

Understanding Beliefs About Medications for Opioid Use Disorder: Insights from Florida Problem-Solving and Dependency Court Staff & Judges (2019-2020)

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Summary

This pilot study examined medications for opioid use disorder (MOUD) beliefs among Florida problem-solving court staff, assessing changes over time and the impact of MOUD training. Surveys conducted in 2019 and 2020 measured agreement with 33 MOUD-related statements. Sign tests compared pre/post-training beliefs for participants completing both surveys, while Mann-Whitney U tests compared beliefs between trained and untrained respondents. Among those trained and surveyed in both years, some significant shifts occurred in agreement for two statements. Trained staff in 2020 held significantly more positive beliefs on two statements than untrained staff. These findings suggest modification of MOUD beliefs is possible.

INTRODUCTION

Opioid use disorder (OUD) is a deadly, chronic health condition. Between 1999 and 2017, opioid overdose mortality rates in the US increased over 400% (Hedegaard, Miniño, & Warner, 2021). More than 80,000 people in the US died of opioid overdose during the twelve months preceding January 2023 (Ahmad, Cisewski, Rossen, & Sutton, 2023). Medications for opioid use disorder (MOUDs), including buprenorphine, methadone, and extended release (XR) naltrexone, are associated with reduced risk of return to drug use, overdose, and criminal activity among people with OUD (Bukten et al., 2012; Molero et al., 2018). For example, MOUD cuts the risk of death from overdose among people with OUD by approximately half (Santo et al., 2021). Expanding MOUD access to justice-involved populations is a public health priority because justice-involved populations have higher rates of OUD (12-15%) than the general population (2.2%) (Substance Abuse and Mental Health Services Administration, 2023). Justice-involved populations are also at higher overdose risk than the general population, especially after release from carceral settings (Binswanger et al., 2013; Strang et al., 2003). Unfortunately, only 5% of people with OUD in the justice system receive MOUD (Krawczyk et al., 2017).

Problem-solving courts are designed to address the underlying behavioral causes of crime through mandated treatment, hearings, drug testing, and other services. Despite such an orientation, only approximately one-quarter of problem-solving court participants with OUD in counties with high overdose rates receive MOUD (Marlowe, Theiss, Ostille, & Carnevale, 2022). Therefore, approximately three-quarters of problem-solving court participants may be at an unnecessarily elevated risk of overdose death (Marlowe, Theiss, Ostille, & Carnevale, 2022). Furthermore, people who do not successfully complete problem-solving court may face severe negative legal consequences, such as a return to traditional courts for sentencing or incarceration. Access to effective substance use disorder (SUD) treatment, like MOUD, could improve court program graduation rates, including among racially minoritized populations – a population with historically low court program graduation rates (Cheesman, Marlowe, & Genthon, 2023; Galagher et al., 2018).

Several explanations exist for low MOUD referral rates among problem-solving courts. They include negative court staff beliefs about MOUD, the associated costs, a limited supply of MOUD providers in some communities, and court policies or practices favoring non-medication treatments for OUD (Andraka-Christou, Gabriel, & Silverman, 2019; Finlay et al., 2020; Friedman et al., 2012; Matusow et al., 2013; Streisel, 2018).

As the US continues to grapple with the ongoing opioid overdose crisis, and policymakers routinely recommend problem-solving courts as an alternative to incarceration, the field needs significantly more knowledge about how to improve court staff beliefs about MOUD. Furthermore, it is unclear whether certain beliefs are more amenable to change than others (e.g., beliefs based on value judgments). To help address these research gaps, we conducted two online surveys with Florida court staff to understand better how MOUD beliefs among court staff may change over time and the impact of receiving MOUD educational training.

