCs; and, (4) evidence-based success of the PSC model in reducing recidivism (Marlowe, Hardin, & Fox, 2016). Medications are also an effective treatment for reducing opioid and/or alcohol use (SAMHSA, 2020a; 2020b) especially given that there are increased federal funding opportunities for covering medications for SUD treatment (e.g., Medicaid expansion policies adopted in some states). With increasing expansion of clinics that offer MAT and availability of licensed/waivered treatment providers, MAT was a natural choice for expanded treatment options in justice settings, such as PSCs. With this expansion, there has been increasing evidence on the correlates of success of MAT uptake in PSCs. In a study in Indiana, users of opiates were less likely to graduate from a drug court program than users of other drugs, as were those who had a violation of court rules in the first month of the program; while graduation was more likely for participants who had access to MAT and were employed or in school (Gallagher et al. 2018). Based on focus groups with drug court participants, Gallagher and colleagues (2019) emphasized destigmatizing MAT for participants and their families, along with frequent, random drug testing, as critical for success. Finally, in a focus group-based study Gallagher et al. (2021) noted drug court team members had favorable views toward MAT and reported positive outcomes, but also said that participants often needed education on MAT to counter misperceptions.

Legal and Social Structural Factors that Affect Medication-Assisted Treatment (MAT) Authorization

Individual PSCs are embedded in different state regulatory contexts that influence their capacity to authorize access to MAT, especially given that each medication may have a different regulatory regime at the federal and state level. State licensing laws vary on who can prescribe MAT and these variations can impact MAT accessibility by affecting the location and availability of qualified treatment providers (Tierney et al., 2019). Federal and state requirements for qualifications to be a MAT prescriber can affect PSCs' ability to refer court participants to qualified treatment providers that offer medications. PSCs in rural areas tend to lack nearby licensed treatment providers and reliable public transportation, both of which are barriers to support for authorizing MAT within PSCs (Rigg, Monnatb, & Chavezc,

2018; National Rural Health Association, 2016; Friedmann & Wagner-Goldstein, 2015). The regulations covering MAT utilization are crucial to consider since PSCs are not medical entities and courts must affiliate with qualified treatment providers and/or clinics that offer medications. That is, the court can encourage use of the medications, but the delivery is dependent on the treatment providers and/or clinics.

In treating opioid use disorder (OUD), regulatory regimes are more stringent for agonists than antagonists; methadone is the most stringently regulated medication with requirements for the clinic and the provision of some behavioral counseling services (SAMHSA 2015; Kresina et al., 2011). Both have different regulations with methadone being certified at the facility level (SAMHSA 2015; Kresina et al., 2009) and buprenorphine at the provider level. Methadone is only distributed from opioid treatment programs (OTPs) with a medical professional's supervision and at least monthly counseling. Methadone can be delivered in-person or through take-home dosing after the first 90 days of in-person treatments, with increasing allowances of take-home medications (see SAMHSA 2022 for a discussion of guidelines). Recently, as a consequence of COVID-19, the use of take-home methadone doses was expanded (Amram, et al., 2022). Methadone is the most strictly regulated MAT with limited distribution by accredited treatment programs and with required behavioral counseling. Buprenorphine products are less strictly regulated so patients can more easily access them by qualified providers including physicians, nurse practitioners, and others in office-based settings or at a local pharmacy for private use (SAMHSA 2015; Kresina et al., 2009). Federal law limits the number of patients allocated to each qualified provider to place on medication (allowing up to 275 patients) (SAMHSA, 2022). In contrast to buprenorphine and methadone, naltrexone is an opioid antagonist used for the treatment of OUD (SAMHSA 2015; Kresina et al., 2009). Naltrexone works by blocking the intoxicating effects of opioids which can help individuals in recovery maintain opioid abstinence and reduce their cravings (Lee et al., 2016). Because it is not a controlled substance, it is not regulated by the United States Drug Enforcement Administration (DEA) and can be prescribed by any healthcare practitioner licensed to dispense medications.

Besides MAT's regulatory context, Medicaid expansion policies within subscribing states is an important structural factor that may impact MAT authorization by PSCs. A growing number of studies examine the relevance of Medicaid expansion policies for the opioid epidemic more broadly, including access to MAT, and find that states that have Medicaid expansion policies have more qualified providers and more individuals on MAT (e.g., Heinrich & Hill, 2007; Saloner et al., 2018, Venkataramani and Chatterjee, 2019). As of March 2021, Florida, Georgia, South Carolina, North Carolina, Alabama, Mississippi, Tennessee, Texas, Kansas, Wyoming, South Dakota, and Wisconsin were not enrolled in Medicaid expansion. Oklahoma and Missouri adopted Medicaid expansion, but have yet to implement Medicaid expansion as of 2021 (Kaiser Family Foundation, 2021). If allowable under state regulations, Medicaid expansion policy in a state can help cover individuals' costs for MAT. For instance, Mollman and Mehta (2017) observed that the absence of Medicaid expansion in Florida limited access to medications, and alternatively, the state's lack of coverage for specific types of MAT services explained inaccessibility of affordable MAT. Within states that have implemented Medicaid expansion, PSC participants have access to financial coverage for these treatment services. Grogan and colleagues (2016)

highlighted that there are state-level differences in coverage for AUD/OD medications and other treatment services, including coverage of specific types of MAT medications for justice-involved individuals (Grogan et al., 2016). Mollman and Mehta (2017) also found that Medicaid expansion policies in New Hampshire and New York facilitated access to MAT for some drug court participants, but not others. The judiciary's support for court participants to use MAT services is affected by both state and federal regulations.

The present study contributes to this emerging line of inquiry by examining the impact of the availability of Medicaid expansion in the state as a key structural variable for predicting MAT authorization among PSCs, along with the number of known providers and facilities that offer MAT.

Selective Participation in Problem-solving Courts (PSCs)

Each PSC can set their own eligibility criteria for participation, with some eligibility determined by state regulations and/or laws. Mollman and Mehta (2017) studied the variation in eligibility criteria used across drug courts and how it may affect access to services in New Hampshire, Florida, and New York. PSC personnel could determine eligibility as they saw fit, which resulted in disparities in who could participate in a drug court, including where high-risk, high-need individuals could qualify for PSC participation. Federal regulations prevent PSC participation for individuals who have a violent felony conviction history if the PSC received federal funding. Relatedly, Kaiser and Rhodes (2019), in the *2012 Census of Problem-Solving Court* study, found that adult drug courts were more likely to accept participants with non-violent felonies than juvenile drug courts, DWI/DUI courts, mental health courts, domestic violence courts, family dependency courts, or veteran's treatment courts. However, veteran's treatment courts, domestic violence courts, and mental health courts tended to have fewer disqualifications than the other courts (e.g., prior violent conviction or sex offense). The present study considers eligibility criteria (e.g., prior non-violent felony offense, violent offense, sexual offense, prior history of misusing medications) for assessing how the court addresses their mandate to serve a special population. While medications are a newly implemented treatment to PSCs, how medication use is supported by PSCs is specific to each court.

Methods

Survey Design

The nationally representative *Medication-Assisted Treatment (MAT) Utilization Survey of Problem-Solving Courts (PSCs)* survey was conducted from March 2019 to August 2020 to identify overall trends in medication provision within local PSC settings. A mixed-mode survey was administered using: (1) online web survey; (2) computer-assisted telephone interviews (CATI) through George Mason University's Center for Social Science Research, and (3) U.S. Postal Service mailed survey. To encourage participation, the National Association of Drug Court Professionals (NADCP) sent a letter to state coordinators and the survey center included tokens of appreciation (i.e., stress balls and bracelets) in the mailed survey packets. The survey was approved by the IRB at George Mason University (IRB# 1388155-1).

The study consisted of two survey instruments, one for state coordinators and one for local coordinators. The survey instruments' content design was informed by existing validated instruments measuring MAT utilization: (1) National Criminal Justice Treatment Practices Survey (NCJTPS) (Taxman, et al., 2018); (2) National Drug Court Survey (NDCS) (Taxman, et al., 2014); (3) National Drug Abuse Treatment System Survey (NDATSS) (D'Aunno et al., 2014); (4) National Treatment Center Survey (Roman, et al., 2020); (5) Juvenile Justice-Translational Research on Interventions for Adolescents in the Legal System (JJ-TRIALS) survey (Knight et al., 2016), and (6) Opinions About MAT survey (OAMAT) (Friedmann, et al., 2009; 2012).

