Drug Court Review

Winter 2025

National Treatment Court Resource Center

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National Treatment Court Resource Center
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The *Drug Court Review* is an open-access, peer-reviewed, scholarly journal that builds a bridge between law, science, and clinical communities. Published annually by the National Treatment Court Resource Center (NTCRC), the *Drug Court Review* seeks to disseminate scientific and scholarly research in such a way that a wide range of stakeholders (i.e., treatment court practitioners, policymakers, funders, researchers, etc.) can translate the information into practice. Additional information regarding the Advisory Board can be found at ntcrc.org/advisory-board/.

Each volume of the *Drug Court Review* may feature manuscripts that fall into one of three areas below.

1. **Research in the field:** full-length, scholarly monographs featuring the results of original research studies conducted by the author(s). Researchers are encouraged to use both quantitative and qualitative data, as well as discuss how the study findings can be translated into practice by readers.
2. **Research spotlight**: overviews of articles focusing on treatment courts that were published in another peer-reviewed journal. The focus of all research spotlights will be on the major findings and implications for research, policy, practice, etc.
3. **Expert commentary:** overview of what we know about a specific topic relevant to treatment courts. The focus of expert commentary pieces will be on what we know and what we still need to know, with the hope that readers will take up these research questions in future studies.

Acknowledgements

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Contents

Introduction

Drug Court Review is pleased to publish two articles that comprise the Winter 2025 volume, which offer our readers a chance to think about treatment courts from multiple perspectives.

The first article, *Examining an Opioid Court for Felony Probationers,* by Christine Saum, Kimberly Houser, and Matthew Hiller presents findings from a study of retention and graduation rates in one opioid court. With only 36 Opioid Treatment Courts operating across five states (NTCRC https://ntcrc.org/maps/), there is a relative dearth of existing research regarding how these courts operate, and their potential impacts on outcomes of interest. Their work takes us some steps closer to identifying important contributions that the opioid court model makes to the field.

The second article is an Expert Commentary by Elizabeth Hartsell, *Applying Systems Theory to Drug Courts: Advancing the Drug Court Research Agenda.* Many readers may not be familiar with systems theory as a means of providing context to the detailed work treatment court practitioners do every day. The author provides a macro-level view of how drug courts, a system of their own, operate within the larger justice system. Using a Systems Improvement Solutions approach, Dr. Hartsell explains how treatment court research, practice, and policy can function at their best.

These articles remind us that the field is best served when we seek knowledge at both the micro (e.g., individual program) AND macro (systems) levels and seek to translate that knowledge into practice.

Disseminate. Collaborate.

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EXPERT COMMENTARY

Drug Court Review: Winter 2025

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Applying Systems Theory to Drug Courts: Advancing the Drug Court Research Agenda

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The application of systems theory to criminal justice is not new. However, its explicit application to drug courts is novel. The drug court literature has historically suffered from a lack of theorizing and theory testing. Situating drug courts within the larger criminal justice system can help academics and practitioners understand what is going on outside of drug court, how it has important implications inside drug courts, and ultimately can help us better understand how and why drug courts may work for some participants and not others and why some drug courts may be more successful than others. This paper is a thought exercise that applies Mears (2017) systems theory to drug courts and sets forth directional hypotheses as part of a new drug court research agenda.

Key words: drug court theory, systems theory, drugs, treatment, rehabilitation

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Systems Theory in Criminal Justice.

Bernard (2005) applies general systems theory to criminal justice by articulating nine reasons that it can be called a system. For example, there are inputs and outputs from each part (i.e., police, courts, corrections) which create pressure on other parts (Bernard, 2005). Mears (2017) uses systems theory to propose criminal justice reform that focuses not on individual behavior, but on system monitoring and continuous improvement. He does this by analyzing the criminal justice systems context ("crime, laws and politics, resources, public views, competing policy priorities"), its sub-systems ("police, courts, probation/parole, jails/prisons"), its goals ("public safety, justice, accountability, efficiency"), and its dynamics ("design, stocks and inflows/outflows, inputs/outputs, capacity, causal relationships") (Mears, 2017 p. 95 for figure). In this model, drug courts can be seen as a sub-system of the court sub-system. Mears (2017) writes that "subsystems warrant attention in their own right" and that "efforts to improve subsystems require description and understanding of these subsystems" (p. 101). This paper answers that call. This thought exercise can help us understand *why* and *how* some programs thrive, and others may struggle. The process may help us get inside of the drug court 'black box' problem (Goldkamp et al., 2001a; Logan & Link, 2019; Marlowe et al., 2005). Mears (2017) systems improvement solution (SIS) can help us break through some of the barriers to studying and implementing drug courts.

What are Drug Courts?

Drug courts were created to address the increase in volume of low-level drug related arrests (Finn & Newlyn, 1993). They operate differently from a traditional courtroom by adhering to key principles of providing mental and physical healthcare, substance use treatment, housing, and job assistance (All Rise, 2023). They also use sanctions and incentives to motivate behavior change and monitor compliance with drug screens and court appearances (All Rise, 2023). Courts proliferated quickly (Ahlin & Douds, 2019) and as of 2022 there are over 4,000 in operation (NTCRC.org, 2022). There are also national best practices that guide their operation (All Rise, 2023) written by All Rise (allrise.org). Best practices include guidance on when and how to sanction, incentivize, and drug test participants, about the use of community support services, and 12-step meeting requirements. Best practices are a guide for operations, so they helped to shape the theoretical application and analysis below.

Existing Drug Court Theories and Frameworks.

Drug courts originated without a defined theory (Ahlin & Douds, 2019; Fulkerson, 2009, see Goldkamp et al., 2001a) but authors have expanded and/or applied existing theories to include them (e.g., Fulkerson, 2009; Marlowe et al., 2005; Messer et al., 2016). Other scholars have proposed therapeutic jurisprudence (Hora, et al., 1999; Senjo & Leip, 2001) and procedural justice (Atkin-Plunk & Armstrong, 2016; Dollar et al, 2018; Gottfredson et al., 2007; Kaiser & Holtfreter, 2016) as possible mechanisms behind their function. However, because the focus of the literature has primarily been on individuals, not on drug court effectiveness as influenced by the larger criminal justice and treatment systems, we may be missing a broader picture of why some *individuals* and some *courts* are more (or less)

successful (i.e., what is inside the black box, as influenced by what goes on outside the black box). Nearly 25 years ago, Goldkamp (2000) asked how drug courts would "impact the larger criminal caseload and on the court, justice, and health system resources (p. 958)." By applying systems theory to drug courts, we can help address this decades old question.

All Rise, a non-profit who provides key resources, training, and leads drug court practitioners across the country, does articulate best practices (2025) for drug courts to voluntarily follow. However, these do not necessarily meet the definition of a theory. A theory is a set of logically consistent, parsimonious generalizations that can be tested (Akers, Sellers, & Jennings, 2021). All Rise's best practice document takes more of a 'kitchen sink' approach whereby there are dozens of prescriptive things that courts 'should' do which are sometimes cited as having empirical backing. This is not a value judgement on the best practices document, rather, I aim to point out that it is not a testable theory of functioning according to the definition of a criminological theory. Another challenge with using the best practices standards as "theory" is that most courts are not required to adhere to those standards. Florida is currently piloting a system to audit drug courts for meeting best practices (Florida Supreme Court Order No. AOSC23-89), but other states currently have no oversight mechanisms (e.g., Texas). Meaning, in practice, courts may be calling themselves a drug court without adhering to best practices, or at least, adhering to an unknown number of them and with unknown quality. In practice, best practices do not represent a uniform theory of why and how drug courts work, rather, they are a list of helpful 'to do's' for practitioners when they need guidance about how to implement a program or how to respond to certain challenges (e.g., participant non-compliance, medical marijuana use, mental health treatment). Finally, the best practices document is changing rapidly, particularly in 2025 where there have already been several versions released. Some of these changes may represent practice recommendations in response to new peer reviewed research, but other changes may not. For example, the recent removal of all references and practices related to diversity, equity, and inclusion (DEI) and racial disparities in the criminal justice system, per federal directive, is not in line with majority of peer reviewed research. Criminological and program theories do evolve over time whereby researchers may update them in response to new evidence; however, it appears this is not the reason DEI sections were removed in this case.

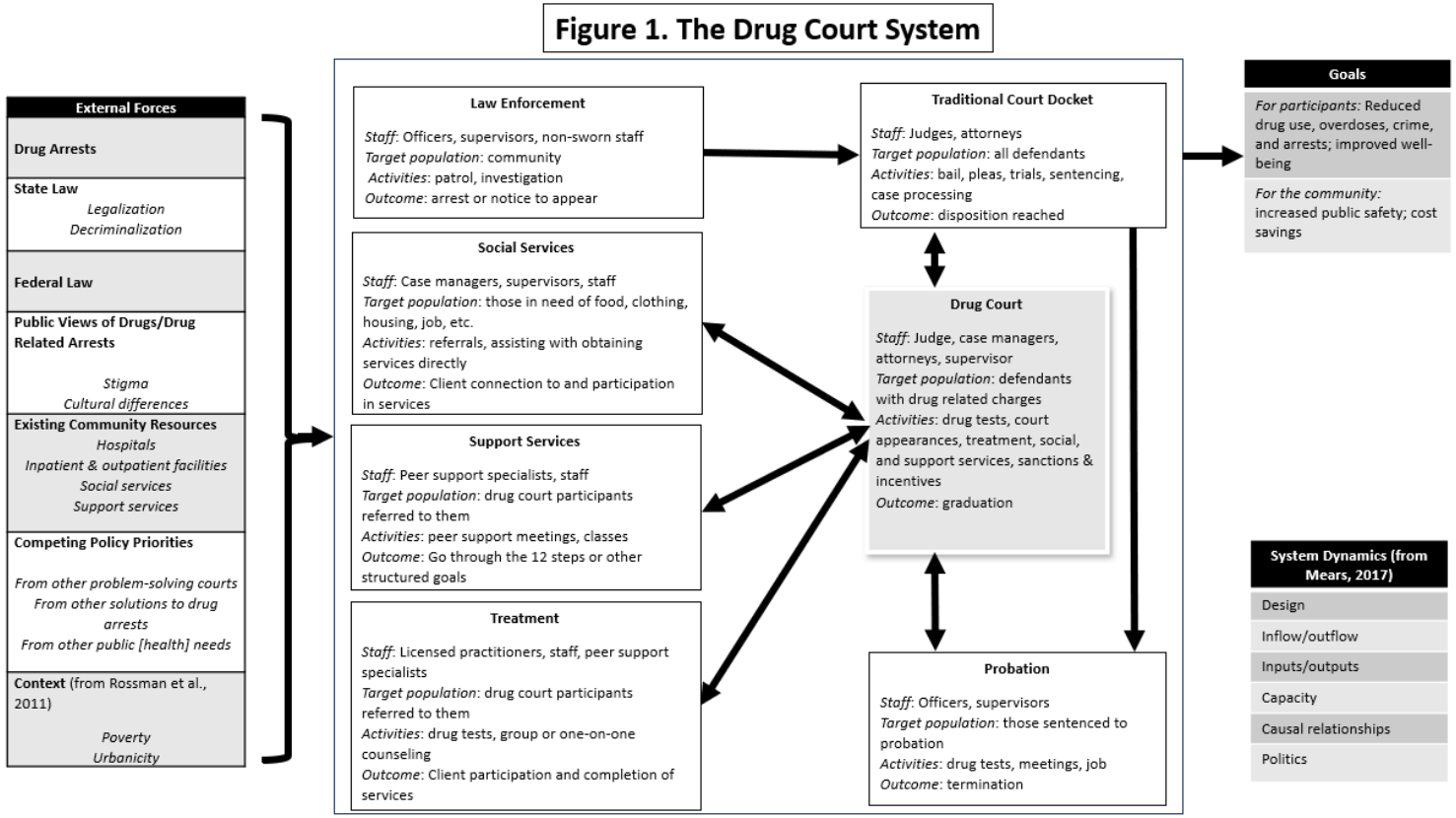
As noted by Akers, Sellers, and Jennings (2021) there are more criminological theories that try to understand why people engage in crime than theories of the criminal justice system itself. The present focus is on the latter of these two modes of theorizing. I aim to illustrate how systems theory should be incorporated when considering how and why drug courts may or may not work for some individuals and for some jurisdictions. Much of the drug court literature is centered around program evaluation and tries to answer the question of "do drug courts work to reduce drug use and/or recidivism?" However, "if there is no adequate specification of the program impact theory, an impact evaluation may be able to determine whether certain outcomes were produced [in our case determine drug use or recidivism outcomes] …, but it will be difficult to explain why or – often more important- why not" (Rossi et al., 2019, p. 87). This is why scholars have long indicated drug courts have a black box problem (that is, our lack of understanding about how and why exactly