METHODOLOGY

Study Design

Our pilot study surveyed primarily non-clinical problem-solving and dependency court staff in 2019 and 2020. The surveys were the same in both years, with the addition of one question in the 2020 version. In 2020, we asked if court staff had received any MOUD training in the past year. With this information, we were able to examine whether training in MOUD affects court staff beliefs. Specifically, for respondents who completed both the 2019 and 2020 surveys and indicated that they had received MOUD training in the 2020 survey, we used a one-group, pretest-posttest design with a sign test to compare changes in beliefs about MOUD before and after training. Additionally, we wanted to know how beliefs differed between those who received MOUD training and those who had not. Therefore, we also compared these two groups on their responses from the 2020 survey.

Ethics

The research was approved as exempt by the Institutional Review Board at the University of Central Florida. All participants were provided with an explanation of the research at the beginning of the survey with a waiver of written consent, as the study was deemed not to exceed minimal risk.

Instrument Development

We developed two versions of an online survey for primarily non-clinical problem-solving court and dependency court staff – one for use in 2019 and one in 2020. Both surveys assessed agreement with 11 statements about each of three MOUDs (methadone, buprenorphine, and extended-release (XR) naltrexone; a total of 33 statements) using a Likert scale, with additional options of “I don’t know” and “I choose not to answer”. Statements about MOUD were derived from an instrument previously used by Matusow et al. (2013), with the addition of some questions reflecting concerns specific to Florida courts that had arisen during our conversations with the Florida Office of the State Courts Administrator (OSCA) and preliminary qualitative work. Both surveys also included questions about the respondents’ court roles (e.g., judge, court coordinator, treatment provider), types of court (e.g., adult drug court, veterans court), and basic demographic information. If court staff worked in more than one type of court, they were asked to answer questions concerning the court in which they spent the most time. The 2020 survey included the same questions as the 2019 survey, except for one additional question about MOUD training: “Which of the following trainings about medication-assisted treatment (MAT) have you received in the last 12 months (if any)? Mark all that apply.” Selection options for this question included the following: 1) Office of the State Courts Administrator webinars during August/September 2020 about MAT; 2) Office of the State Courts Administrator MAT e-learning module in the learning management system (i.e., animated videos, interactive games); 3) Other training from the Office of the State Courts Administrator about MAT; 4) National Association of Drug Court Professionals conference session about MAT; 5) MAT training provided by a treatment professional associated with my court (e.g., webinar, in-person training); 6) MAT training provided by a representative from a pharmaceutical company (e.g., representative visiting your court, conference presentation); 7) other MAT training; and 8) I have not received any MAT training in the last 12 months. We referred to MOUD as “MAT” because piloting had revealed greater familiarity with the latter term among court staff. See selected questions from the survey in Appendix A.

Data Collection

In the summer of 2019, as part of a larger study, the research team received email addresses for all court staff working in problem-solving courts and dependency courts from OSCA, which oversees Florida courts. Problem-solving courts included adult drug courts, juvenile courts, mental health courts, veterans’ courts, family dependency drug courts, and driving under the influence courts. We also recruited general dependency courts, as their court staff mandate treatment for parents who have lost custody due to drug use. Previous literature has found substantial increases in the proportion of child removal cases involving parental OUD – cases typically managed in traditional dependency courts in Florida, as Florida only has thirteen family dependency drug courts (Florida Office of the State Courts Administrator, 2023; Partick, Frank, Mcneer, & Stein, 2019).

The research team then sent an email through Qualtrics to each court staff member with a unique access code for the survey (N=585). Up to three email reminders were sent to those who had not completed the survey, with the survey remaining open for two weeks. A

total of 121 individuals responded in 2019 (21% response rate). In the summer of 2020, we sent the survey through Qualtrics to the same individuals who were contacted in 2019, plus the additional contacts that were added to the contact list (n=642). Additionally, OSCA sent a recruitment message to court staff statewide on our behalf in 2020. A total of 72 individuals responded in 2020 (11% response rate). Of the 121 staff members who responded to the 2019 survey, only 30 (25%) responded to the survey in 2020. Of these, 28 participated in some type of MOUD training between 2019 and 2020.