Sample

The survey's participants are based on a sample of United States (U.S.) counties stratified by region and estimated opioid disorder rates. An original list of PSCs was compiled from various sources including American University's National Drug Court Resource Center (<https://ndcrc.org/>), a directory of 3,400 PSCs provided by the National Association of Drug Court Professionals (NADCP), and publicly available information about PSCs through county and other government websites.

The sampling frame identified potential respondents from four target regions and four certainty states (i.e., states with the largest justice populations). Within each region and state, one-third of the counties were selected based on the highest opioid disorder rates (i.e., top quartile of all counties), one-third from those with the lowest opioid disorder rates (bottom quartile), and one-third from the counties in the middle range (i.e., rates between the twenty-fifth and seventy-fifth percentiles). Data on opioid use disorder (OUD) rates came from the Substance Abuse and Mental Health Services Administration (SAMHSA) extracted from the National Survey on Drug Use and Health (NSDUH) in 2014 (Center for Behavioral Health Statistics and Quality, 2015). The original sample of courts was drawn from each of the three major types of PSCs: adult PSCs (e.g., adult drug courts, DWI/DUI courts, mental health courts), veteran's treatment and reentry courts, and family dependency courts as defined in the original sample list.

Our final sample consisted of 42 state-wide PSC coordinators from 50 states (a response rate of 84%) and 849 local courts in 35 states. State coordinators were contacted to ensure that the survey could be administered to the courts in their state—13 state coordinators preferred the survey to be administered to all local courts in their state instead of targeting select counties. Six other state coordinators refused to have the survey administered to the local courts within their state. Both the state coordinators and the local coordinators were followed up with 10 times. Regarding the local courts, after we learned how the state coordinators wanted to handle contacting local coordinators, we proceeded. The American Association of Public Opinion Research (AAPOR) identifies six different response rate formulas (see AAPOR 2020). As noted, there is no accurate directory of PSC. We had to create a directory and then confirm that the court was still a PSC; we had difficulties in this confirming process since not all courts responded or some courts reported having two types of courts but run by the same team. Therefore, a conservative response rate (48.6%) assumes that all non-responses were eligible courts, which we do not believe is accurate; a

more liberal response rate (76.8%) reflects those courts that responded to emails, calls or mail and removes those courts that did not respond.

Measures

Dependent Variables.—Our study used two dependent variables: (1) Availability of MAT in PSC (i.e., Does the court allow participants to use MAT? (1 = Yes; 0 = No)), and (2) MAT Usage in PSC (i.e., number of court participants receiving MAT (i.e., count)).

Independent Variables.—Predictors captured court, county, and state characteristics that we hypothesized to be associated with the outcome variables.

Court Variables.—These variables included the following items: (1) Court type (0 = other (i.e., non-substance use) courts including mental health only, reentry, veteran’s treatment, and family dependency courts, 1 = substance use courts including adult drug, opioid, DUI/DWI, hybrid (e.g., DUI and drug), and co-occurring disorders courts (i.e., mental health disorders and substance use disorders); (2) Court size (i.e., count of number of participants); (3) Staff characteristics (measured as participant to staff ratio, participants to judge ratio, number of courts overseen at one time, and coordinators’ work experience); (4) Factors that affect court participation, including cost related (0 = No, 1 = Yes), Exclusionary MAT eligibility criteria, and number of exclusionary eligibility criteria; (5) Court participant characteristics based on counts of demographics (i.e., race/ethnicity, gender) and number of people with a substance use disorder (SUD); (6) Number and type of treatment options authorized for substance use and mental health disorders, and (7) Available forms of MAT. See Table A1 in the Appendix for more detailed measures of these variables. To note, the study did not include Native American or juvenile specialty courts given that these courts have distinct treatment operations for their specific populations.

County-level Variables.—County level variables including drug overdose deaths were measured based on drug overdose deaths per 100,000 people (Rossen et al., 2020) and percentage of people with opioid use disorders in a county (SAMHSA, 2015). Additional county-level variables included the following measures of MAT providers: (1) Buprenorphine patient capacity (patient limit per 1,000 people); (2) Methadone providers (i.e., providers per 100,000 people), and (3) Naltrexone providers (i.e., providers per 100,000 people). We also explored buprenorphine providers per 100,000 people as another capacity measure.

State-level Variables.—Included the following set of predictors: (1) Number of PSCs in a state (count); (2) Average size of PSC population per state (count); (3) Medicaid expansion policy; (4) Regional location of courts; (5) State mandates the types of treatment programs and services used; (6) State mandates MAT training for court staff, and (7) State mandates eligibility criteria to admit participants to PSCs. See Table A2 in the Appendix for more detailed measures of these variables.

Analytic Strategy

Data analysis consisted of two stages. First, we analyzed the state and local survey data separately using descriptive statistics and bivariate tests (e.g., chi-square for nominal variables and t-tests and ANOVAs for interval-ratio and ordinal variables). Second, we used hierarchical multiple linear regression analyses (i.e., generalized linear mixed model (GLMM)) to examine relationships between availability of each of the three FDA approved medications for treating opioid use disorder and various county, state, and local court characteristics (See Table 1 for a description of variables used at each level). GLMM is a highly flexible approach for clustered multilevel data (Raudenbush & Bryk, 2001). GLMM make use of all available data and provide accurate inferences with missing data and uneven data structures. The data was analyzed in a three-level model where individual PSC responses are nested within counties, which are nested within states. We used an iterative model building process where organizational and demographic factors (see Table 2) thought to be associated with the likelihood of authorizing MAT or MAT uptake by PSC participants were added to the model incrementally. We report on both the significant and non-significant predictors in the final models (see Table 4 and Table 5).

Results

Descriptive Statistics

Overall, 86% of state court coordinators indicate that their court authorize some type of MAT, while 14% of court coordinators report that their court does not authorize MAT. The type of PSCs represented in the data included adult drug courts, mental health courts, veteran's treatment courts, DUI/DWI courts, and a combination of courts that local coordinators simultaneously oversaw. Table 2 details the descriptive statistics for our local and state survey variables used in the models.

Both state and local PSCs revealed that they had limited access to information on their court participants, operations, and service provisions. State coordinators reveal that: (1) they did not have information on the number of PSC participants at each local court level (40%) and (2) did not know the characteristics of the PSC participant population in terms of demographics (50%). At the local level, coordinators reveal that they could not provide the length of time to complete the PSC (29%), graduation rate for participants (37%), number of participants prescribed MAT (43%), number of participants with a SUD diagnosis (44%), or with an OUD diagnosis (64%). Further, nearly 50% of the local PSC coordinators did not have information on the demographic characteristics of participants in their courts either.

Respondent Demographics and Court Role Characteristics: An Overview

A third of state coordinators were located in the South (33%), 30% in the West, and respondents from Midwestern and Northeastern regions were 19% each. State coordinators primarily identified themselves as non-Hispanic (94%), white (86%), college educated (95%) (i.e., BA or higher), women (73%) between 35- and 54-years-old (63%). Similarly, local coordinators self-identified as non-Hispanic (93%), white (83%), college-educated (87%) (i.e., BA or higher), women (69%), and between 35 and 54 years old (63%).

Additionally, 61% of local coordinators reported that they had four or more years of work experience in their position.

State Coordinators' Role in Facilitating PSC Operations

Most state coordinators indicate that they spent their workday performing at least one of the following seven activities (more than 90% of state coordinators): (1) educating and training court staff; (2) doing paperwork; (3) engaging in statewide policymaking; (4) ensuring courts are compliant with state-wide policies; (5) reviewing evidence-based practices to improve local PSCs; (6) conducting public outreach regarding PSCs, and (7) collaborating with treatment providers. The state coordinators further confirmed they were involved in state-level policy-making by engaging in conversations with stakeholders about expanding the range of treatment services (85%), increasing court staff training for MAT/behavioral health treatment (83%), ensuring funding is adequate for treatment services (78%), promoting strategies to increase participants retention (78%), clarifying treatment guidelines between court and treatment providers (76%), and developing new metrics for participant performance (60%). State coordinators explained that they engaged in collecting and presenting data to policy makers (70%), providing feedback on policy under review (67%), consulting with treatment and public health agencies for policy needs (67%), and being directly involved in drafting policy (37%).

Court and Participant Characteristics

As shown in Table 2, coordinators reported that local PSC participants tended to be non-Hispanic or Latino (85%), white (76%), and men (66%). PSCs are funded in a myriad of ways including state budget funding (91%), federal grant dollars (70%), participant fees for drug testing and treatment services (67%), and local county funding (72%). The source of funding affects regulations with courts required to meet federal and state regulations.