they appear work for some but not others and why some programs are more successful than others) (Goldkamp et al., 2001a; Logan & Link, 2019; Marlowe et al., 2005).

Relevance to Researchers and Practitioners.

Because prior drug court theory does not take a systems approach, the field may be overlooking important context. I do not propose we dismiss or discount other theories, rather we work to incorporate a systems perspective into drug court theory development and practice. This will allow us to consider how context- e.g., neighborhoods, the economy, political structures- can impact courts. Theory and research tell us that higher levels of aggregation matter (Sampson, Raudenbush, & Earls, 1997; Shaw & McKay, 1942) and systems theory is a way to integrate the individual level with the larger context that individuals and programs operate in. As Logan and Link (2019) indicate, more drug court theory development is needed because it will help us to, "establish a clearer and more nuanced model that can explain why the intervention works for some people in some places and under some conditions (p. 292)" which would be helpful for practitioners who are looking to implement new programs or expand existing ones. Theory can allow researchers and practitioners to create more sound program plans and structures and allow for more rigorous evaluations and testing of effectiveness (see Akers, Sellers & Jennings, 2021). Particularly relevant for practitioners who have limited financial and time resources, if we can better determine what are 'key' drug court ingredients and what are 'cherries on top', strained resources can be allocated to target essential elements with evidenced based support. Using a systems theory approach can also allow practitioners to increase program fidelity by adhering to 'what works' via implementation of a systems improvement solution (Mears, 2017) through improved data collection, increased oversight, required training, and implementation of evidence-based practices.

Figure 1. The Drug Court System



Note: This figure is modeled after Mears (2017) figure depicting the entire criminal justice system.

Application of Systems Theory to Drug Courts

First, I establish how drug courts are a system and elaborate on external factors that may impact them. Next, I assess sub-systems, their dynamics, and goals. Finally, I discuss how Mear's systems improvement solution (SIS) may be a fruitful direction for research and practice. Figure 1 is a simplification of the drug court system (DCS) because various courts operate differently (Logan & Link, 2019). However, because there is a unifying format (see ADCBPS Vol. 2, 2018; All Rise, 2023), generalizations can be made. Figures 2-4 indicate hypotheses.

Drug courts are themselves a system.

They contain the four parts of a system, have specific goals, and their own structure with multiple sub-systems (All Rise, 2023; Bouffard & Taxman, 2004; Mears, 2017; Taxman & Bouffard, 2002). External forces that Mears (2017) describes as impacting the justice system broadly, also impact the DCS and they must also reckon with broader system dynamics. Each of these is discussed further below and illustrated in Figures 1-4. I do not propose that this is all relationships that may exist, but that this is a start to push theory and research forward. This exercise does not hypothesize about why people engage in crime (see Kraska, 2006). It is focused on how systems and sub-systems operate and the external forces and system dynamics that impact their function.

External forces impact courts.

Different jurisdictions vary with respect to *what* external forces impact a DCS and the relative *strength* of those forces (Figure 2). The impetus for drug court creation was the increased volume of low-level drug arrests (Finn & Newlyn, 1993) and arrests will continue to impact the DCS in this manner (Figure 2 hypothesis 1). However, more recent research has indicated the opposite directional relationship between arrests and drug courts, such that, when drug courts are created, more drug arrests follow (Lilley, 2017, see hypothesis 1a). More research is needed to understand which direction(s) the relationship is operating in and what feedback loops may exist, but clearly external forces (e.g., police inputs) are impacting the DCS. Prior research also indicates that drug arrests are not evenly distributed across the population (Mitchell & Caudy, 2015; Tiger, 2018) and drug use rates themselves can change over time (Miech et al., 2023). These variations should be considered in longitudinal systems analysis (see Goldkamp et al., 2001b; hypothesis 1b). I also hypothesize that existing community resources will play a major role as an external force on the DCS (hypothesis 1c). Drug courts rely heavily on community treatment and social services as key resources (see All Rise, 2023 Best Practice Standards V & VI). Prior research indicates that the capacity, capabilities, and relationships with local hospitals, in-and-out-patient treatment facilities, social services, and support services are critical to drug court success (Bouffard & Taxman, 2004; Rossman et al., 2011b; Taxman & Bouffard, 2002; Taxman & Bouffard, 2005), thus these resources are a key feature of the systems model. This prior research also acknowledges that there is a wide variety of the types of community-based treatment provided to participants (Bouffard & Taxman, 2004) which may also contribute to heterogeneity in drug court outcomes (see

Taxman & Bouffard, 2005). For example, rural and urban drug courts may have varying degrees of access to hospitals and treatment providers because of their location (Browne et al., 2016; Warner & Leukefeld, 2001) which could impact the program, positively or negatively, through no fault of their own. Hypothesis 1c indicates that upon initial creation of drug courts in a community, these services will experience increased demand, leading to a temporary under resourcing problem but that over time, services will be expanded to meet the increased need.

Figure 2. External Factors and the DCS Dynamics

1. More drug arrests = more reliance on the DCS and more robust DCS[1].
    a. Alternatively, the presence of drug courts = increased drug arrests (Lilley, 2017) (net-widening, Gross, 2010; Tiger, 2018)
    b. Relationships between drug use, arrests, and the DCS change over time (Goldkamp et al., 2001b).
    c. In places where there are more drug arrests, treatment, support, and social services are overwhelmed and under resourced initially, then are expanded due to increased need.
2. In states with more punitive drug laws, the rationale for using the DCS is social control (see Tiger, 2018). In states that have more lenient drug laws, their rationale is rehabilitation. Irregardless of rationale, the DCS can meet its goals.
    a. Alternatively, goals may not be reached if legitimacy is decreased and procedural justice declines (see Walters & Bolger, 2019).
3. Increased stigma = more arrests and increased DCS reliance (indirect effect) (see Kennedy-Hendricks et al., 2017; Sylvester et al., 2022).
    a. Decreased stigma could also lead to more DCS participation because more defendants may be willing to admit they have a drug problem and get help via the DCS (see Kennedy-Hendricks et al., 2017; Sylvester et al., 2022).
        i. There could be a tipping point with stigma, where these indirect effects do not happen until a tipping point of stigmatization is reached.
    b. Alternatively, increased stigma = more arrests but not more DCS participation if the jurisdiction has a more punitive approach.
4. More competing policy priorities = less reliance on the DCS (Mears, 2017).
5. Urban jurisdictions have more transportation, treatment, support, and social services = increased DCS use (see Bouffard & Smith, 2005).
    a. In jurisdictions with more poverty, the DCS will struggle to meet evidence-based practices related to providing services.

State and federal law are also important external forces because depending on the jurisdiction, these may conflict. Federal law classifies all illicit drug use as a crime (DEA, 2018) but some states allow medical and/or recreational use of marijuana (NCSL.org) and Oregon decriminalized possession of some other drugs (oregon.gov). This interplay of federal, state, and local jurisdictional conflict (or consensus) will impact the DCS because different motives may underly its use (hypothesis 2). Some jurisdictions may use the DCS as social control/

1 That is, a drug court who meets most evidence-based practices. Including, but not limited to, having strong partnerships to community resources, treatment providers, and social services, a non-adversarial nature, a well-trained and active team structure, and who appropriately administers sanctions and incentives.

punishment for the most marginalized communities (O'Hear, 2011; Kohler-Hausmann, 2018; Tiger, 2013) and other jurisdictions could use the DCS as rehabilitation/therapy (Hora et al., 1999; Senjo & Leip, 2001) (Figure 2 hypothesis 2). If more people are participating in drug courts, regardless of the motivation for their creation, drug courts will be more likely to meet their goals. However, because research also indicates that if legitimacy and procedural justice perceptions decline then law-breaking behavior and deviance may increase (Walters & Bolger, 2019), there could be a criminogenic effect of intervention if courts are not careful to maintain procedural justice and fairness. Individual systems analyses should occur to test these hypotheses which will allow us to understand why and how motivations may impact procedural justice, legitimacy, and ultimately participant outcomes.