Data analysis

Descriptive statistics were calculated to describe the data for the 2019 and 2020 survey responses. We used a sign test to compare beliefs before and after training for respondents who received training and completed the survey in both years. For those who responded only in 2020, we used a Mann-Whitney U test to compare MOUD beliefs between those who received MOUD training and those who had not. Due to the risk of family-wise error rates, we report significant results with a conservative significance level of $p < .01$.

RESULTS

Participants

Our first sample (S1) consisted of 28 individuals who took the survey in 2019 and 2020 and received MOUD training in between. The second sample (S2) included 72 individuals who responded in 2020.

The most common type of court environment in which respondents worked were adult drug courts (S1: 46.43% and S2: 40.3%) and general dependency courts (S1: 17.9% and S2: 19.4%). The most common role indicated by respondents in S1 was court administrator (46.4%) and judge in S2 (34.7%). There were no significant differences in respondent characteristics between the two samples; however, there was a slightly higher percentage of female respondents in S1 compared to S2 ($\chi^2(1) = 3.763, p = .052$). See Table 1 for complete respondent characteristics.

Table 1. Sample Characteristics

	2019 & 2020 with Training (Sample 1)	2020 Only (Sample 2)	2019 Sample
Court Type			
Adult Drug Court	46.4%	40.3%	35.1%
Early Childhood Court	7.14%	4.17%	9.0%
Family Dependency Drug Court	3.6%	1.4%	3.6%
General Dependency Court	17.9%	19.4%	24.3%
Juvenile Drug Court	3.6%	2.8%	4.5%
Other Court	17.9%	22.2%	15.3%
Veterans Court	3.6%	9.7%	7.2%
DUI Court	0%	0%	1.0%
Court Role			
Administrator/manager/coordinator	46.4%	34.7%	25.5%

Court case manager	10.7%	8.3%	12.7%
Judge	28.6%	41.6%	37.3%
Other*	14.3%	15.3%	24.5%
Other Characteristics			
Female	89.3%	70.8%	81.1%
Court in urban/mostly urban area	78.6%	70.8%	64.9%
<i>Observations</i>	28	72	111

* “Other” role category includes judicial assistants, mental health or substance use counselors, probation or parole officers, defense attorney, and Department of Children & Families Attorney.

Receipt of MOUD training

In the 2020 survey, 83.3% of respondents reported receiving at least one type of MOUD training during the last 12 months. Table 2 shows the percentage of respondents reporting each type of training received. These percentages are not mutually exclusive, as respondents could indicate they had attended multiple training courses. The most frequently selected types of MOUD training were (a) training provided by a treatment professional associated with the court and (b) webinars by the OSCA in 2020.

Table 2. Percent Distribution of Types of Medications for Opioid Use Disorder Training Selected by Sample

Types of MOUD Training*	2019 & 2020 with Training (Sample 1)	2020 Only (Sample 2)
Treatment professional associated with court	53.6%	41.1%
OSCA webinars	57.1%	41.1%
NADCP	50%	37%
Other from OSCA	57.1%	31.5%
OSCA MAT E-learning module	35.7%	23.2%
None	0%	17.8%
Pharmaceutical company	28.6%	16.4%
Other	46.4%	13.7%

* Respondents could select more than one training

Changes in beliefs after MOUD training

We examined how MOUD beliefs changed after receiving MOUD training using a single-group pretest-posttest design. This sample included respondents who completed the survey in both years and indicated they had received training within 12 months prior to the 2020 survey ($n = 28$). Those who responded “I don’t know” or “I choose not to answer” for an item in either year were not included in the analysis for that belief. There were significant changes in the level of agreement for only two of the 34 statements about MOUD after attending at least one MOUD training session. Respondents were *more* likely to agree that methadone prescribers should have a titration plan ($T = 11, p = 0.006$) and *less* likely to agree that it is difficult for a parent to regain custody of a child while the parent is treated with

buprenorphine ($T = 1, p = 0.003$). Table 3 shows the group medians and statistics from the sign test for differences in MOUD beliefs.