State PSC coordinators indicate that *federal funds* are allocated mostly for operational costs (70%), mental health services (63%), court staff wages (59%), MAT services (58%), and transportation for participants to and from treatment services (57%). *State funds* are allocated primarily for court staff wages (87%), mental health services (81%), operational costs (78%), transportation for participants to and from treatment services (76%), MAT services (71%), and incentives (57%). Related to staff training, statewide PSC conferences are the only required training for staff (64%). Other optional well-known trainings include: 1) Substance Abuse and Mental Health Services Administration (SAMHSA) webinars (91%), 2) National Association of Drug Court Professionals (NADCP) annual conference (82%), 3) National Drug Court Institute (NDCI) in-person trainings (73%), 4) MAT community PSC sessions (64%), NDCI online learning (64%), 5) certified MAT advocate training through the American Association for the Treatment of Opioid Dependence (AATOD) (55%), and 6) state-run technical assistance provider training (54%).

Local PSCs were in the Southern (46%), Western (25%), Midwestern (22%), and Northeastern (7%) regions of the United States. Local court coordinators oversee mostly (93%) substance use specific courts (e.g., adult drug, opioid, DUI/DWI, hybrid, and co-occurring disorders courts), while the remaining 7% of non-substance use courts target other

populations (e.g., reentry, veteran's treatment, family dependency, and mental health only courts). Notably, 62% of coordinators oversee only one court and 38% of coordinators oversee more than one court: two courts (20%); three courts (11%); four courts (5%); five courts (2%); six or seven courts (less than 1%). On average, local courts have 11 staff positions and the participant to staff ratio is eight to 1. The average number of participants per surveyed court was 56 participants.

On average, local court coordinators reported that 90% of local PSC participants were Non-Hispanic or Latino, 77% were white, and 63% were men. Over a third (39%) of local PSCs excluded participants with a prior violent conviction, while 5% of courts excluded participants who used pain medication for chronic disorders/diseases. Overall, more than half (59%) of courts report one or more exclusion criteria for determining participants' eligibility; the others did not identify eligibility criteria (41%). More than two-thirds (71%) of respondents report that, on average, it takes 16 months or more to complete the PSC process, 29% did not have this information. On average, coordinators report that 41% of participants successfully graduated from PSC programs; however, about a third of the coordinators (37%) did not provide this information.

Local coordinators also identified the factors that affect participants' ability to engage in their prescribed treatment program used by the PSC. Almost 59% of court coordinators indicated that at least one of the following factors impacted participation: (1) transportation availability and costs (32%); (2) maintaining a job (15%); (3) medical condition/physical health status (15%); (4) social support from family (15%); (5) frequency of court hearings/treatment sessions (9%); (6) health insurance coverage (8%); and (7) waiting time to receive treatment (6%).

Medication-Assisted Treatment (MAT) Services and Participant Characteristics

State Coordinators.—A high percentage (81%) of state coordinators did not provide information on the number of court participants statewide who were receiving MAT since they did not have that information. From the eight state coordinators who responded to this survey item, an average of 228 PSC participants are receiving MAT services. From the eight coordinators who provided this information, an average of 262 participants per state have an OUD. Lastly, 56% of state coordinators are unaware of the number of participants statewide with a SUD. Based on 19 state coordinators respondents, there were on average 1,640 PSC participants per state who had a SUD.

Local Court Coordinators.—Only 2% of respondents indicate that their courts support participants to use all eight types of available MAT for OUD or alcohol use disorders. As shown in Table 2, the most commonly available medications include Naltrexone/Vivitrol (56%), Buprenorphine (50%), and Methadone (36%).

In general, 63% of local PSCs authorized six to nine behavioral health therapy treatment options and 62% authorize four to seven mental health treatment options. Coordinators prefer individual counseling (21%) and group therapy (19%) as treatment methods for addressing participants' mental health related problems, while individual counseling (15%) and 12-Step Programs (14%) are the most preferred treatment methods for substance

use related problems. Coordinators reported that their least preferred treatment option is Mindfulness Stress Reduction (MSR) (12% for mental health disorders and 8% for substance use disorders).

Bivariate Analyses

Medication-Assisted Treatment (MAT) Availability Compared Across Courts.—

Table 3 displays the statistically significant associations between the presence of Medicaid expansion in states, the availability of specific types of MAT medications, and the expected size of the provider community for each type of medication.

Modeling Medication-Assisted Treatment (MAT) Use and Number of Participants on MAT

Generalized linear mixed models (GLMM) (Stroup, 1999; Littell et al. 2006) were used to analyze the likelihood of a given court authorizing each of the three FDA approved MATs and the number of participants receiving MAT. To analyze the likelihood of a court supporting use of each MAT, binary logistic regressions were used and to analyze the number of participants receiving MAT, a Poisson regression was used. In both cases, data were structured hierarchically, where local data (level 1; survey responses from individual courts) were nested within county data (level 2; data gathered from 2016 National Center for Health Statistics (NCHS), see Rossen et al., 2020) which were nested within state data (level 3; survey responses from state coordinators and 2016 NCHS data). In the case of the Poisson regression, only courts that authorized MAT were included in the analysis and an offset variable was included to control for the size of the court. Models were constructed in an exploratory, iterative fashion where a set of hypothesized predictors were added one-by-one based on hypothesized importance. The resulting final models included all predictors both significant and non-significant.

The predictor variables included in the iterative model building procedure are summarized in the methods section and the Appendix (see Table A1 and Table A3). County level data on opioid overdose mortality rates were largely missing, therefore the study used the overall drug overdose mortality as a predictor. Ultimately, when the percent of the county population that was opioid dependent was included in the MAT models, they failed to converge. Thus, the percent of the county population with an opioid use disorder does not appear as a predictor in the final models of supporting the use of MAT. The buprenorphine patient capacity rate was converted from ‘per 100k population’ to ‘per 1k population’ because the scale of the original variable was an order of magnitude larger than other predictors which caused problems with parameter estimations.

Results of the final models are summarized in Table 3 and 4. County level MAT availability was a significant predictor of the likelihood of that MAT was being offered by a local court. Each additional methadone clinic and naltrexone provider per 100,000 population increased the likelihood of a court offering each MAT by 65% and 17% respectively. Likewise, each additional buprenorphine patient capacity per 1,000 population was associated with an 8% increase in the likelihood of a court utilizing buprenorphine. However, given the different ways that buprenorphine treatment can be provided, we repeated the buprenorphine model substituting patient capacity per 1,000 population with another measure of availability to

test the strength of our findings. Buprenorphine providers per 100,000 population replaced patient capacity. In this model, there was no significant effect of per capita buprenorphine providers on the likelihood of a given court utilizing buprenorphine ($b = 0.12$, $OR = 1.12$, $SE = 0.070$, $z = 1.68$, $p = 0.092$). Being in a Medicaid expansion state was found to be a significant predictor of local courts offering buprenorphine and methadone but not naltrexone (see Table 5). Courts located in a Medicaid expansion state were twice as likely to offer buprenorphine ($OR = 2.01$) and almost three times as likely to offer methadone ($OR = 2.86$) as courts located in states without Medicaid expansion. Adult drug courts were 1.83 times as likely to offer naltrexone as other court types, but there was no relationship between court type and the likelihood of offering buprenorphine or methadone. State mandates regarding the types of treatment services to be provided were associated with increased likelihood of courts offering methadone ($OR = 0.58$), but not buprenorphine or naltrexone ($p = 0.066$). In courts, where there was a perception that MAT was just ‘substituting one drug for another,’ all three MATs were significantly less likely to be offered. Participant interest in MAT (based on the responding coordinator) was found to be unrelated to whether or not a court was likely to offer MAT and was removed from the final models to prevent over-specification and convergence issues from arising.

For courts that offer MAT (see Table 5), MAT utilization amongst participants was significantly associated with the county’s overdose mortality rate. Each 1 unit increase in county’s mortality rate (i.e., deaths per 100,000 people) predicted a 2% increase in MAT utilization. State mandates requiring eligibility criteria for participation in PSCs were significantly associated with reduced MAT usage. Courts located in states that mandated eligibility requirements to be in the PSC are predicted to have half the rate of MAT utilization (Incidence Rate Ratio (IRR) = 0.51). Lastly, the degree to which participants had the option to choose which MAT they would like to receive was significantly associated with MAT uptake.