Next, public perception and stigma surrounding drug use will impact the DCS (hypothesis 3). There is a stigma associated with drug use (Kulesza et al., 2013) which can impact public policy opinions (Kennedy-Hendricks et al., 2017; Sylvester et al., 2022). For example, those with more stigmatized perceptions of opioid use disorder favored punitive policies (i.e., use of the CJS) over rehabilitation-oriented policies (i.e., healthcare responses) (Kennedy-Hendricks et al., 2017). Public opinion/stigma of substance use will impact the DCS because policymakers/advocates with low stigma towards substance use disorder will continue push for their creation and financial support. Alternatively, high stigma towards drug use could be so pervasive that it reduces use of the DCS, with policymakers favoring more punitive solutions (Kennedy-Hendricks et al., 2017; Sylvester et al., 2022). We also know that stigma attached to drug use and treatment is not universal; it can vary based on political affiliation, race and racial attitudes, and relationships (or lack of) with someone who uses illicit substances (Sylvester et al., 2022). Based on prior research, I hypothesize that individual DCS's will be impacted not only by the larger cultural context and stigma surrounding substance use disorder, but also by more specific, and possibly localized or individualized contexts, as some stakeholders may be more (or less) willing to embrace treatment based on their backgrounds and perceptions (Sylvester et al., 2022).

Competing policy priorities will also impact the DCS (hypothesis 4). A recent nationally representative Pew report indicates that drug use made the list of top concerns for Americans (Pew, 2023). However, drug courts are not the only policy solution to drug use, for example, there are community-based treatment and prevention programs in workplaces and schools (NIDA, 2023). These non-criminal justice solutions may compete with the DCS for buy-in and funding. There could also be competition within the problem-solving court space (Mears, 2010). For example, Veterans Treatment Courts may be easier to create public and policymaker support for due to the perceived worthiness of rehabilitation and specialized case processing for Veterans (Rowen, 2020) possibly leading to the support and creation of VTC's, but not drug courts.

Finally, the make-up of a jurisdiction matters, including poverty, urbanicity, and race (hypothesis 5). The considerations of poverty and urbanicity were incorporated from Rossman's drug court et al., (2011a) framework. These factors can impact transportation, availability and access to healthcare, treatment, social, and support services, jobs, housing, and involvement with the criminal justice system (see Duncan et al., 2017; Gustafson, 2009)

which are all important to the DCS reaching its goals (All Rise, 2023). If participants cannot get to appointments, cannot afford appointments, and/or do not have health insurance, compliance with drug court rules will be much more difficult. Race also matters. We know that poverty and criminal justice system involvement are not equally distributed in the US (Herring, Yarbrough, & Marie Alatorre, 2020; Kurlychek & Johnson, 2019). Black Americans are more likely to experience poverty and interact with all aspects of the criminal justice system (Baker, 2022; Mitchell & Caudy, 2015). There is also some evidence of race differences in drug court treatment such that Black participants are less likely to succeed (Gallagher, 2013; Shah et al., 2015; Shannon et al., 2016).

The DCS has multiple sub-systems.

The DCS includes police, traditional courts, treatment, support, and social services, and probation. Jurisdictional organization varies in the U.S. (Gest, 2018) and based on the external forces, target populations, activities, and goals, sub-system members could vary in local jurisdictions. Law enforcement provides inputs for court dockets but the process to become a drug court participant varies by jurisdiction. Participation is encouraged to be voluntary (All Rise, 2023) and is in most cases (Cooper, 2002) but acceptance to a program depends on the current charge type, criminal history, and typically requires having a substance use disorder and/or admitting use (All Rise, 2023; Cooper, 2002). This voluntary nature and admittance based on charge type and criminal history leads to inherent self-selection and removal those applicants with more serious charges and criminal histories. All Rise best practices and evidence-based practices at large highlight the need to focus on high-risk high-need participants (All Rise, 2023). However, because state statutes commonly limit participation to the lowest level possession offenses, the goal to reduce crime rates at the community level could be negatively impacted because individuals with more serious charges, and possibly more acute drug use, are not allowed in the program. Drug court staff mirror traditional court staff with the inclusion of judges and attorneys but are expanded to include case managers and supervisors. Court activities can vary but the core activities include, drug tests, substance use treatment, social and support service referrals, sanctions, and incentives (All Rise, 2023) leading to graduation.

Figure 3. Sub-System Dynamics

6. Output from police = input for courts
7. Output from courts = input for the DCS
8. Removal from the DCS = input for courts
    a. This could become probation input
9. Reciprocal relationships and interaction effects exist between the drug court and treatment, support, and social services because participants move between these systems (All Rise 2023).
    a. Likely also a dose effect of drug court, treatment, support, and social services (see Festinger et al., 2002; Mears, 2010; Peters et al., 2001; Rossman et al., 2011c; Tiger, 2018).

Social service, support service, and substance use treatment sub-systems are more like each other than they are compared to the police, court, or drug court sub-systems.

Required support services could include peer support programs such as AA or NA, other 12-step programs, or non-12 step peer support groups whose staff regularly communicate with the court (All Rise, 2023). The type of treatment participants may receive can vary widely even within the same DCS because of the individualized nature of the program (All Rise, 2023; see also DeMatteo et al., 2006). Based on prior research, there are likely dose effects of the treatment received in the DCS (Festinger et al., 2002; Mears, 2010; Peters et al., 2001; Rossman et al., 2011c).

Finally, probation is a sub-system. Goldkamp writes that it was "consciously excluded" from most courts (2000) when they began. However, today some states allow drug court to be a condition of probation (Florida Statute 397.334) and some programs use probation officers as case managers (e.g., Minnesota Supreme Court, 2006). It appears probation's role in the DCS has increased since Goldkamp's observation in 2000. System dynamics will impact the relationships between these sub-systems to each other, to external forces, and DCS goals (see Figure 4).

Drug court goals.

At the individual level, goals include abstinence from drug use (and related overdoses and arrests) and improved well-being (Hora, 2002; Wiseman, 2005). Drug courts are unique from other CJS case processing because their goals go beyond desistance from crime and into more personal life choices, for example, getting a job, family relationships, and going to school (Tiger, 2018). Drug courts also strive to increase public safety (Wiseman, 2005) and save money (Rossman et al., 2011c; Wiseman, 2005) (see Figure 2). Some of these goals are proximal (i.e., reduced drug use, improved well-being during the program) and others are distal (i.e., continued abstinence and no arrests). Based on prior research, I hypothesize that proximal goals are much more likely to be achieved (hypothesis 11; see All Rise, 2023 for further discussion of proximal and distal goals; see also Rossman et al., 2011c and Kearley & Gottfredson, 2019 for evidence of sustained success). Additionally, as hypothesis 12 indicates, individual level goals are more likely to be achieved than community level goals. Relatively few people participate in the DCS. That is, they have not gone "to scale" (Fox & Berman, 2002), so increased participation and a system expansion would be needed to reach the tipping point to ensure community level outcomes (Mears, 2010). Finally, participants who are in more robust drug courts (i.e., drug courts that are adhering to evidence-based principles) will have a higher likelihood of success compared to participants who are in a poorly ran program that is practicing "correctional quackery" (see All Rise, 2023, Latessa & Reitler, 2014, Mears, 2022).

Figure 4. Dynamics Between the DCS and Goals

10. For high-risk participants: more services, attention, and a longer time in the DCS = goals met (Festinger et al., 2002; Mears, 2010; Peters et al., 2001; Rossman et al., 2011c). However, for low-risk participants, increased dosage may cause harm (Logan & Link, 2019; DeMatteo et al., 2006).
    a. May also be a threshold even for high-risk participants, such that positive effects deteriorate if too much intervention is given.
11. Proximal goals are more likely to be achieved compared to distal goals (see All Rise, 2023 for further discussion of proximal and distal goals; see also Rossman et al., 2011c and Kearley & Gottfredson, 2019 for evidence of sustained success).
12. DCS goals directed at individuals are more likely to be achieved than community level goals.
13. Participants in robust DCS's will have a higher likelihood of positive outcomes (see All Rise, 2023; Latessa & Reitler, 2014) while participation in a poor DCS may have no impact or be criminogenic (i.e., "correctional quackery" (Mears, 2022)).

Application of the Systems Improvement Solution to Drug Courts.

The steps of Mears (2017) systems Improvement Solution (SIS) can be used to push forward drug court theory, practice, research, and policy.

Step 1: data collection. The first step is to "conduct systems research (Mears, 2017 p. 138)". Regular monitoring and evaluation are already widely recognized as essential for drug courts (All Rise, 2018). However, the majority of drug court research is not multi-site or longitudinal, although there are exceptions to this (Rossman et al., 2011a; Kearley & Gottfredson, 2020). Drug courts are in a unique position to embrace this first step because of the existing national organization, All Rise (allrise.org), could be the national 'captain', as Mears refers to the leader, of a nationwide drug court database. All local DCS captains could report to the national captain. Some states already use data management software across all problem-solving courts in the state (e.g., Florida, see https://www.flcourts.gov/Resources-Services/Office-of-Problem-Solving-Courts/Florida-Drug-Court-Case-Management-System-FDCCMS). However, not all states do this (e.g., Texas). A recent publication by the National Treatment Court Resource Center indicates that only 59.6% of court survey respondents have a statewide data management system (DeVall, Lanier, & Baker, 2022). Best practices (All Rise, 2018) suggest specific data points for courts to keep (e.g., recidivism, time at risk, sobriety) which could serve as a jumping off point for what a database should include. However, because adherence to best practices is voluntary, many jurisdictions are likely operating without strict compliance to these data point recommendations. Training staff and implementing a nationwide database would not be easy or cheap. But nationwide databases do exist for other criminological issues (i.e., the UCR and NIBRS) and are possible to accomplish if there is stakeholder buy in. A nationwide database of participant characteristics and outcomes would allow researchers to do the research required fulfill the first step of the SIS.

Step 2: oversight and training. Mears (2017) second step of the SIS is already encouraged by All Rise (2003; ADCBPS Vol. 2, 2018) and documented by researchers (e.g., Carey et al., 2012; Rossman et al., 2011c). He indicates there should be an institutionalized captaining

agency and involve stakeholders at the highest level of government. This could be All Rise. However, participating in All Rise training on best practices is currently largely voluntary. Meaning there is still vast variation in practices (see Mears, 2010) and a general lack of coordination. Jurisdictional DCS's could benefit from a national DCS that ensures consistency through required monitoring, technical assistance, and training.

Step 3: implementation. The third step is to ensure evidenced based practices are implemented (Mears, 2017). Most research has focused on individual drug courts (e.g., process and outcome evaluations (DeVall & Lanier, 2012; Gill, 2016; Roman et al., 2020), even meta-analyses (e.g., Mitchell et al., 2012; Sevigny et al., 2013; Shaffer, 2011)) but not courts impact and integration into the larger CJS. Examination at this larger level of aggregation is the way forward. Some states are working to have state-level oversight to ensure proper court implementation. For example, Florida is piloting a certification program to monitor compliance with evidence-based practices (Florida Supreme Court Order No. AOSC23-89 see https://www.flcourts.gov/Resources-Services/Office-of-Problem-Solving-Courts/Florida-Problem-Solving-Court-Certification-Program). Ensuring step three is possible, step two must also occur. Mears (2017) emphasizes that steps 1-3 are a continuous process (p. 185). This is an important for drug courts as they can change over time as stakeholders, treatment and service providers, and participant needs change (Goldkamp et al., 2001b).