Table 3. Differences in Methadone (M), Buprenorphine (B), and Naltrexone (N) beliefs before and after MOUD training using Sign Test

Belief	Grouped Median before Training (sample size)			Grouped Median after Training (sample size)			T		
	M	B	N	M	B	N	M	B	N
MOUD reduces relapse	4.11 (28)	4.29 (27)	4.57 (25)	4.46 (28)	4.54 (27)	4.61 (25)	9	9	6
MOUD reduces crime and re-incarceration	3.91 (25)	4.12 (25)	4.50 (23)	4.06 (25)	4.29 (25)	4.42 (23)	5	7	7
MOUD rewards criminals for being drug users	1.65 (28)	1.67 (27)	1.39 (26)	1.55 (28)	1.41 (27)	1.30 (26)	4	1*	3
MOUD prolongs addiction	2.80 (26)	1.88 (25)	1.23 (23)	2.18 (26)	1.68 (25)	1.30 (23)	4	3	4
MOUD should be used to maintain clients who have opioid use disorder	3.58 (27)	4.17 (26)	4.26 (26)	3.88 (27)	4.35 (26)	4.64 (26)	8	8	9
MOUD is more effective than non-pharmacological approaches (e.g., counseling) to retaining clients in treatment	2.83 (23)	2.80 (24)	2.83 (23)	3.46 (23)	3.63 (24)	3.14 (23)	8	11	6
MOUD interferes with one's ability to drive a car	3.36 (18)	2.47 (20)	1.64 (17)	3.11 (18)	1.80 (20)	1.29 (17)	3	3	1
MOUD reduces or blocks the effect of heroin	3.91 (22)	4.39 (22)	4.79 (19)	3.60 (22)	4.39 (22)	4.83 (19)	6	4	2
In Florida, it is difficult for a parent to regain custody of a child while the parent is treated with MOUD	3.00 (19)	2.78 (19)	1.77 (20)	2.00 (19)	1.67 (19)	1.37 (20)	3	1**	1*
People should be allowed to access MOUD without counseling	1.39 (28)	1.38 (28)	1.45 (27)	1.68 (28)	1.65 (28)	1.79 (27)	8	8	1 1
MOUD prescribers should have a titration plan for each patient	3.09 (25)	3.13 (22)	2.86 (22)	4.25 (25)	4.15 (22)	3.56 (22)	11**	8	8

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

Associations between training exposure and MOUD beliefs in the 2020 sample

We also examined how later MOUD beliefs differed between those who received MOUD training and those who did not. This sample included the 72 participants who completed the 2020 survey, but those who responded “I don’t know” or “I choose not to answer” for a particular belief were not included in the analysis for that belief. We found statistically significant differences between the group that had received training and the

group that had not received training for only two of the 33 MOUD statements. Respondents who received MOUD training were *more* likely to agree that buprenorphine ($U = 353.5, p = 0.006$) and XR-naltrexone reduce relapse ($U = 329.0, p = 0.013$). Table 4 shows the group medians and statistics from the Mann-Whitney U for differences in MOUD beliefs.

Table 4. Differences in Methadone (M), Buprenorphine (B), and Naltrexone (N) beliefs by receipt of MOUD training using Mann-Whitney U Test