Discussion

PSCs were designed to address the unique needs of people with substance use disorders in the justice system. The treatment-testing-status hearing (designed to adjust services based on progress) equipped the justice system with a judicial led process to advance treatment-and-justice outcomes. The expectation was that PSCs would rapidly incorporate new innovations, particularly for treatment services. This includes medications for opioid use disorders and alcohol disorders along with traditional behavioral health treatment services. This study illustrates that both state and local PSC coordinators are in the early stage of adopting medications. Funding is available, but coordinators sometimes expressed concerns that the medications were just substituting one drug for another. PSCs are reluctant to adopt medications and only about half of the courts are open to supporting the use of at least one medication for treating opioid use disorders. Overall, court coordinators reveal that they lack knowledge about medications, and even more so lack confidence that the medications are effective in curbing substance abuse and/or recidivism.

This study found that of MAT usage was associated with the availability of funding for MAT in PSCs and the availability of providers and/or facilities that provide MAT.

Coordinators' willingness to authorize MAT was also associated with knowledge and interest in medications. When coordinators have perceptions that MAT is merely a substitute for illicit drugs, then the court is less likely to authorize MAT (Andraka-Christou & Atkins, 2020; Fendrich & LeBel, 2019; Matusow et al., 2013; Richard et al., 2020). Medicaid expansion impacts the number of patients that receive medications and the number of qualified providers and clinics (Maclean & Saloner 2019; Abraham et al., 2021). This study found that increasing the uptake of MAT could be affected by Medicaid expansion, the regulations that expand where MAT is offered, and who can provide MAT. State mandated eligibility criteria to participate in PSC were negatively associated with increased participant utilization of MAT. It also identified that a barrier to utilization of MAT was the attitude of coordinators regarding the perception that MAT is just substituting one drug for another.

This national survey of PSCs was challenging to conduct and revealed that the courts lack infrastructure to understand the participants' needs and service provision. The challenges we encountered included defining a PSC and obtaining a valid list of PSCs and their coordinators. Such a list is not maintained at the national level, and many states do not have this information or were not willing to share the information. Further, the hierarchical nature of PSCs, where a state coordinator provides approval for study participation, is a further barrier. In the end, 13 state coordinators did not provide permission to sample specific courts but allowed for the survey to be administered to all courts in their state; six state coordinators did not provide a list of their courts—this resulted in the study design needing to be modified based on the state coordinator. In 28 states, the study team dispensed the online survey link to only a few courts and in 13 states the state coordinator sent the link to all courts in the state. This resulted in obtaining responses from 849 courts which we found to be similar to the original 402 surveys from target courts. We assessed whether the additional courts had an impact on our two dependent outcomes—adopt MAT and use MAT for participants in the courts—and it did not.

Survey responses reveal that most PSCs lacked infrastructure to understand the participants' needs and service provisions. At the state coordinator level, few states had access to information on participants who were using MATs. The high percentage of missing responses to particular items among state coordinators might be the result of a lack of information at the state level about the participant characteristics in local PSCs and suggests a disconnect in communications and information sharing between state coordinators and the local level courts they oversee. Just as surprising were the number of state coordinators who did not have information on the number and type of participants in PSCs across the state, as well as more detailed data on the services provided. State coordinators are an important gateway, but they may not have access to the data on their states' local courts that would be useful for describing the system, understanding performance, or assessing the effectiveness of policies and practices. At the local level, coordinators could not easily describe or may not have had access to characteristics of participants and services. Taken together, it is apparent that PSC coordinators at both levels need more support to better use data to manage the courts and advance PSC services. Given that 40% of the local coordinators manage more than one court, more attention is needed to identify performances for each type of special populations.

Not surprisingly, the importance of funding for MAT (and other treatment services) and regulations around licensing of providers and facilities cannot be overestimated. Medicaid expansion was associated with whether local PSC coordinators support the use of buprenorphine or methadone treatment in specialized courts. Similarly, there was an association between community availability of treatment providers and the likelihood of local PSCs utilizing MAT. However, this finding is sensitive to how availability was assessed in the case of buprenorphine. While this current survey did not provide insight into exactly how PSCs administered MAT, many coordinators indicate that this is often the prerogative of the treatment provider to offer MAT and/or work with medical personnel to do so. More research is needed on how treatment agencies and/or medical providers are integrated into PSCs. Future work is also needed on the knowledge and opinions of PSC coordinators about MAT—the lack of knowledge about each medication and uncertainty about the effectiveness of the medications was striking and illustrated that efforts by national and state associations to educate coordinators need to be enhanced.

Implications for Policy and Practice

This study has important implications for policymakers and practitioners. Policymakers at the county, state, and national level must consider how MAT services are impacted by funding, coordinator perceptions, and PSC operations. First, MAT uptake and utilization are associated with whether state policies mandate the use of certain behavioral health treatments and participant eligibility criteria, respectively. The more mandates for treatment services and the more participant eligibility factors, the less likely the courts are to offer and use MAT. Integrated policies are needed to facilitate MAT utilization in PSCs (Taxman, 2018). For nearly 30 years, federal regulations have prevented federal funding for individuals convicted of violent offenses (which have not been well-defined) to participate in PSCs. These types of requirements are counterproductive to expanding participation in PSCs, which can provide alternatives to incarceration and linkage to treatment for substance use disorders, including MAT among other services.

The study revealed that PSCs may benefit from more support to expand MAT use, including expanding the pool of treatment providers that can offer the medications in a given jurisdiction. Many courts have adopted MAT, but it is unclear to what extent courts are using medications to treat participants with SUDs. Missing data rates on MAT usage by court participants illustrates that courts need assistance in documenting the MAT provided to individuals that are served by PSCs. A need exists to ensure that there is equitable access to MAT and other services by all court participants, especially those with diagnosed substance use disorders. Further work is needed to understand which participants are offered MAT, and which ones are not, and the barriers to uptake of MAT for individuals with OUD. A related issue is to better understand how to destigmatize the use of MAT for participants who could benefit from medication.

Limitations

While this nationally representative study advances MAT stakeholders' understanding and practices of MAT utilization within PSCs, it has several limitations. First, similar to Matusow and colleagues (2013), our survey collected self-reported data on MAT utilization

(Matusow et al., 2013). Therefore, the survey data provides stakeholder-based estimates of courts' current MAT usage. Furthermore, the self-reported data is limited to court coordinators' perspectives and may not account for other court personnel's perspectives that could reveal variation in MAT attitudes. Given the cross-sectional nature of this survey, we are unable to draw strong conclusions about causality or directionality of the associations revealed by our statistical models. Instead, the results presented in this paper are meant to gauge the current state of PSCs and generate hypotheses for future research. In particular, our findings related to the availability of buprenorphine treatment in the community and its association with PSCs' likelihood of utilizing buprenorphine are limited by the fact that this association is sensitive to the specific measure of availability being used. While the findings indicate that the number of qualified providers may facilitate utilization, more research is needed to identify whether these providers are independent or part of clinics.

Furthermore, Medicaid expansion may be driving local availability of MAT in the community and our analyses did not account for potential mediation, as this is outside the scope of this paper. Structural equation models are better suited to testing potential mediating relationships and establishing causal pathways and should be explored in future research. To address these limitations, future nationwide surveys should triangulate data through the analysis of other sources (e.g., court administrative records) and examine different types of court personnel's perceptions (e.g., judges, treatment staff) within courts.

To broaden the scope of the current research, future studies should: (1) quantitatively study available treatment options in lieu of MAT within juvenile courts; (2) conduct survey-based research with Native American courts on their MAT utilization policies and practices; (3) include qualitative interviews with PSC participants to capture their experiences with MAT usage; and (4) analyze participants' post-PSC discharge or completion outcomes (e.g., recidivism) using administrative data.

Conclusion

These findings provide important insights on how PSCs function as complex systems that are simultaneously shaped by state-, county-, and local-level factors that impact how courts are able to implement MAT for their participants with OUD and SUDs. Adoption and use of treatment innovations like MAT are affected by coordinators' perceptions of MAT as well as structural factors affecting availability of the medications in the community and funding resources. Future MAT utilization research within PSCs, and other justice settings, is necessary to better understand how such settings may improve and expand upon their MAT services to better serve socioeconomically diverse participants with acute OUD and SUDs. A better understanding of how PSCs can improve their operations in support of MAT is needed, including how to facilitate institutional support for use of MAT.

Funding

The author disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: This work was supported by the National Institute on Drug Abuse (R01DA043476, PI Gordon).

APPENDIX

Table A1

Additional Measures for Court-level variables.