Discussion and Future Directions

Mears (2017) proposes a systems theory of the CJS which is broader than the DCS proposed here, but the DCS fits back into the CJS. Drug court literature suffers from underutilizing theory. By applying systems theory, we have a framework for future research and application. Specifically, through an SIS we could obtain uniform data via a national database, have oversight, and provide monitoring for courts by expanding All Rise, and ensure implementation of evidence-based practices. This will help us better understand *why* and *how* some programs struggle, and others thrive. Future research should work to test the proposed hypotheses in Figures 2-4 to understand which may apply, or not, to various jurisdictions. Additionally, individual jurisdictions should map their own DCS' which will allow them to better understand and address system problems. Stakeholders can perform systems analysis when planning for new programs as part of a needs assessment (Finlay, 2019; Logan et al., 2001; Rossi et al., 2019). This will allow for identification of relevant external forces and dynamics, an understanding of how those may impact the DCS. This can also set programs up for success because they will anticipate (and can pre-emptively act on) barriers that may stand in their way. Once established, systems analysis can be used to find pain points and assist with remedying them (Finlay et al., 2019), improve communication (Finlay et al., 2019), and ensure evidence-based practices are used (DeVall et al., 2012). By examining the DCS with a systems perspective, we can better understand the black box encourage better practices through implementation of an SIS.

As with any proposal, there are limitations. Primarily several relationships proposed here are untested within drug courts. These were built based on prior research, as cited above and in figures 2-4, but future research should aim to test these in a variety of DCS's to allow

for comparisons. However, there are many challenges with testing certain hypotheses when an SIS has not been implemented. For example, we have access to arrest data and information on laws over time. But, understanding local folkways in implementation is not something widely documented, and we know that the difference between law on the books and law in action is critical for understanding how courts are used by a community (Halperin, 2011; Pound, 1910). This in-depth understanding would take researchers going into communities to document relationships between local, state, and federal policies and politics, community agencies, and the CJS in a unified way to allow for comparisons-- a rather ambitious project. Another data related issue is associated with measuring stigma of local politicians and key actors (e.g., county commissioners, sheriffs, police chiefs, judges, prosecutors, public defenders). These data do not exist in a comprehensive, accessible manner. One can imagine that surveying all local actors could be one possibility that comes with its own challenges (primarily non-response). A possible alternative could be to analyze these actors 'on the record' statements about substance use, the CJS, and rehabilitation. For example, comments made to news sources, documents/transcripts from city council meetings, and campaign materials. Analyzing these for each actor in a jurisdiction and multiplying that by the number of jurisdictions needed to reach a critical mass to form conclusions is a large undertaking and would likely also suffer from a lack of public, readily accessible, materials to analyze for some actors and still only give a limited view of their true opinions. Getting a local insider(s) in each jurisdiction could assist with data collection to test stigma related and 'law in action' related hypotheses. However, relying on one, or even several, local insiders may come with its own limitations. Primarily the possible introduction of these insiders' own bias, potentially limited knowledge about certain actors, and their willingness to be transparent to an outside researcher.

Documentation of the resources that courts rely on is currently very limited. Ideally, researchers would want to know about funding sources, costs for services, waitlists, and accessibility. For example, physical accessibility could be analyzed by mapping provider locations relative to public transportation, but future research would need to consider if they are accessible in other ways, such as having non-English speaking staff. Logging these various elements for all providers a court uses, or could use, in a community is important work and currently does not exist in a comprehensive manner. Another data related challenge is documenting competing policy priorities. Pew gives us a good idea of these at the aggregate level, but at the local level, interviews with residents, examination of local news and social media posts, could give researchers additional insight into what is happening that could influence local policy. Researchers could also use census information on poverty and urbanicity but would need to spend time in the local courts to understand *how* these impact court function.

Fully testing these hypotheses cross sectionally or longitudinally, is a data, time, and money intensive proposition that would need to be done at a large scale to allow nationwide conclusions. I hope in the future, we can move towards a major system test such as this. A more proximal possibility is for a sample of courts within one state to conduct systems analyses of their DCS and submit them to researchers for analysis. Then, we could begin drawing cross-court comparisons within one state. The individual analyses would include

information on local stakeholder support and stigma, treatment and service providers, court eligibility and participation requirements, and an understanding of the courts ability to meet evidence-based practices. It would also need to analyze competing policy priorities, report on county level crime and arrest data, and participant level risk assessment and proximal and distal outcomes. By comparing information across courts, we could better examine hypotheses proposed in figures 2-4 and understand the contextual nuances that matter for DCS operation. Much of this information could be provided via survey with follow up interviews and focus groups with court staff. This approach may still seem daunting. However, NPC research regularly works with problem solving courts to conduct process and outcome evaluations using similar methods (see npcresearch.com/reports-publications/); when in receipt of grant funds, BJA technical assistance also operates similarly; that is, by examining court provided information about the program followed by a virtual or in person site visit for observation of team meetings, court hearings, and interviews and/or focus groups with staff. Staring with one state will allow for preliminary systems contextualization and for state specific recommendations to policy makers. Then, the process can be refined and spread to other states to later allow for cross-state comparisons.

Finally, some may also accuse the DCS proposed here as too broad/general. On the other hand, some may accuse the DCS proposed here is too specific when Mears (2017) explains the CJS at large. Because drug court literature is not conclusive about the theory behind drug court function, there is lesser consideration of how drug courts fit into the broader CJS, and research rarely considers anything beyond individual level measurement, systems theory application is a valuable exercise and contribution to the way we think about the CJS.

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RESEARCH

Drug Court Review: Winter 2025

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Examining an Opioid Court for Felony Probationers

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In response to the opioid crisis, specialty opioid courts have emerged, but we know little about those who participate or their outcomes. We examined participant characteristics along with the impact of their sociodemographic, criminal history, substance use, mental health, and other variables on retention and graduation in an opioid court program. Key findings suggest that participants without health insurance, those with multiple mental health problems, and those with early justice system involvement had poorer outcomes. These results suggest that additional interventions both within the court and through community partners for those with more complicated life circumstances may prove beneficial. Indeed, ongoing budget constraints and limited resources may require problem-solving courts to focus on those at the greatest risk for failure. Nevertheless, opioid courts must be prepared to provide all participants with the tools, services, and support they need so they can realistically achieve otherwise extremely challenging goals.

Key words: opioid court, opioids, drug court, OUD

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Introduction

With over 9 million people misusing opioids and 5.6 million with an opioid use disorder (OUD) in the U.S. (Substance Abuse and Mental Health Services Administration [SAMSHA], 2022), this is now considered both an epidemic and a public health crisis; the "most problematic form of drug use globally" (United Nations Office on Drugs and Crime, 2015, p. xi). Indeed, in 2020, 75% of all drug overdose deaths involved opioids (Centers for Disease Control and Prevention, 2022). Although high rates of drug use and overdose are not new in justice-involved populations, the opioid epidemic has raised new challenges for the criminal justice system (CJS) as it navigates this growing population with vast and immediate treatment needs.

Each of the major components of the CJS has been impacted by this crisis. Police increasingly serve as first responders for opioid overdoses and continue to make a growing number of opioid-related arrests (Pike et al., 2021). In turn, escalating arrests have severely impacted the courts. Indeed, the National Judicial Opioid Task Force states that the criminal courts have been exponentially affected by the scope and magnitude of the problem (2019). Finally, over one-quarter of state prisoners report lifetime opiate use (Bronson et al., 2017), but treatment within correctional facilities and on release is sorely limited (Belenko et al., 2012; Reichert & Gleicher, 2019). As such, reentry is a high-risk period for relapse, overdose, and recidivism (Binswanger et al., 2020; Ranapurwala et al., 2018). In fact, the leading cause of death among those released from jail or prison is opioid-related overdose (Joudrey et al., 2019).

One popular intervention for drug-using, justice-involved individuals has been drug court. Based on a problem-solving, non-adversarial approach, drug courts provide judicially-based supervision, community-based treatment and address participant's myriad needs; they've been hailed as one of the most promising advances made in the CJS, significantly reducing drug use and crime at a lower cost (National Association of Drug Court Professionals, 2018). As many of these programs have admitted an increasingly large number of participants with OUD, some have responded by offering medications for the treatment of OUD, while others have been modified specifically for OUD participants, including the Wisconsin Court in the present study. Although treatment courts are well-positioned to address high-risk/high-need individuals with OUDs (DeVall et al., 2023), some research suggests that "drug court benefits have not accrued equally for persons with OUD" (Marlowe, et al., 2022, p. 2).

Despite the high prevalence of OUD participants in treatment courts, there is a dearth of empirical literature on individual-level characteristics of this population for its predictive value on program outcomes; our understanding is even more limited regarding those in opioid-specific courts. This is largely due to their small numbers and relatively short existence. Thus, we are missing a basic understanding of opioid court participants that allows us to respond more proactively to risks and needs that lead to better post-court success. Our study addresses this gap by examining sociodemographic and other individual-level factors on retention and graduation outcomes among participants in a Wisconsin opioid court.

Literature Review

Opioid Dependence and Drug Courts

At year-end 2023, there were over 4,000 treatment courts in the U.S, of which the majority were adult drug courts (National Treatment Court Resource Center [NTCRC], 2024). To date, drug courts have been the primary type of treatment court to respond to OUD offenders. While prevalence rates vary, there has been an increasing number of opioid users in drug courts. Early drug court research by Saum et al. (2001) found that about a quarter of drug court participants indicated any opiate use at program entry. Friedman & Wagner-Goldstein's 2015 profile of drug courts found the percentage of opioid addiction ranged from 33%-75% for participants spanning three different community types. More recently, Marlowe et al. (2022) reported that among 169 drug courts surveyed, more than three quarters of the respondents (78 %) indicated that at least half of their clients had an assessed OUD and roughly half (49 %) reported that most or nearly all clients had an OUD. Following this pattern, a national treatment court survey found that over 80% of adult drug court participants reported heroin/opioid use (DeVall et al., 2023).

Although research clearly suggests an increasing prevalence of OUD participants in treatment courts, studies don't typically report on the characteristics or findings specific to these OUD offenders. Moreover, because drug courts respond to individuals with myriad types of substance use disorders, we can't generalize findings from drug courts and their participants to those in opioid courts. Thus, it's important to examine the characteristics, social support, health, and criminal attributes of those in opioid courts as they may be uniquely different.