Belief	Grouped Median for Control group (sample size)			Grouped Median for Training group (sample size)			U		
	M	B	N	M	B	N	M	B	N
	MOUD reduces relapse	3.83 (8)	3.40 (8)	4.00 (8)	4.42 (59)	4.51 (57)	4.66 (56)	331.5*	353.5**
MOUD reduces crime and re-incarceration	3.00 (7)	3.40 (7)	3.83 (8)	3.94 (57)	4.20 (56)	4.36 (53)	293.0*	281.0	281.5
MOUD rewards criminals for being drug users	1.83 (9)	1.86 (10)	1.57 (9)	1.40 (59)	1.39 (59)	1.38 (57)	202.0	213.0	221.0
MOUD prolongs addiction	2.60 (7)	2.50 (8)	2.50 (7)	2.30 (59)	1.88 (56)	1.61 (54)	191.5	180.0	106.5
MOUD should be used to maintain clients who have opioid use disorder	3.50 (7)	3.67 (9)	4.00 (6)	3.97 (58)	4.38 (56)	4.64 (56)	255.5	339.5	228.0
MOUD is more effective than non-pharmacological approaches (e.g., counseling) to retaining clients in treatment	3.17 (7)	2.86 (9)	3.50 (9)	3.50 (55)	3.88 (51)	3.58 (53)	230.5	284.5	223.5
MOUD interferes with one's ability to drive a car	3.67 (4)	3.00 (4)	2.67 (4)	2.69 (45)	1.81 (48)	1.44 (43)	255.5	48.5	32.0*
MOUD reduces or blocks the effect of heroin	3.93 (4)	3.33 (4)	4.00 (7)	3.33 (53)	4.32 (53)	4.70 (45)	132.0	161.0	216.5
In Florida, it is difficult for a parent to regain custody of a child while the parent is treated with MOUD	3.43 (8)	2.50 (7)	2.50 (6)	2.70 (42)	2.08 (44)	1.65 (43)	130.0	136.0	91.0
People should be allowed to access MOUD without counseling	1.63 (10)	1.86 (10)	1.71 (9)	1.49 (57)	1.56 (58)	1.58 (57)	265.5	251.5	241.0
MOUD prescribers should have a titration plan for each patient	4.57 (9)	4.33 (9)	4.43 (8)	4.32 (56)	4.11 (54)	4.03 (50)	222.0	216.0	153.5

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

Discussion

Our pilot study yielded some notable findings about the relationship between primarily non-clinical court staff MOUD training and their MOUD beliefs. Mainly, we found that not only can court staff beliefs change, but they can do so in a short period of time (i.e., 12 months). Historically, it has been believed that an individual's opinions are difficult to change, especially regarding stigmatized topics (Wyer & Albarracin, 2005). Specifically, with regard to MOUDs, studies have shown that court staff hold many misconceptions and negative attitudes toward them (Andraka-Christou & Atkins, 2020; Andraka-Christou, Gabriel, Madeira, & Silverman, 2019; Matusow, et al, 2013). However, one approach to improve court staff beliefs about MOUD is through targeted training (Andraka-Christou & Atkins, 2020; Andraka-Christou & Atkins, 2021). To our knowledge, only two peer-reviewed studies have specifically examined MOUD training effects among problem-solving court staff, both suggesting training-related improvement in MOUD beliefs, with gains diminishing over time (Matejkowski, Dugosh, Clements, & Festinger, 2015; Matusow, Rosenblum, & Fong, 2021). However, neither study examined changes in beliefs over a 12-month period or used multiple analysis techniques.

A strength of our study is the use of two separate types of analysis to address our research question: (1) a pretest-posttest of MOUD beliefs for those who participated in MOUD training between the two surveys and (2) a posttest-only of MOUD beliefs between those who did and did not receive MOUD training in the year prior to 2020. While neither design allows us to draw strong causal conclusions, the congruent results from both designs preliminarily suggest that MOUD training may affect some MOUD beliefs. Furthermore, we adjusted our significance level to 0.01 to account for the risk of family-wise error rates. Therefore, the results reported are conservative. Future studies with stronger causal designs should further explore this research question. Another strength of our study is the focus on non-clinical court staff who were unlikely to have received MOUD training as part of their undergraduate or graduate education (e.g., in criminology or juris doctoral studies). Most court staff are not clinical in problem-solving and dependency courts. Lastly, it is also important to note that many of the medians improved from 2019-2020, even though they did not reach our conservative statistical significance. The lack of significance is likely in part driven by the small sample size, but the improvements signal (limitations notwithstanding) that training may improve MOUD beliefs.