Variable Name	Coding Scheme
Court type	
Other (i.e., non-substance use) court	Coded as 0 = No if court was a Veteran's Treatment, Reentry, Family Dependency, and Mental Health only
Substance use Court	Coded as 0 = Yes if court was a Drug, DUI/DWI, and Mental Health Court in Combination with Drug Court
Staff characteristics	
Participant to staff ratio	Total number of participants per court/Total number of staff per court
Participants to judge ratio	Total number of participants per court/Judges per court
Number of courts overseen at one time	0 = No response; 1 = one type of court; 2 = two types of court; 3 = three types of court; 4 = four or more types of court
Coordinators' work	1 = 3 years or less; 2 = 4 or more years
Experience	
Factors that affect Court Participation	
Exclusionary	0 = None selected; 1 = Uses pain meds; 2 = Prior violent felony conviction; 3 Other only; 4 = Other + prior violent felony conviction; 5 = Other combinations
Eligibility criteria	
Number of exclusionary eligibility	0 = No response; 1 = one eligibility criteria selected; 2 = two eligibility criteria selected; 3 = three eligibility criteria selected; 4 = four eligibility criteria selected; 5 = five eligibility criteria selected; 6 = six eligibility criteria selected; 7 = seven eligibility criteria selected
Number (count) and type of treatment options allowed for substance use	Coded for distinct types of treatment offerings and various combinations of them based on the following options: MAT, 12-step, individual counseling, group therapy, cognitive behavioral therapy (CBT), motivational interviewing (MI), mindfulness stress reduction (MSR), and mindfulness relapse prevention (MRP) (range: 0 (None selected) to 10 (other combinations of available options))
Number (count) and type of treatment options allowed for mental health	Coded for distinct types of treatment offerings and various combinations of them based on the following options: Group therapy, individual counseling, motivational interviewing (MI), cognitive behavioral therapy (CBT), dialectic behavioral therapy (DBT), mindfulness stress reduction (MSR) (range: 0 (None selected) to 10 (Other combinations of available options))
Available form/s of MAT service	Coded for distinct types of MAT offerings and various combinations of them based on the following options: Naltrexone/Vivitrol, buprenorphine/Naloxone, buprenorphine pills, acamprosate, methadone, disulfiram/Antabuse, buprenorphine injection, and buprenorphine implant (range: 0 (None selected) to 12 (Other combinations of available options))

Table A2

Additional Measures For State-Level Variables.

Variable Name	Coding Scheme
Availability of medicaid expansion policy	0 = No; 1 = Yes
Regional location of courts	1 = Midwest; 2 = Northeast; 3 = South; 4 = West

Table A3

Additional Measures for Variables GLMM Model Variables.

Variable Name	Data Source or Coding Scheme
State mandates the types of treatment programs and services used	0 = No; 1 = Yes
State mandates MAT training for court staff	0 = No; 1 = Yes
State mandates eligibility criteria to admit participants to PSC	0 = No; 1 = Yes
Percent of population that is opioid dependent	Data on the opioid dependent population came from the substance abuse and mental health services administration (SAMHSA) extracted from the 2014 national survey on drug use and health (NSDUH)
Drug overdose mortality rate (deaths/100k pop.)	Data on drug overdose mortality rates came from the 2016 wave of the national drug poisoning mortality: United States, 1999–2018 survey conducted by the centers for disease control (CDC)

Table A4

Measures of Study Variables Reported for Descriptive Results.

Variables	Measures for recoded and computed variables
State survey variables	
Medicaid expansion state	0 = No; 1 = Yes
Region where court is located	1 = Midwest; 2 = Northeast; 3 = South; 4 = West
Local survey variables	
Medicaid expansion in state	0 = No; 1 = Yes
Types of local PSCs	1 = Substance use courts (Drug, DUI/DWI, and Mental Health Court in Combination with Drug Court); 2 = Other courts (Veteran’s Treatment, Reentry, Family Dependency, and Mental Health only)
Number of courts overseen at one time	0 = No response; 1 = One type of court; 2 = Two types of court; 3 = Three types of court; 4 = Four or more types of court
Staff characteristics	
Participants to staff ratio	Total number of participants per court/Total number of staff per court
Participants to judge ratio	Total number of participants per court/Judges per court
Respondent demographics and work experience	
Race	1 = White; 2 = Non-white

Variables	Measures for recoded and computed variables
Ethnicity	1 = Hispanic or Latino; 2 = Not Hispanic or Latino
Age	1 = 25 to 34 years old; 2 = 35 to 44 years old; 3 = 45 to 54 years old; 4 = 55 or older
Educational attainment	1 = Bachelor's Degree; 2 = Graduate/Professional Degree; 3 = Other
Gender	1 = Men; 2 = Women
Work experience as a coordinator	1 = 3 years or less; 2 = 4 or more years
Average PSC completion time	1 = 15 months or less; 2 = 16 to 19; 3 = 20 months or more
Factors that affect court participation	
Cost related	0 = Unrelated to cost; 1 = Related to cost
Exclusionary eligibility criteria	0 = None selected; 1 = Uses pain meds; 2 = Prior violent felony conviction; 3 = Other only; 4 = Other + prior violent felony conviction; 5 = Other combinations
Number of exclusionary eligibility criteria selected	0 = No response; 1 = One eligibility criteria selected; 2 = Two eligibility criteria selected; 3 = Three eligibility criteria selected; 4 = Four eligibility criteria selected; 5 = Five eligibility criteria selected; 6 = Six eligibility criteria selected; 7 = Seven eligibility criteria selected
Treatment options offered Substance use	0 = None selected; 1 = MAT, 12-step, individual counseling, group therapy, and Cognitive Behavioral Therapy (CBT); 2 = Motivational Interviewing (MI), MAT, 12-step, individual counseling, and CBT; 3 = MI, MAT, 12-step, individual counseling, group therapy, and CBT; 4 = Mindfulness Stress Reduction (MSR), MI, MAT, 12-step, individual counseling, group therapy, and CBT; 5 = Mindfulness Relapse Prevention (MRP), MAT, 12-step, individual counseling, group therapy, and CBT; 6 = MRP, MI, MAT, 12-step, individual counseling, group therapy, & CBT; 7 = MRP, MSR, MAT, 12-step, individual counseling, group therapy, and CBT; 8 = MRP, MSR, MI, MAT, 12-step, individual counseling, group therapy, and CBT; 9 = Other, MRP, MSR, MI, MAT, 12-step, individual counseling, group therapy, and CBT; 10 = Other combinations
Number of substance use treatment options allowed	0 = No response; 1 = One substance use treatment option selected; 2 = Two substance use treatment options selected; 3 = Three substance use treatment options selected; 4 = Four substance use treatment options selected; 5 = Five substance use treatment options selected; 6 = Six substance use treatment options selected; 7 = Seven substance use treatment options
Mental health	0 = None selected; 1 = Group therapy and individual counseling; 2 = Cognitive Behavioral Therapy (CBT), group therapy, and individual counseling; 3 = CBT, group therapy, individual counseling, and Motivational Interviewing (MI); 4 = CBT, Dialectic Behavioral Therapy (DBT), group therapy, individual counseling, and MI; 5 = CBT, group therapy, individual counseling, and Mindfulness Stress Reduction (MSR); 6 = CBT, DBT, group therapy, individual counseling, and MSR; 7 = CBT, group therapy, individual counseling, MI, and MSR; 8 = CBT, DBT, group therapy, individual counseling, MI, & MSR; 9 = CBT, DBT, group therapy, individual counseling, MI, MSR, and other; 10 = Other combinations
Number of mental health treatment options allowed	0 = No response; 1 = One mental health treatment option selected; 2 = Two mental health treatment options selected; 3 = Three mental health treatment options selected; 4 = Four mental health treatment options selected; 5 = Five mental health treatment options selected; 6 = Six mental health treatment options selected; 7 = Seven mental health treatment options selected
MAT service options	0 = None selected; 1 = Naltrexone/Vivitrol; 2 = Naltrexone/Vivitrol and Buprenorphine/Naloxone; 3 = Naltrexone/Vivitrol, Buprenorphine pills, and Acamprosate; 4 = Naltrexone/Vivitrol, Methadone, and Buprenorphine implant; 5 = Naltrexone/Vivitrol, Methadone, and Buprenorphine pills; 6 = Naltrexone/Vivitrol, Methadone, Buprenorphine pills, and Buprenorphine/Naloxone; 7 = Naltrexone/Vivitrol, Methadone, Buprenorphine pills, Buprenorphine/Naloxone, and Buprenorphine Injections; 8 = Naltrexone/Vivitrol, Methadone, Disulfiram/Antabuse, Buprenorphine pills, and Buprenorphine/Naloxone; 9 = Naltrexone/Vivitrol, Methadone, Disulfiram/Antabuse, Buprenorphine pills, Buprenorphine/Naloxone, and Acamprosate; 10 = Naltrexone/Vivitrol, Methadone, Disulfiram/Antabuse, Buprenorphine pills, Buprenorphine injection, and Buprenorphine/Naloxone; 11 = All eight selected; 12 = Other combinations