Opioid Court Models

Like the initiation of drug courts in response to overwhelming numbers of drug-involved offenders, opioid courts have emerged to manage the high prevalence of opioid users who are involved in the justice system. For the purposes of this paper, we have developed a general definition of *opioid courts* as "problem-solving courts for OUD populations" to encompass the variety of models that have been implemented. As such, the earliest opioid court known to the authors was developed in 2012 in Waukesha, Wisconsin. This court was based on the drug court model and was designated solely to meet the complex and difficult needs of opioid users. Key modifications focused on the intensive treatment demands and overdose risks of OUD offenders. The court included the use of medication-assisted treatment (MAT)[1] and frequent judicial monitoring, but the primary modification was the hiring of a full-time licensed and dedicated substance use treatment counselor who also served as case manager.

1 More recently, the term Medications for Opioid Use Disorder (MOUD) has been used in lieu of MAT which suggested that medication was secondary to other treatment interventions. According to the National Institute on Drug Abuse (2021, p.1), MOUD "aligns with the way other psychiatric medications are understood (e.g., antidepressants, antipsychotics), as critical tools that are central to a patient's treatment plan."

Another opioid court model, the Opioid Intervention Court (OIC), began in 2016 in Buffalo, New York. The OIC court focused on the immediate risks and needs of this population; in fact, it was created as a response to three drug court participants who fatally overdosed in the same week while awaiting their second court appearance (Kahn et al., 2021). An important feature of the OIC is to provide opioid users with more immediate screening for overdose risk along with rapid assessment and treatment engagement than what is typically provided in the standard drug court model (Kahn et al., 2019). In fact, court personnel describe the OIC as an "emergency room" in a drug court, emphasizing how individuals are quickly triaged into the program (Kahn et al., 2021). Another unique difference between drug and OIC courts includes broader legal eligibility. For example, OICs serve more as crisis response and stabilization programs, thus not limiting eligibility to a particular risk-level or type of criminal offense (Center for Court Innovation [CCI], 2019). Finally, OICs require extremely high levels of judicial supervision and monitoring; it is recommended that participants attend court each weekday for at least 3 months and undergo frequent random drug testing (CCI, 2019). To inform and standardize these new specialty courts, the *10 Essential Elements of Opioid Intervention Courts,* a framework based on drug court research and practice, was published in 2019. This guide illustrates OIC objectives including the urgency of addressing overdose risk and the initiation of MAT within 24 hours of arrest (CCI, 2019).

Several other courts have been developed using some or all of the elements in the models described above; these are sometimes referred to as heroin courts or recovery courts. Therefore, it is likely that additional opioid courts have not been captured in the data as they are not recognized independently as "opioid courts"; this definitional issue creates additional barriers to research. At year-end 2023, only 36 total opioid courts in the U.S. had been identified by the NTCRC (2024).

Opioid Court Research

As noted, we have a limited understanding of the characteristics of opioid court participants with much of this confined to the NY OICs. Kahn et al. (2019) examined 295 individuals screened for the Buffalo OIC; most were male (54%), on average 34 years old, and about a quarter (23%) had a high school diploma or GED. Almost everyone (95.3%) reported heroin use, about 25% reported using cocaine or crack and about 25% reported having a co-occurring mental health disorder. Just over half reported safe living conditions and only about 5% reported having health insurance. Cerulli et al.'s (2022) interviews of a small group of women (N = 31) enrolled in the same OIC, found participants to be on average 31 years old, the majority were White, with approximately 68% reporting a GED or high school education and almost 75% were unemployed. Additionally, findings showed many of the women had a co-occurring mental health disorder and reported negative experiences with the CJS prior to entering opioid court. Similar characteristics were reported by Bleasdale et al. (2022) in their study of the same OIC.

Program outcomes for the Buffalo OICs have also been examined. Kahn et al. (2021) studied 384 participants and found that 34% completed the program; of the non-completers, most were out on warrants. In a subset of these cases (n = 206), each day spent in the OIC

was associated with a 1% increase in the odds of completion and those who received MAT were over three times more likely to complete. These researchers also conducted a small convenience sample of those who were enrolled at least 35 days (n = 18); most reported general satisfaction with the program, but most indicated that educational and vocational opportunities should be increased. Carey (2021) studied the same court comparing those in the OIC with opioid users who experienced typical case processing; findings indicated that OIC participants were more likely to engage in treatment and were half as likely to die of a drug overdose within one year of enrollment. It was also determined that the most successful OIC participants were those who tested positive for opioids alone, rather than in combination with cocaine.

Findings of other opioid courts have also shown promising results. For example, the Cumberland County Pennsylvania OIC witnessed a 40% reduction in overdose deaths; no overdose deaths were reported among program graduates (Lucas & Arnold, 2019). Brown County's "Heroin Court" in Wisconsin, which is described as a drug court track for those with OUD, reports that 35 of the 72 participants graduated from the program and a 90% reduction in police contacts and jail placements (Lucas & Arnold, 2019). In 2017, Delaware County Pennsylvania implemented an opioid-specific diversion court within their Court of Common Pleas. Early findings reported by the court suggest appreciable success with many participants engaged in long-term treatment programs, and two participants are now certified recovery specialists (Delaware County Court of Common Pleas, n.d.). An opioid treatment court was established in Gila County Arizona in 2017 which adopted some OIC features such as rapid assessment and treatment engagement. As such, they reduced the average time from arrest to treatment from 6-9 months to 7-10 days (Lucas & Arnold, 2019).

Current Study

If opioid courts hope to serve as models for future replication, it is critical that we understand the characteristics of their participants and examine the factors that may predict successful (and unsuccessful) outcomes. Moreover, this knowledge can help us to better assess how these courts can reduce opioid use and related overdoses, as well as improve recidivism and other long-term outcomes. This study is a step in that direction.

Method

Opioid Court Program

In 2010 when Purdue Pharma released an abuse-deterrent formulation of OxyContin and increasing numbers of physicians limited opioid prescriptions, users turned to heroin; this is thought to have marked the beginning of the heroin epidemic (Berezow, 2018) and is on the heels of the creation of the opioid court studied here. Indeed, it was around this time when community stakeholders in Waukesha, Wisconsin recognized a growing opioid problem in their county, particularly among young adults. As many of these stakeholders had experience implementing a modified drug court for repeat DUI offenders (see Saum et al., 2013), they sought funding from the Bureau of Justice Assistance for an adult opioid

court that targeted younger individuals. The court was implemented in 2012 as a collaborative effort between Waukesha County and Wisconsin Community Services. Referrals came primarily from the probation department and public defenders, as well as from the prosecutor's office, and local jails. Participants were required to be adult residents of the County, diagnosed with opioid dependence based on the Texas Christian University Drug Screen II which corresponds approximately with DSM-IV-TR (American Psychiatric Association, 2000) drug dependence diagnoses, assessed to be high-risk, and to be on probation for a felony offense with no history of violent offenses.[2]

The opioid court followed a standard problem-solving court four-phase structure that involved attending treatment sessions and status hearings, judicial monitoring, meetings with the case manager and frequent random drug testing. Additional supervision and support were provided by probation officers. Participants had to remain in the program at least twelve months and successfully complete the requirements of each phase to graduate. Those who failed to complete the program were subject to revocation of their supervision status.

As a drug treatment court modified to address the complex and intensive treatment needs of individuals with OUD, one important feature was the dedicated case manager who was a Certified Alcohol and Drug Counselor. The case manager worked closely with the participants as well as with community treatment partners to meet their specific needs which included individual and group treatment and the use of MAT. Vivitrol (naltrexone) was provided at no cost through the grant, but participants had to use private insurance for methadone or buprenorphine. Though voluntary, participants were strongly encouraged to use Vivitrol as part of their treatment protocol and it was regularly discussed during status reviews before the opioid court judge. In addition, state health officials attended pre-hearing conferences to share expertise regarding available treatments and services.

Sample, Data Collection and Measures

Our sample consisted of all participants admitted to the Wisconsin Opioid Court between March 2012 and November 2013, yielding a sample of 56 individuals. Following admission, participants completed an in-depth psychosocial intake interview with the case manager that asked questions regarding sociodemographic characteristics, criminal history, substance use and treatment history, mental health, chronic medical problems, abuse and/or neglect and social support (i.e., the independent variables). In addition, some sociodemographic and criminal history data were coded from the publicly available information in the Wisconsin Court System Circuit Court Access website. All participant data were collected and maintained by the case manager in a management information system. A computerized index was developed that linked the identifying information with an arbitrary numeric code unique to the specific person. This de-identified data were then shared with the research team in compliance with Temple University's Institutional Review Board (IRB).

2 Currently, the program also includes users of other drugs (there is no longer a requirement for participants to have a diagnosis of opioid dependence) and now serves as a traditional drug court.

We examined two dependent variables, graduation and retention. Graduation was coded as 1 for successful completion of the opioid court program and 0 for those who failed to complete. Reasons for failure included being discharged for repeated noncompliance with program rules, voluntary withdrawal, absconding, new criminal charges, or medical issues. Of the 56 participants in our study, we found that 43% graduated; among those who failed (57%), the primary reason was noncompliance (46%). The second dependent variable, retention, reflected the length of time in the program by days; this was created by subtracting the entry date from the discharge date. We found that the mean length of stay in the program was 442 days (range 3–1,077 days).

Analytic Plan

Univariate analyses were completed to examine the participants' characteristics. For the analysis of the graduation and retention outcomes, a two-staged approach was taken. The first stage was to do a series of bivariate analyses (i.e., chi-square, t-test, ANOVA) to identify a subset of predictor variables that had at least a marginally significant ($p<.10$) relationship with the dependent variables. The second stage was to use all these variables in multivariable analyses; that is, logistic regression for the binary dependent variables graduated (0 = 'no'; 1 = 'yes') and survival analyses using Cox Proportional Hazards regression for the retention variable, the number of days in opioid court.[3]

Results

Sociodemographic

Most of the 56 participants were white (93%) and male (68%). The median age of participants when they entered the program was 24 (range 17–45), with the majority (64%) being 25 or younger. Most (51%) had a high school diploma or its equivalent; 36% had additional education beyond high school. The majority (57%) were unemployed. Half (49.9%) of the participants had health insurance (many reported their parents as the source for this), and most of these plans (38%) included a behavioral health rider that provided for substance use and mental health treatment.

Table 1. Participant Characteristics (N = 56)

Characteristics		% of Total Sample[a]
Sociodemographics		
Gender		
	Male	67.9
	Female	32.1
Race/Ethnicity		
	White Caucasian	92.7
	Bi-Racial	3.6

3 It should be noted that statistical power was low because of the relatively small number (ranging from 52 to 56 depending on missing data) of participants. Although there may be apparently large differences between groups in the proportion who graduated, only those differences with corresponding large effect sizes reached statistical significance.