References

- Abraham AJ, Yarbrough CR, Harris SJ, Adams GB, & Andrews CM (2021). Medicaid expansion and availability of opioid medications in the specialty substance use disorder treatment system. *Psychiatric Services (Washington, D.C.)*, 72(2), 148–155. 10.1176/appi.ps.202000049 [PubMed: 33267651]
- Amato L, Davoli M, Perucci A, Ferri C, Ferri M, Faggiano F, & Mattick PR (2005). An overview of systematic reviews of the effectiveness of opiate maintenance therapies: available evidence to inform clinical practice and research. *Journal of Substance Abuse Treatment*, 28(4), 321–329. 10.1016/j.jsat.2005.02.007 [PubMed: 15925266]
- Amato L, Minozzi S, Davoli M, & Vecchi S (2011a). Psychosocial combined with agonist maintenance treatments versus agonist maintenance treatments alone for treatment of opioid dependence. *The Cochrane Database of Systematic Reviews*, 10, CD004147. 10.1002/14651858.CD004147.pub4
- Amato L, Minozzi S, Davoli M, & Vecchi S (2011b). Psychosocial and pharmacological treatments versus pharmacological treatments for opioid detoxification. *The Cochrane Database of Systematic Reviews*, 9, CD005031. 10.1002/14651858.CD005031.pub4
- American Association for Public Opinion Research (AAPOR) (2020). Standard definitions. [https://www.aapor.org/Standards-Ethics/Standard-Definitions-\(1\).aspx](https://www.aapor.org/Standards-Ethics/Standard-Definitions-(1).aspx)
- Amram O, Solmaz A, Thorn E, Robert L, & Joudrey P (2022). Changes in methadone take-home dosing before and after COVID-19. *Journal of Substance Abuse Treatment*, 133, 108552. 10.1016/j.jsat.2021 [PubMed: 34304950]
- Andraka-Christou B, & Atkins D (2020). Whose opinion matters about medications for opioid use disorder? A cross-sectional survey of social norms among court staff. *Substance Abuse*, 42(4), 735–750. 10.1080/00952990.2020.1807559 [PubMed: 33284059]
- Andraka-Christou B, Gabriel M, Madeira J, & Silverman RD (2019). Court personnel attitudes towards medication-assisted treatment: A state-wide survey. *Journal of Substance Abuse Treatment*, 104, 72–82. 10.1016/j.jsat.2019.06.011 [PubMed: 31370988]
- Andraka-Christou B, Nguyen T, Bradford DW, & Simon K (2020). Assessing the impact of drug courts on provider-directed marketing efforts by manufactures of medications for the treatment of opioid use disorder. *Journal of Substance Abuse Treatment*, 110, 49–58. 10.1016/j.jsat.2019.12.004 [PubMed: 31952628]
- Aos S, Miller M, & Drake E (2006). Evidence-based public policy options to reduce future prison construction, criminal justice costs, and crime rates. Olympia, WA: Washington State Institute for Public Policy.
- Bermann G, & Feinblatt J (2001). Problem-Solving Courts: A Brief Primer. *Law and Policy*, 23(2), 125–140. 10.1111/1467-9930.00107
- Carroll KM, & Weiss RD (2017). The role of behavioral interventions in buprenorphine maintenance treatment: a review. *The American Journal of Psychiatry*, 174(8), 738–747. 10.1176/appi.ajp.2016.16070792 [PubMed: 27978771]
- Center for Behavioral Health Statistics and Quality (2015). 2014 national survey on drug use and health: Methodological summary and definitions. Rockville, MD: Substance Abuse and Mental Health Services Administration.
- Centers for Disease Control and Prevention (2020). America's drug overdose epidemic: Data to action. https://www.cdc.gov/injury/features/prescription-drug-overdose/index.html#:~:text=On_average%2C_130_Americans_die_every_day_from_an_opioid_overdose
- Cross B. (2011). Mental health courts effectiveness in reducing recidivism and improving clinical outcomes: A meta-analysis. Tampa: University of South Florida.
- D'Aunno T, Pollack HA, Frimpong JA, & Wuchiett D (2014). Evidence-based treatment for opioid disorders: A 23-year national study of methadone dose levels. *Journal of Substance Abuse Treatment*, 47(4), 245–250. 10.1016/j.jsat.2014.06.001 [PubMed: 25012549]
- Dirks-Linhorst PA, & Linhorst DM (2012). Recidivism outcomes for suburban mental health court defendants. *American Journal of Criminal Justice*, 37(1), 76–91. 10.1007/s12103-010-9092-0

- Evans EA, Wilson D, & Friedmann PD (2022). Recidivism and mortality after in-jail buprenorphine treatment for opioid use disorder. *Drug and Alcohol Dependence*, 231, 109254. 10.1016/j.drugalcdep.2021.109254 [PubMed: 35063323]
- Fendrich M, & LeBel TP (2019). Implementing access to medication assisted treatment in a drug treatment court: Correlates, consequences, and obstacles. *Journal of Offender Rehabilitation*, 58(3), 178–198. 10.1080/10509674.2019.1582573
- Friedmann PD, Hoskinson R, Gordon M, Schwartz R, Kinlock T, Knight K, Flynn PM, Welsh WN, Stein LAR, Sacks S, O'Connell DJ, Knudsen HK, Shafer MS, Hall E, & Frisman LK, for the MAT Working Group of CJ-DAT (2012). Medication-assisted treatment in criminal justice agencies affiliated with the criminal justice-drug abuse treatment studies (CJ-DATS): availability, barriers, and intentions. *Substance Abuse*, 33(1), 9–18. 10.1080/08897077.2011.611460 [PubMed: 22263709]
- Friedmann PD, Rhodes AG, & Taxman F (2009). Collaborative behavioral management: Integration and intensification of parole and outpatient addiction treatment services in the Step'n Out study. *Journal of Experimental Criminology*, 5(3), 227–243. 10.1007/s11292-009-9079-3 [PubMed: 19960114]
- Friedmann S, & Wagner-Goldstein K (2015). Medication-assisted treatment in drug courts: Recommended strategies (p. 72). Legal Action Center & Center for Court Innovation.
- Gallagher JR, Marlowe DB, & Minasian RM (2019b). Participant perspectives on medication-assisted treatment for opioid use disorders in drug court. *Journal for Advancing Justice*, 2, 39–54.
- Gallagher JR, Nordberg A, Francis Z, Menon P, Canada M, & Minasian RM (2021). A Focus Group Analysis with a Drug Court Team: Opioid Use Disorders and the Role of Medication-Assisted Treatment (MAT) in Programming. *Journal of Social Work Practice in the Addictions*, 21(2), 139–148. 10.1080/1533256X.2021.1912964
- Gallagher JR, Wahler EA, Lefebvre E, Paiano T, Carlton J, & Woodward MJ (2018). Improving graduation rates in drug court through employment and schooling opportunities and medication-assisted treatment (MAT). *Journal of Social Service Research*, 44(3), 343–349. 10.1080/01488376.2018.1472173
- Gallagher JR, Wahler EA, Minasian RM, & Edwards A (2019a). Treating opioid use disorders in drug court: participants' views on using medication-assisted treatments (MATs) to support recovery. *International Criminal Justice Review*, 29(3), 249–261. 10.1177/1057567719846227
- Garcia CA, Correa GC, Viver ADH, Kinlock TW, Gordon MS, Avila CA, Reyes IC, & Schwartz RP (2007). Buprenorphine-naloxone treatment for pre-release opioid-dependent inmates in Puerto Rico. *Journal of Addiction Medicine*, 1(3), 126–132. 10.1097/adm.0b013e31814b8880 [PubMed: 21768947]
- Gordon MS, Kinlock TW, Schwartz RP, Fitzgerald TT, O'Grady KE, & Vocci FJ (2014). A randomized controlled trial of prison-initiated buprenorphine: prison outcomes and community treatment entry. *Drug and Alcohol Dependence*, 142, 33–40. 10.1016/j.drugalcdep.2014.05.011 [PubMed: 24962326]
- Gordon MS, Kinlock TW, Schwartz RP, & O'Grady KE (2008). A randomized clinical trial of methadone maintenance for prisoners: findings at 6 months post-release. *Addiction*, 103(8), 1333–1342. 10.1111/j.1360-0443.2008.002238.x [PubMed: 18855822]
- Gordon MS, Kinlock TW, Schwartz RP, O'Grady KE, Fitzgerald TT, & Vocci FJ (2017). A randomized clinical trial of buprenorphine for prisoners: findings at 12-months post-release. *Drug and Alcohol Dependence*, 172, 34–42. 10.1016/j.drugalcdep.2016.11.037 [PubMed: 28107680]
- Grogan CM, Andrews C, Abraham A, Humphreys K, Pollack HA, Smith BT, & Friedmann PD (2016). Survey Highlights Differences In Medicaid Coverage For Substance Use Treatment And Opioid Use Disorder Medications. *Health Affairs (Project Hope)*, 35(12), 2289–2296. 10.1377/hlthaff.2016.0623 [PubMed: 27920318]
- Heinrich CJ, & Hill CJ (2007). Role of state policies in the adoption of naltrexone for substance abuse treatment: role of state policies in the adoption of naltrexone. *Health Services Research*, 43(3), 951–970. 10.1111/j.1475-6773.2007.00812.x
- Johnson BA (2008). Update on neuropharmacological treatments for alcoholism: Scientific basis and clinical findings. *Biochemical Pharmacology*, 75(1), 34–56. 10.1016/j.bcp.2007.08.005 [PubMed: 17880925]

- Kaiser KA, & Holtfreter K (2016). An integrated theory of specialized court programs: using procedural justice and therapeutic jurisprudence to promote offender compliance and rehabilitation. *Criminal Justice and Behavior*, 43(1), 45–62. 10.1177/0093854815609642
- Kaiser Family Foundation (2021). Status of state medicaid expansion decisions: interactive map. Retrieved From <https://www.kff.org/medicaid/issue-brief/status-of-state-medic-aid-expansion-decisions-interactive-map/>
- Kaiser KA, & Rhodes K (2019). A drug court by any other name? An analysis of problem-solving court programs. *Law and Human Behavior*, 43(3), 278–289. 10.1037/lhb0000325 [PubMed: 30920235]
- Kearley B, & Gottfredson D (2020). Long term effects of drug court participation: Evidence from a 15-year follow-up of a randomized controlled trial. *Journal of Experimental Criminology*, 16(1), 27–47. 10.1007/s11292-019-09382-1
- Kinlock TW, Gordon MS, Schwartz RP, Fitzgerald TT, & O’Grady KE (2009). A randomized clinical trial of methadone maintenance for prisoners: results at twelve-months post-release. *Journal of Substance Abuse Treatment*, 37(3), 277–285. 10.1016/j.jsat.2009.03.002 [PubMed: 19339140]
- Knight DK, Belenko S, & Wiley T 2016. Juvenile Justice-Translational Research on Interventions for Adolescents in the Legal System (JJ-TRIALS): a cluster randomized trial targeting system-wide improvement in substance use services. *Implement Sci.*;1129:57. Published 2016 Apr, doi:10.1186/s13012-016-0423-5
- Kresina T. (2007). Medication assisted treatment of drug abuse and dependence: global availability and utilization. *Recent Patents on Anti-infective Drug Discovery*, 2(1), 79–86. 10.2174/157489107779561652 [PubMed: 18221165]
- Kresina T, Litwin A, Marion I, Lubran R, & Clark H (2009). United States Government Oversight and Regulation of Medication Assisted Treatment for the Treatment of Opioid Dependence. *Journal of Drug Policy Analysis*, 2(1). 10.2202/1941-2851.1007
- Kresina TF, & Lubran R (2011). Improving public health through access to and utilization of medication assisted treatment. *International Journal of Environmental Research and Public Health*, 8(10), 4102–4117. 10.3390/ijerph8104102 [PubMed: 22073031]
- Lee JD, Friedmann PD, Kinlock TW, Nunes EV, Boney TY, HoskinsonWilson RAD Jr., McDonald R, Rotrosen J, Gourevitch MN, Gordon M, Fishman M, Chen DT, Bonnie RJ, Cornish JW, Murphy SM, & O’Brien CP (2016). Extended-Release Naltrexone to Prevent Opioid Relapse in Criminal Justice Offenders. *The New England journal of medicine*, 374(13). 1232–1242. 10.1056/NEJMoa1505409 [PubMed: 27028913]
- Littell RC, Milliken GA, Stroup WW, Wolfinger RD, & Schabenberger O (2006). *SAS for Mixed Models*. SAS Institute.
- National Academies of Sciences (2019). Engineering, and medicine; health and medicine division; board on health sciences policy; committee on medication-assisted treatment for opioid use disorder. In Mancher M., & Leshner AI (Eds), *Medications for Opioid Use Disorder Save Lives*. Washington DC: National Academies Press (US). Available from: <https://www.ncbi.nlm.nih.gov/books/NBK541390/>
- Marlowe D, Hardin C, & Fox C (2016). Painting the current picture: A national report on drug courts and other problem-solving courts in the United States (p. 88). National Drug Court Institute.
- Matusow H, Dickman SL, Rich JD, Fong C, Dumont DM, Hardin C, Marlowe D, & Rosenblum A (2013). Medication assisted treatment in US drug courts: Results from a nationwide survey of availability, barriers and attitudes. *Journal of Substance Abuse Treatment*, 44(5), 473–480. 10.1016/j.jsat.2012.10.004 [PubMed: 23217610]
- Miller MK (2020). A qualitative analysis and eleven-factor typology of hypothesized factors encouraging or discouraging the development of problem solving courts in various countries. *Journal of Experimental Criminology*, 16(1), 79–100. 10.1007/s11292-019-09368-z
- Mitchell O, Wilson DB, Eggers A, & MacKenzie DL (2012). Assessing the effectiveness of drug courts on recidivism: A meta-analytic review of traditional and non-traditional drug courts. *Journal of Criminal Justice*, 40(1), 60–71. 10.1016/j.jcrimjus.2011.11.009
- Mollmann M, & Mehta C (2017). Neither justice nor treatment: Drug courts in the United States. *Physicians for human rights*.

- National Rural Health Association Policy Brief (2016). Treating the rural opioid epidemic.
- Office of National Drug Control Policy (2018). The white house. Retrieved from <https://www.whitehouse.gov/ondcp/>
- Raudenbush SW, & Bryk AS (2001). Hierarchical linear models: Applications and data analysis methods (advanced quantitative techniques in the social Sciences) (2nd ed.). Sage Publications.
- Richard EL, Schalkoff CA, Piscalko HM, Brook DL, Sibley AL, Lancaster KE, Miller WC, & Go VF (2020). You are not clean until you're not on anything": Perceptions of medication-assisted treatment in rural Appalachia. *International Journal of Drug Policy*, 85, 102704. 10.1016/j.drugpo.2020.102704 [PubMed: 32173274]
- Rich JD, McKenzie M, Larney S, Wong JB, Tran L, Clarke J, Noska A, Reddy M, & Zaller N (2015). Methadone continuation versus forced withdrawal on incarceration in a combined US prison and jail: a randomised, open-label trial. *Lancet*, 386(9991), 350–359. 10.1016/s0140-6736(14)62338-2 [PubMed: 26028120]
- Rigg KK, Monnat SM, & Chavez MN (2018). Opioid-related mortality in rural America: Geographic heterogeneity and intervention strategies. *International Journal of Drug Policy*, 57, 119–129. 10.1016/j.drugpo.2018.04.011 [PubMed: 29754032]
- Roman JK, Yahner J, & Zweig J (2020). How do drug courts work? *Journal of Experimental Criminology*, 16(1), 1–25. 10.1007/s11292-020-09421-2
- Rossen LM, Bastian B, Warner M, Khan D, & Chong Y (2020). Drug poisoning mortality: United States, 1999–2018. National Center for Health Statistics. <https://www.cdc.gov/nchs/data-visualization/drug-poisoning-mortality/>
- Saloner B, Levin J, Chang H, Jones C, & Alexander GC (2018). Changes in Buprenorphine-Naloxone and Opioid Pain Reliever Prescriptions After the Affordable Care Act Medicaid Expansion. *JAMA Network Open*, 1(4), Article e181588. 10.1001/jamanetworkopen.2018.1588 [PubMed: 30646116]
- SAMHSA (2015). Methadone take-home flexibilities extension guidance. Retrieved from <https://www.samhsa.gov/medication-assisted-treatment/statutes-regulations-guidelines/methadone-guidance>
- SAMHSA (2020b). Tip 63: Medications for opioid use disorder—full document. <https://store.samhsa.gov/product/TIP-63-Medications-for-Opioid-Use-Disorder-Full-Document/PEP20-02-01-006>
- SAMHSA (2022). Methadone take-home flexibilities extension guidance. <https://www.samhsa.gov/medication-assisted-treatment/statutes-regulations-guidelines/methadone-guidance>
- SAMSHA (2020a). Medication and counseling treatment. Retrieved from <https://www.samhsa.gov/medication-assisted-treatment/treatment>
- Schwartz RP, Kelly SM, O'Grady KE, Gandhi D, & Jaffe JH (2012). Randomized trial of standard methadone treatment compared to initiating methadone without counseling: 12-month findings. *Addiction*, 107(5), 943–952. [PubMed: 22029398]
- Shaffer DK (2011). Looking inside the black box of drug courts: A meta-analytic review. *Justice Quarterly* (28, pp. 493–521). SPSS Inc. Version 6.14. Chicago (IL).
- Stroup Walter W. (1999). *Generalized Linear Mixed Models: Modern Concepts, Methods and Applications*. CRC Press.
- Taxman FS (2014). Building effective service delivery mechanisms for justice-involved individuals: An under-researched area. *Health & Justice*, 2(1), 2. 10.1186/2194-7899-2-2
- Taxman FS (2018). The Partially Clothed Emperor: Evidence-Based Practices. *Journal of Contemporary Criminal Justice*, 34(1), 97–114. 10.1177/1043986217750444
- Tierney M, Toretzky C, Chapman S, & Phoenix B (2019). Many nurse practitioners cannot provide medications to treat opioid addiction. UC San Francisco. Retrieved from <https://www.ucsf.edu/news/2019/04/413856/many-nurse-practitioners-cannot-provide-medications-treat-opioid-addiction>
- U.S. Department of Justice and National Association of Drug Court Professionals (1997). Defining drug courts: The key components. <https://www.ojp.gov/pdffiles1/bja/205621.pdf>
- Venkataramani AS, & Chatterjee P (2019). Early medicaid expansions and drug overdose mortality in the USA: a quasi-experimental analysis. *Journal of General Internal Medicine*, 34, 23–25. 10.1007/s11606-018-4664-7 [PubMed: 30238403]