Characteristics	% of Total Sample[a]
Hispanic	3.6
Age	
Median Age (range)	24 (17-45)
Under 20	7.3
20 to 25	56.4
26 or older	36.4
Marital Status	
Never Married/Divorced/Separated	98.2
Married	1.8
Education	
Median (Range)	12 (10-16)
< than High School	13.2
High School/GED	51.0
> than High School/GED	35.8
Employment	
Unemployed	56.6
Part-time	18.9
Full-time	24.5
Health Insurance	
w/Behavioral Rider	38.4
w/o Behavioral Rider	11.5
No Insurance	50.1
Criminal History	
Juvenile Arrest Record	32.1
Adult Drug Law Offense	80.0
Possession of a Controlled Substance	75.0
Possession of Drug Paraphernalia	55.4
Operating While Intoxicated (OWI)	30.4
Adult Property Offense	57.1
Adult Public Disorder Offense	57.1
Substance Use (Lifetime)	
Alcohol	92.5
Prescription Opioids	88.7
Heroin	88.7
Cocaine	64.2
Crack	24.5
Marijuana	84.9
Amphetamines/Methamphetamines	11.3
Substance Use (at Intake)[b]	
Alcohol	81.1
Prescription Opioids	73.6
Heroin	79.2
Cocaine	30.2
Crack	11.3
Marijuana	53.8
Amphetamine/Methamphetamines	3.8
Concurrent Drug Use (at Intake)[b]	92.5
Injection Drug Use (at Intake)[b]	79.2
Substance Use Treatment (Lifetime)	73.6
Detox	11.3
Regular Outpatient	15.1
Intensive Outpatient	37.7
Residential	28.3
Medication Assisted Treatment	17.0
Currently in Treatment	18.9
Overdose (Lifetime)	47.2
Any Mental Health Problem (at Intake)[b]	41.8
Anxiety	21.8
Depression	16.3
Bipolar	9.4
PTSD	3.8

Characteristics	% of Total Sample[a]
2 or more Mental Health Problems (at Intake)[b]	9.4
Use of Psychiatric Medication (at Intake)[b]	28.8
Chronic Medical Problem (Lifetime)	13.5
Serious Head Injury (Lifetime)	18.0
Abuse and/or Neglect (Lifetime)[c]	20.8
Social Support (at Intake)[b]	
Supportive Family Member(s)	
None	3.8
1 to 2	40.4
3 or more	55.8
In a Self-Help Group (at Intake)[b]	28.3

[a]Percentages reflect only those with valid data. Numbers may exceed 100% because some categories are not mutually exclusive.

[b]"At intake" refers to the 6-month time period preceding opioid court entry.

[c]Due to limitations in the intake questionnaire, the type of abuse and/or neglect reported was not able to be specified.

Criminal history data showed about one-third (32%) had been arrested as juveniles (median age of first arrest was 15). As adults, 80% had been arrested at least one time during their life for a drug offense; the most common of these was possession of a controlled substance (75%). Possession of drug paraphernalia (55%) and operating while intoxicated (OWI) (30%) were also common. Nearly 60% had been arrested for a property offense including theft of a movable object (45%) and burglary (21%), while over half had been arrested for a public disorder offense (57%) including bail jumping (45%).

Participants reported using a myriad of substances throughout their lifetimes. All participants reported lifetime use of at least one of two forms of opiates; nearly 90% had used prescription opioids and about 90% had used heroin. Lifetime use of other drugs included alcohol (93%), marijuana (85%), cocaine (64%) crack (25%), and amphetamine/methamphetamine (11%). The fact that close to half (47%) had ever experienced a drug overdose is extremely troubling.

At program intake, participants were also asked about their substance use within the past 6-months; all participants reported using opiates, with 74% indicating the use of prescription opioids and 79% using heroin. Other drugs reported included alcohol (81%), marijuana (54%), cocaine (30%), crack (11%); and amphetamine or methamphetamine (4%). Unfortunately, injection drug use was found to be prevalent (79%). Moreover, the pervasiveness of substance use was evident with the large majority (93%) of participants reporting concurrent use of two or more drugs. Findings also indicated that most participants (74%) had at least one experience with substance use treatment in their lifetime. Common treatment types were intensive outpatient (38%) and residential (28%). Though there are several FDA-approved MATs for treating opioid addiction, only 17% of the participants reported "ever" using MAT. Finally, at program entry, 19% of participants reported being in substance use treatment.

Any mental health problem(s) was reported by over two-fifths (42%) of the participants at intake. These mental health problems included, 22% who reported anxiety, 16%

depression, 9% bipolar disorder and 4% Post Traumatic Stress Disorder (PTSD); more than 9% of the sample reported 2 or more mental health problems. Twenty-one percent of participants indicated histories of abuse and/or neglect. Close to one-third (29%) reported they were taking psychiatric medications (e.g., antidepressants) at the time of intake.

Relatively few participants (14%) reported having chronic medical problems and almost one-fifth of participants (18%) reported they had experienced serious head injuries. Finally, two measures of support were examined; 56% of the participants reported that they had three or more family members who provided positive social support (almost all had at least one supportive family member) at the time of court entry, and over a quarter (28%) of the participants were involved in a self-help group.

Table 2. Correlates of Graduation and Retention

Characteristic/Value		% Graduated	Days Retained Mean (SD)	Log(10) Days Retained Mean (SD)
Demographic Information				
Gender				
	Male	42.1	400.8 (236.3)	2.45 (.51)
	Female	44.4	530.2 (259.0)	2.65 (.30)†
Race/Ethnicity[a]				
	White/Caucasian	41.2	441.9 (250.5)	2.51 (.46)
	Other	50.0	386.8 (257.8)	2.45 (.47)
Age[b]				
	Age - 17-25	40	486.7 (261.8)†	2.57 (.39)*
	Age - 26 or older	45	352.3 (203.4)	2.39 (.54)
Education				
	< than High School	42.9	448.1 (309.0)	2.48 (.51)
	High School/GED	37.0	386.3 (224.4)	2.45 (.49)
	> High School/GED	47.4	524.6 (242.2)	2.68 (.20)
Employment				
	Unemployed	33.3	424.2 (244.3)	2.50 (.47)
	Employed[c]	52.2	469.9 (251.6)	2.58 (.33)
Health Insurance				
	No	26.9	353.4 (207.9)	2.40 (.50)
	Yes	57.7*	549.6 (238.2)**	2.70 (.19)**
Criminal History				
Juvenile Arrest Record				
	No	52.8	466.9 (257.1)	2.55 (.43)
	Yes	17.6*	395.7 (220.8)	2.48 (.38)
Drug Law Violations				
Possession of a Controlled Substance				
	No	50.0	507.2 (245.9)	2.64 (.30)
	Yes	40.5	420.8 (249.2)	2.48 (.49)
Possession of Drug Paraphernalia				
	No	44.0	422.1 (235.6)	.42 (.08)
	Yes	41.9	458.8 (262.0)	.49 (.09)
Operating While Intoxicated (OWI)				
	No	46.2	479.8 (262)†	2.57 (.41)
	Yes	35.3	356.7 (197.3)	2.40 (.55)
Property Crimes				
Petty or Retail Theft				
	No	44.2	419.6 (231.6)	2.48 (.49)
	Yes	38.5	517.9 (297.2)	2.63 (.30)
Theft of Moveable Object				
	No	38.7	423.4 (261.2)	2.45 (.55)
	Yes	48.0	465.9 (236.2)	2.59 (.30)
Burglary				
	No	43.2	443.9 (238.4)	2.52 (.48)
	Yes	41.7	437.0 (296.4)	2.52 (.39)
Forgery/Fraud				
	No	39.5	423.2 (252.1)	2.47 (.51)
	Yes	50.0	482.9 (244.4)	2.61 (.31)

Characteristic/Value	% Graduated	Days Retained Mean (SD)	Log(10) Days Retained Mean (SD)
Public Disorder Crimes			
Bail Jumping			
No	48.4	472.6 (246.4)	2.56 (.41)
Yes	36.0	404.9 (252.1)	2.49 (.51)
Disorderly Conduct			
No	45.7	470.9 (245.0)	2.57 (.41)
Yes	30.0	311.6 (235.9)†	2.26 (.59)
Resisting Arrest			
No	42.9	433.8 (248.8)	2.50 (.47)
Yes	42.9	502.7 (261.8)	2.62 (.33)
Substance Use (at Intake)			
Heroin			
No Use	55.6	401.8 (294.5)	2.5 (.37)
< Daily Use	50.0	347.3 (173.7)	2.5 (.20)
Daily Use	35.1	471.7 (234.4)	2.6 (.47)
Prescription Opioids			
No Use	44.4	516.1 (235.1)	2.6 (.35)
< Daily Use	25.0	288.5 (217.9)	2.3 (.36)
Daily Use	42.9	462.9 (249.7)	2.6 (.45)
Alcohol			
No Use	9.1*	246.0 (216.7)**	2.1 (.66)***
< Daily Use	52.8	502.5 (220.4)	2.7 (.21)
Daily Use	33.3	456.5 (293.0)	2.6 (.35)
Cocaine			
No Use	41.7	433.1 (238.2)	2.5 (.46)
< Daily Use	33.3	480.9 (219.5)	2.6 (.23)
Daily Use	42.9	462.1 (355.3)	2.5 (.42)
Marijuana			
No Use	30.0	394.6 (236.3)	2.5 (.32)
< Daily Use	38.5	462.8 (295.5)	2.6 (.38)
Daily Use	44.8	454.9 (236.4)	2.5 (.48)
Injected Drugs			
Never	45.5	352.5 (285.9)	2.4 (.35)
Yes	40.5	468.1 (232.6)	2.6 (.43)
Concurrent Use of Drugs[d]			
Yes	27.3	319.3 (304.4)†	2.2 (.70)†
No	45.2	476.7 (221.4)	2.6 (.26)
Any Mental Health Problem (at Intake)[e]			
No	45.2	444.3 (231.1)	2.6 (.30)
Yes	36.4	443.7 (271.7)	2.5 (.54)
Anxiety			
No	47.6	461.5 (249.2)	2.6 (.30)
Yes	18.2†	377.6 (233.4)	2.4 (.69)
Depression			
No	44.4	456.3 (235.3)	2.6 (.30)
Yes	25.0	375 (309.5)	2.3 (.79)
Bipolar			
No	41.7	447.0 (250.7)	2.5 (.43)
Yes	40.0	415.4 (219.5)	2.5 (.34)
Two or More Mental Health Problems (at Intake)			
No	45.8	465.8 (241.3)	2.6 (.30)
Yes	0.0*	235.6 (209)*	2.0 (.90)
Use of Psychiatric Medication (at Intake)			
No	43.2	472.6 (237.6)	2.6 (.28)
Yes	40.0	399.5 (254.8)	2.4 (.61)
Substance Use Treatment (Lifetime)			
Never	28.6	377.4 (203.2)	2.5 (.33)
At least once	46.2	468.0 (258.1)	2.6 (.45)
In Treatment at Intake			
No	39.1	402.3 (235.8)	2.5 (.48)
Yes	60.0	627.1 (234)**	2.8 (.16)†
Chronic Medical Problem (Lifetime)			
None	37.8	417.8 (243.7)	2.5 (.44)
At Least One	71.4	595.1 (235.9)†	2.7 (.28)
Serious Head Injury (Lifetime)			
None	41.5	421.8 (241.4)	2.5 (.44)
At Least Once	22.2	437.3 (232.1)	2.6 (.31)
Abuse and/or Neglect (Lifetime)			
Not Abused	42.9	426.6 (231.8)	2.5 (.43)
At Least One Type of Abuse	36.4	510.9 (298.0)	2.6 (.35)

Characteristic/Value		% Graduated	Days Retained Mean (SD)	Log(10) Days Retained Mean (SD)
Social Support (at Intake)				
Supportive Family Members				
	1 or fewer	40.0	354.3 (217.8)	2.3 (.70)
	2 or more	42.9	473.2 (247.0)	2.6 (.31)
In a Self-Help Group (at Intake)				
	No	34.3	412.9 (233.0)	2.5 (.47)
	Yes	55.6	504.6 (266.3)	2.6 (.26)

†$p < .10$; *$p < .05$; **$p < .01$; ***$p < .001$

[a]This variable was dichotomized in to White/Caucasian and other for analysis because too few biracial or Hispanic participants were available to permit separate analyses of each category.

[b]This variable was dichotomized into ages 17 to 25 and ages 26 and older because there were too few individuals in the under 20 group to permit separate analysis of this category.

[c]Employed includes both those with part-time and full-time employment.

[d]Concurrent abuse of drugs reflects whether the participant entered opioid court abusing a single drug or multiple (concurrent) drugs.

[e]This does not necessarily reflect a medical diagnosis of a mental health disorder. Participants self-reported whether they had mental or emotional problems, and then were asked which type of problem. It is assumed (but cannot be ascertained) that participants were reporting based on what they had been told by a mental health professional.

Bivariate Analyses: Identifying Correlates of Graduation and Retention

Sociodemographic information and graduation and retention.

Examining the relationships between sociodemographic information and graduation can identify specific subgroups of participants who are most likely or not as likely to graduate. Findings presented in Table 2 showed only one variable, having health insurance [χ^2 (1, n = 52) = 5.04, p = .025)], to be significantly related to a higher likelihood of graduating from the opioid court. Other variables that we typically find associated with drug court graduation, including gender, age, ethnicity, education level and employment, were not associated with graduating from the opioid court.

Another set of analyses examined the relationships between retention (measured as the number of days in the opioid court program) and the sociodemographic variables described in the preceding paragraph. To reduce large standard deviations, a logarithmic transformation was used to create a variable with more limited dispersion. Findings are presented in Table 2 for both the retention and the log-transformed variables. For retention, results were similar to the analysis of graduation, with a few exceptions. In this set of analyses, being female (mean = 530.2, SD = 259) was marginally related to longer stays (males mean = 400.8, SD = 236.3) [t(54) = -1.86, p = .069], as was being younger [t(53) = 1.97, p = .053; for the log-transformed variable, t(53) = 2.12, p = .039]. Findings for health insurance mirrored findings for graduation, with those who had insurance having longer stays in opioid court than those without it [t(54) = -3.16, p = .003]. Race/ethnicity, education and employment status were not associated with retention in the court.

Criminal history and graduation and retention.

As shown in Table 2, analysis of the associations between graduation and criminal history showed only one statistically significant relationship. That is, those who had a juvenile arrest history were significantly less likely to graduate from the opioid court [χ^2 (1, n = 53) = 5.87, p = .015)]. With respect to retention, only two variables were found to be marginally related; participants with an offense history that included an OWI had shorter stays in the program than those without an OWI [t(54) = 1.72, p = .089] as did those with a history of disorderly conduct [t(54) = -1.87, p = .06]. Findings showed no statistical relationship between graduation or retention and having a criminal history that included arrests for possession of a controlled substance, possession of drug paraphernalia, petty or retail theft, theft of a moveable object, burglary, forgery/fraud, bail jumping, or resisting arrest.

Substance use, substance use treatment, and graduation and retention.

The next set of analyses examined the relationship between different substance use variables and graduation and retention. The only drug that was statistically significantly related to graduation and length of stay was alcohol. More specifically, those who didn't use alcohol or reported daily use (in the last 6 months) were less likely to graduate than those reporting alcohol use on a less than daily basis [χ^2 (2, n = 53) = 6.81, p = .033)]. This also was true for the length of stay, with those who didn't use alcohol and those who reported daily use having shorter stays in opioid court [F(2, 50) = 5.35, p = .008]. Findings also showed those who used two or more drugs (i.e., concurrent use) were marginally more likely to remain in the opioid court longer than those who did not [t(51) = -1.94, p = .058], which also was true for the logarithmic transformation of the number of days in opioid court [t(51) = -1.87, p = .088]. Finally, having ever participated in substance use treatment was unrelated to graduation or retention; however, those in substance use treatment at intake had significantly longer stays than those who were not [t(54) = -2.74, p = .008)].

Mental health, psychiatric medicine and graduation and retention.

Findings summarized in Table 2 showed that having any mental health problem or taking psychiatric medication were not associated with graduation or retention. This was also true for depression and bipolar disorder diagnoses. There was, however, a marginal difference noted for anxiety, with those who reported having anxiety having lower graduation rates (18%) compared to those who did not have it (48%) [χ^2(1, n = 53) = 3.11, p = .078)]. Participants with 2 or more mental health problems were less likely to graduate from the program [χ^2(1, n = 53) = 3.92, p = .048)] and were found to have overall shorter stays in the program.

Health problems, social support, and graduation and retention.

Findings presented in Table 2 show only one variable, having a chronic medical problem, was marginally related to graduation compared to those who did not [χ^2(1, n = 53) = 3.11, p = .078)]. Although it falls outside of the marginal threshold of p = .10, being

involved in a self-help group at opioid court entry appears to improve the likelihood of graduation [t(51) = -1.29, p = .20)].

Table 3. Summary of Hierarchical Logistic Regression Analyses for Predicting Graduation from Opioid Court

	Model 1			Model 2			Model 3			Model 4[b,e]			Model 5[b,e]		
Predictors	**B**	**OR**	**95%[a] CI**	**B**	**OR**	**95%[a] CI**	**B**	**OR**	**95%[a] CI**	**B**	**OR**	**95%[a] CI**	**B**	**OR**	**95%[a] CI**
Health Insurance	1.3*	3.7	[1.15, 11.86]	1.3*	3.8	[1.11, 13.00]	1.1	2.9	[.73, 10.4]	1.2	3.2	.79	1.0	2.8	[.62, 12.2]
Juvenile Arrest Record				-1.6*	.20	[.05, .88]	-1.5*	.22	[.05, .98]	-1.5	.2	[.05, 1.3]	-1.1	.4	[.06, 2.09]
No Alcohol Use[c]							-1.4	.25	[.01, 4.4]	-1.5	.2	[.01, 5.7]	-1.3	.3	[.01, 15.1]
Daily Use[c]							.5	1.7	[.21, 12.7]	.2	1.3	[.11, 14]	1.2	3.3	[.1, 97.2]
Anxiety										-1.4	.2	[.03, 1.8]	-1.7	.2	[.02, 1.9]
Two or More Mental Health Problems[d]										—[d]			—[d]		
In Treatment										1.2	3.3	[.6, 19.8]	1.0	2.7	[.5, 15.9]
Chronic Medical Problem													2.1	8.2	[.6, 117]
Model Fit Statistics															
Model χ^2		5.1*			10.4			14.1			17.8			20.9	
-2 Log Likelihood		65.7			60.5			56.7			53.1			48.8	
Cox & Snell		.09			.18										
Nalgerke R^2		.13			.24			.32			.39			.45	

	Model 1			Model 2			Model 3			Model 4[b,e]			Model 5[b,e]		
Predictors	B	OR	95%[a] CI	B	OR	95%[a] CI	B	OR	95%[a] CI	B	OR	95%[a] CI	B	OR	95%[a] CI

[†]$p < .10$; *$p < .05$; **$p < .01$; *** $p < .001$

[a]Odds ratios below 1 indicate a reduced likelihood of graduating and odds ratios above 1 indicate an increased likelihood. By convention the 95% confidence intervals are shown alongside the odds ratio. The interval can include negative and positive values and can provide both an assessment of a variable's statistical significance (i.e., variables who 95% confidence intervals include 1 cannot be conclusively declared as statistically significant). The 95% CI also helps diagnose predictor/model instability.

[b]The general rule of thumb is to have a minimum of 10 subjects for each parameter in the logistic regression model to achieve some degree of model stability. To run a full model that also included anxiety, being in treatment at drug court intake, and chronic health problems, a total of 80 participants are needed.

[c]The referent category for this contrast was less than daily alcohol use. The interpretation of the coefficients, therefore, is the difference between the no alcohol use versus less than daily, and less than daily versus daily alcohol use, respectively.

[d]COD2 = two or more mental health problems at intake. This variable was excluded from analyses because of high multicollinearity with anxiety.

[e]This is a statistic used for comparing model fit. It represents subtracting the -2 Log Likelihood for the models being compared. The resulting value is distributed as a chi square with one degree of freedom. Whether the value achieved is statistically significant can be ascertained by examining a table showing critical value thresholds.

Logistic regression for predicting graduation from opioid court.

As shown in Table 3, a hierarchical series of logistic regression models were computed using the variables shown in the bivariate analyses to be significantly ($p < .05$) or marginally (p<.10) related to graduating from opioid court. The first model (model 1) presents findings for a logistic regression that included demographic variables only, and each subsequent model adds a different type/category of predictors (e.g., model 2 adds juvenile arrest record; model three adds alcohol use). Both unstandardized coefficients (B), odds ratios (OR), and the 95% confidence interval (CI) for each predictor is presented for each model iteration. The analyses were limited by the small sample size; for the current findings, the models become progressively less precise and more unstable in terms of their estimates of parameters and overall fit of each model.