Table 1.

Variables used in GLMM Models.

Predictors	Court Offers MAT	Number of Court Participants Receiving MAT
	Level	Level
Medicaid expansion state (Yes = 1; 0 = No)	State (3)	State (3)
State mandates the types of treatment programs and services used (1 = Yes; 0 = No)	State (3)	n/a
State mandates MAT training for court staff (1 = Yes; 0 = No)	n/a	State (3)
State mandates eligibility criteria to admit participants to PSC (1 = Yes; 0 = No)	n/a	State (3)
Percent of population that is opioid dependent	County (2)	County (2)
Drug overdose mortality rate (deaths/100k pop)	County (2)	County (2)
Buprenorphine patient capacity (patient limit/1k pop)	County (2)	n/a
Methadone providers (providers/100k pop.)	County (2)	n/a
Naltrexone providers (providers/100k pop.)	County (2)	n/a
PSC type (substance use = 1; other = 0)	Court (1)	Court (1)
There is a perception in the court that MAT is “just substituting one drug for another” ^a	Court (1)	n/a
“Most participants in our court are not interested in MAT services” ^a	Court (1)	n/a
PSC participants are given a choice over which MAT to receive ^b	n/a	Court (1)

n/a refers to *not applicable*, denoting variables that were not included in that particular model.

Note. See Table A3 in the Appendix for additional information on these variables.

^a(1—4; Strongly Disagree, Disagree, Agree, Strongly Agree).

^b(1—4; Never, Sometimes, Frequently, Always).

Table 2.Descriptive Statistics for Main Study Variables. State surveys ($n = 42$) Local surveys ($n = 849$).

	State Survey		Local Survey	
	n	% or Mean	n	% or Mean
Variables (indicates % able to answer this question)	—			
Mean number of courts in state (100%)	42	67	n/a	n/a
Mean number of PSC participants (60%, 70%)	26	2,658	587	77
Mean time to PSC graduation (100% both groups)	—			
under 20 months	n/a	n/a	668	63%
over 20 months	n/a	n/a	668	37%
Mean number of courts offering MAT	n/a	n/a	568	86%
Court offers buprenorphine	n/a	n/a	428	50%
Court offers methadone	n/a	n/a	306	36%
Court offers naltrexone	n/a	n/a	479	56%
Mean PSC graduation rate	n/a	n/a	535	41%
Medicaid expansion state	43	72%	849	62%
Court types coordinated	—			
Adult drug	42	98%	849	37%
Mental health	42	93%	849	6%
Veteran's treatment	42	93%	849	5%
Family dependency	42	86%	849	7%
DUI/DWI	42	84%	849	5%
Coordinated multiple types of courts	n/a	n/a	849	40%
Sources of funding for operational costs	—			
Federal	41	70%	n/a	n/a
State	41	91%	n/a	n/a
Local	41	72%	n/a	n/a
Participant fees	41	67%	n/a	n/a
Other (i.e., foundation money and 501(c) (3)) incentives)	41	9%	n/a	n/a
Staffing of PSC	—			
Average size	n/a	n/a	644	11
Average participants to staff ratio (64%)	n/a	n/a	553	8:1
Average length in position	—			
3 years or less	n/a	n/a	815	39%
4 or more years	n/a	n/a	815	61%
Characteristics of PSC participants (50%, 50%)	—			
White	14	76%	419	79%
Men	14	66%	446	63%
Non-hispanic or latino	12	85%	326	91%

Note. Sample size reflects the number of available cases from the full sample of 849.

Table 3.

Chi-Square Test Results For Availability Of MAT By Medicaid Expansion States.

	Medicaid Expansion State		
	Yes	No	<i>n</i>
Dependent variables	—		
Buprenorphine/Naloxone film strips	70% [*]	30%	520
Buprenorphine injections	73% ^{**}	27%	520
Buprenorphine pills	70% [*]	30%	520
Disulfiram/Antabuse	78% ^{***}	22%	520
Methadone	71% ^{**}	29%	520
Naltrexone/Vivitrol	67%	33%	520

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

Table 4.

Regression Results for Courts Authorizing Different Types of MAT.

Outcome	Predictor	Level	<i>b</i>	Odds Ratio	<i>SE</i>	<i>z</i>	<i>p</i>
Court offers buprenorphine <i>n</i> = 509 courts	Intercept	—	1.80	—	0.45	4.03	<0.001
	MAT substitutes one drug for another	Court	-0.77	0.46	0.16	-4.97	<0.001
	Buprenorphine patient capacity/1k	County	0.081	1.08	0.019	4.20	<0.001
	Medicaid expansion	State	0.70	2.01	0.27	2.62	<0.01
Court offers methadone <i>n</i> = 509 courts	Intercept	—	0.85	—	0.42	2.01	0.045
	Court type	Court	-0.051	0.95	0.26	-0.20	0.84
	MAT substitutes one drug for another	Court	-0.61	0.54	0.14	-4.48	<0.001
	Methadone providers/100k	County	0.50	1.65	0.16	3.17	<0.01
	Medicaid expansion	State	1.05	2.86	0.29	3.62	<0.001
	State mandates types of services	State	-0.55	0.58	0.26	-2.08	0.038
Court offers naltrexone <i>n</i> = 509 courts	Intercept	—	1.38	—	0.56	2.45	0.014
	Court type	Court	0.60	1.83	0.30	2.00	0.045
	MAT substitutes one drug for another	Court	-0.33	0.72	0.15	-2.15	0.031
	Naltrexone providers/100k	County	0.16	1.17	0.055	2.91	<0.01
	Medicaid expansion	State	0.50	1.65	0.39	1.28	0.20
	State mandates types of services	State	-0.68	0.51	0.37	-1.84	0.066

Table 5.

Regression Results for MAT Utilization Among Courts that Authorize MAT.

Outcome	Predictor	Level	<i>b</i>	Incidence Rate Ratio	<i>SE</i>	<i>z</i>	<i>p</i>
Number of participants receiving MAT <i>n</i> = 291 courts	Intercept	—	-3.08	—	0.34	-9.19	<0.001
	Court type	Court	0.037	1.04	0.11	0.34	0.73
	Offer MAT choice	Court	0.28	1.33	0.054	5.26	<0.001
	Drug overdose mortality rate/100k	County	0.020	1.02	0.01	2.82	<0.01
	Medicaid expansion	State	0.21	1.24	0.25	0.85	0.40
	State mandates eligibility criteria	State	-0.68	0.51	0.23	-2.90	<0.01

Author Manuscript

Author Manuscript

Author Manuscript

Author Manuscript