Model 1 shows that health insurance was statistically significantly related to graduation (B = 1.3, Wald $\chi^2 = 4.85$, $p = .028$), with those who had insurance when they began opioid court were 3.7 times more likely to graduate than those who didn't. The wide 95% confidence interval (CI 1.2—11.9) shows some imprecision in the calculation of the B coefficient; but the confidence interval does not include 1, so there is some degree of certainty regarding the significance of this finding. Overall, this model provided an equivocal fit to the data, with insurance explaining about 10% of the likelihood that someone will graduate from opioid court. Model 2 added whether the participant had a juvenile arrest record, and this also was found to be a statistically significant predictor of graduation (B = -1.6, Wald $\chi^2 = 4.53$, $p = .028$). Those with a juvenile arrest record were 80% less likely to graduate from opioid court. In this model, having insurance remained a statistically significant predictor and overall, the model provided a nominal fit to the data (Cox and Snell $\chi^2 = .18$), explaining 18% of the variation in opioid court graduation.

Model 3 adds two alcohol use variables (i.e., no alcohol use and daily use) which set up orthogonal comparisons of these against less than daily alcohol use. Neither of these coefficients were statistically significant. Only having a juvenile charge remained a statistically significant predictor in this model, with having insurance no longer significantly related. For this model, the pattern of findings for insurance and alcohol use were similar to the findings from the preceding bivariate (and for insurance similar to the multivariable) analyses. The lack of statistical significance in the third model is likely the result of low statistical power due to the small sample size (n = 52) for this model. With the large 95% CI for multiple predictors, caution must be exercised in interpreting models 4 and 5; however, the valence (+ or -) of relationships is the same directional patterns supporting findings reported in the bivariate and multivariable analyses.

Table 4. Summary of Cox Proportional Hazards Regression for Prediction Retention in Opioid Court

Predictor	B	SE	Wald χ^2	Risk Ratio (RR)	95% CI for RR
Health Insurance	-.78	.36	4.72*	.46	[.23, .93]
Prior OWI Arrest	.59	.35	2.79†	1.81	[.90, 3.61]
Prior Disorderly Conduct Arrest	.32	.45	.48	1.37	[.56, 3.35]
No Alcohol Use[a]	.75	.65	1.60	2.11	[.59, 7.57]
<Less than Daily Alcohol Use[a]	.28	.57	1.53	1.33	[.44, 4.03]
2 or More Mental Health Problems	1.6	.71	1.56*	4.78	[1.18, 19.28]
In Treatment	-.35	.40	.79	.70	[.32, 1.53]

†$p < .10$; *$p < .05$

[a]The referent category for this contrast was daily alcohol use. The interpretation of the coefficient, therefore, is the difference between the no alcohol use versus daily, and less than daily versus daily alcohol use, respectively.

Proportional hazards regression prediction program retention.

The final analytic step was to examine retention via a multivariable Cox Proportional Hazards regression for predicting the length of time spent in opioid court. When interpreting Cox regression, it is important to remember that a positive (+) coefficient predicts an increased hazards for drop out (i.e., worse retention/shorter stays in the program); whereas a negative (-) coefficient indicates a lower hazards of drop out (i.e., longer retention/longer stays in the program). Overall, model 4 was statistically significant ($\chi^2(7) = 291.57$, $p = .001$), with two predictors reaching significance. Having health insurance at program intake was found to be associated with better retention (B = -.78, $p = .03$). Participants with 2 or more mental health problems were found to have poorer retention (B = 1.56, $p = .028$); however,

caution in interpretation of the findings is suggested due to the wide CI. Finally, participants with a history of OWI had marginally poorer retention (B = .59, p = .094).

Limitations

Although our study advances the dearth of literature on opioid courts, it was based on a cross-sectional sample of opioid court participants limited to one county in one state. Moreover, there was little variation in the participant characteristics with most being male, white, younger, not married, and fairly educated. Thus, caution should be exercised in generalizing these findings to all OUD offenders in opioid courts. In addition, due to the small sample size, low statistical power was evident, making it difficult to detect anything other than a large effect size; this may lead to Type II errors so that significant relationships may not have been identified. This was, however, offset to some degree by reviewing the Odds Ratios as measures of effect size, as well as the 95% confidence intervals. One obvious improvement for future evaluations is to add more participants to improve model precision and stability. However, as opioid courts are relatively new and few in number, small sample sizes are likely to be a limitation of opioid court research for the near future.

In addition, while we recognize that the data are older, this study was conducted at a critical time when the opioid epidemic was marking a new wave with the change from prescription opioids to heroin and subsequent increase in overdose deaths. Thus, these courts were responding to participants with different and additional risk factors including IV drug use (NIDA, 2018). Waukesha was also likely one of the first modified drug courts to exclusively serve opioid dependent participants. Therefore, our findings provide a greater understanding of modified drug courts for opioid users, which remains sorely limited and provides a baseline against which researchers may compare their own results and examine changes over time. Lastly, for participants who reported using MAT, we were not able to ask the type of drug used; this would have been interesting to consider in relation to outcomes.

Summary and Discussion

Increasing numbers of opioid users are entering our court systems; one response has been the development of opioid-specific treatment courts. Because they are relatively new and few in number, we have little information about these courts or their participants. The current study adds to our knowledge of opioid courts by exploring individual participant characteristics and how these factors may influence graduation and retention outcomes. At the bivariate level, sociodemographic variables (e.g., race, education, employment) typically related to retention and graduation in drug court (Hepburn & Harvey, 2007; Shaffer et al., 2008), were not statistically significantly associated with these outcomes. We did, however, find marginally significant relationships in that women and younger participants were likely to be retained longer in the program. But, as we explain below, whether length of stay in a specialty court is a beneficial finding or not is complicated. Overall, these findings suggest that there may be distinct differences between participants in opioid courts and those in drug courts and, as such, there may be different predictors of program outcomes.

The only sociodemographic variable to reach statistical significance was having health insurance. We found participants with health insurance had longer stays in the court and were more likely to graduate. This supports a survey of treatment court professionals that identified resource gaps and unmet needs of participants; respondents voiced concerns that a lack of insurance and limited access to behavioral health providers resulted in poorer outcomes (Easter et al., 2021).

Having health insurance could represent stability through family support and/or employment which could also be motivating factors for therapeutic engagement and ultimately, graduation. Indeed, knowing that many parents were the providers of their adult children's insurance is an indicator of participants having more familial networks and resources, demonstrating higher degrees of social capital. Moreover, having insurance likely provides participants with access to beneficial health and medical services both in and outside of opioid court. As mentioned, methadone and buprenorphine were only available to participants through their health insurance, limiting options for the uninsured participant. Finally, having an insurer pay some or all of one's health care costs may allow participants the stability to focus on their treatment rather than on financial concerns.

Some criminal history variables were related to the outcome variables at the bivariate level. Unsurprisingly, participants with an earlier history of offending (i.e., having an official juvenile arrest record) were statistically significantly less likely to graduate. Indeed, more extensive criminal backgrounds have been associated with negative CJ outcomes (Houser et al., 2019). In addition, participants with arrests for OWI and/or disorderly conduct offenses had shorter rates of retention, though the relationships were only marginally significant.

Bivariate results related to substance use and treatment variables may appear contradictory. For example, concurrent drug use was marginally associated with longer stays in opioid court; yet one may expect that a user of multiple drugs would be more apt to drop out. Understanding the way individuals progress through specialty courts may provide some context. Because court teams are trained to understand addiction as a medical condition (Davis & Cates, 2017), participant setbacks are handled differently than in traditional courts (Thompson et al., 2007). By way of example, participants in specialty courts who continue to use substances may be required to remain longer in a program phase, while a participant in a traditional probation program may receive a probation violation or jail time. Thus, an opioid court participant who is struggling may remain in the program longer indicated by higher rates of retention as they continue in the recovery process. At the same time, the related finding that participating in substance use treatment at the point of opioid court entry was related to longer retention coincides with a longer recovery process and the benefit of the continuity of treatment model (Hiller et al.,1999).

The final bivariate results demonstrated that opioid court participants with anxiety and/or two or more mental health problems were less likely to graduate. This result is unsurprising given that having a co-occurrence of a mental health disorder is more likely to hinder recovery and is often associated with lower treatment completion rates and poorer medication compliance (Lehman et al., 2000; Peters et al., 2008). At the same time, although not statistically significant, participants who reported having a chronic medical problem had

better graduation outcomes. Perhaps the opioid court team was not properly trained to help with complex psychological needs, while they were able to provide more basic support and referrals for those with physical health issues. Indeed, Pinals et al. (2019) report that treatment court personnel often express a lack of skills and limited guidance with which to respond to populations with both substance use and mental health disorders. These findings demonstrate the importance of assessment for mental health disorders with a concomitant focus on integrated treatment services, which are considered essential to successful treatment outcomes (Hills, 2000). Indeed, treatment specialists argue that the failure to address both disorders is equivalent to offering no treatment or could even have iatrogenic effects (SAMHSA, 2009). This is important as recent estimates suggest 64% of adults with OUD report a co-occurring mental illness in the past year (Jones & McCance-Katz, 2019). Moreover, Carey's (2021) study of the Buffalo OIC found that participants were more likely to have been treated for mental illness and to have experienced trauma than a matched group of defendants in jail prior to the start of the OIC.

Multivariate findings provide a further understanding of participant characteristics that help predict opioid court graduation. Health insurance and juvenile arrest records were both found to demonstrate a statistically significant relationship with graduation. As was found at the bivariate level, the participants who did not have health insurance and those who had been arrested as juveniles were the least likely to successfully complete the opioid court program. Indeed, the model that included only these predictors explained nearly 20% of the variance in graduation.

Two important areas of focus are highlighted by this research which may help to improve the performance of opioid users in specialty courts: 1) better healthcare access and services, and 2) extra support and ancillary provisions for the most challenging offenders. For example, the value of having health insurance underscores the fact that those without it may have been at a disadvantage as additional health care and related services could have served to improve overall life circumstances including better opioid court outcomes. Our findings further suggest that participants with official justice involvement beginning at a younger age, and those with more complicated clinical pictures (e.g., two or more mental health disorders occurring with a substance use disorder) may benefit from receiving additional services. Our results reinforce the need for a more proactive approach to identify and respond to opioid court participants who may face the most barriers to success. Additional programming and support for myriad issues may also improve the primary problem, in this case, OUD. Indeed, ancillary assistance through medical, trauma, housing and family support services are considered an essential element of OICs (CCI, 2019). While this approach would be ideal for all participants, ongoing budget constraints and limited resources may require courts to focus on those at the greatest risk for failure. Nevertheless, opioid courts must be prepared to provide all participants with the tools, services, and support they need so they can realistically achieve otherwise extremely challenging goals.

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