Importantly, our results suggest that MOUD training may not influence all beliefs about MOUD. In both of our analyses, we only found significant changes in two MOUD beliefs each. Furthermore, none of these were the same beliefs; that is, the changed beliefs in the first design were not the same beliefs for which we found differences between groups in the second design. Given the number of beliefs that we tested, it is possible that these were significant by chance, or the low sample sizes in the first design under-powered the sign tests. Another consideration is that some beliefs are more amenable to training effects than others; alternatively, the training may have focused on only certain types of myths/issues to the exclusion of others. Many of these limitations are difficult to establish since our study was limited by heterogeneity in the types of training respondents were exposed to. We did not control the MOUD intervention; respondents could have participated in one (or more) of several training opportunities. Future work should more carefully examine whether certain

types of beliefs require specific approaches to training (e.g., content, delivery method) or “dosages” of training (e.g., length of single training; number of trainings). Additionally, the effect of continued training should also be explored, as studies have demonstrated diminished gains from trainings over time (Matejkowski, Dugosh, Clements, & Festinger, 2015; Matusow, Rosenblum, & Fong, 2021). It is also noteworthy that in the first analyses, while one of the beliefs became more positive toward MOUD after training, one belief became more negative. Specifically, after training, court staff were more likely to agree that methadone providers should have a methadone titration plan from the beginning of treatment – possibly suggesting that training led court staff to see methadone as a short-term versus long-term treatment or view the long-term use of methadone as an undesirable form of treatment. The scientific evidence, however, is strong that long-term methadone treatment yields better health outcomes than short-term treatment (Brorson, Arnevik, Rand-Hendriksen, & Duckert, 2013; Dobler-Mikola et al., 2005; Shi et al., 2007). Therefore, while our results suggest that MOUD training may make some beliefs about MOUD more positive among non-clinical court staff, researchers and advocates should not assume that all training will be beneficial. Instead, careful attention should be paid to the content of any MOUD training, to reduce inadvertent introduction of inaccurate or negative MOUD beliefs.

Our study has several limitations. First, the response rate to the survey was relatively low, especially in 2020, perhaps because the courts were contending with COVID-19. However, the literature supports the use of survey results with this level of response rate; therefore, we were not unduly concerned (Dillman, et al., 2009; Lindquist & Fahrney, 2011; Pickett et al., 2018). Also, the reported response rate may not be entirely accurate. We did not receive an updated court staff contact list in 2020; therefore, recruitment and response rate calculations in 2020 relied on the 2019 contact list. Second, the data were based on self-reports, which are susceptible to inaccurate recollections and estimates (e.g., with respect to training received) and social desirability biases. Third, there may be a lack of independence between respondents who are from the same court. For example, respondents in the same court may have similar beliefs and be exposed to similar training. Fourth, the sample size for the pretest-posttest analysis is relatively small, which may have underpowered the Mann-Whitney tests. Also, it is possible that the 2019 sample may have had prior training, which may be why we saw small effects in our analyses. It is possible that the effect of training would be even larger with samples that have never been exposed to MOUD training. Additionally, we have very limited information about the nature of the training received (e.g., specific topics covered; depth) and no information about specifically when the training was received during the 12 months prior to the 2020 survey (e.g., one month prior to the survey versus eleven months); but prior research suggests that training gains may diminish over time (Matejkowski, Dugosh, Clements, & Festinger, 2015; Matusow, Rosenblum, & Fong, 2021). Finally, our sample combined court staff from both problem-solving courts and dependency courts, which are heterogeneous groups – with the latter focused on parent-child reunification and the former primarily focused on addressing SUD treatment issues that lead to criminal behavior. Nevertheless, despite the different focus in the two groups, SUD is a key cause of child removal in the state of Florida (Florida Courts, 2023), and therefore staff in dependency courts benefit from exposure to MOUD trainings, because they consider SUD treatment progress in reunification decisions.

Although our findings reveal limited statistically significant results and come with various limitations, they still underscore the potential for meaningful shifts in court staff's beliefs about MOUD. Thus, while acknowledging the constraints of this pilot study, its outcomes demonstrate a plausibility of affecting change and moving forward with a more robust sample size is essential to corroborate and expand upon these initial findings.

Conclusion

MOUDs serve as a crucial, life-saving intervention for individuals grappling with OUD, a demographic notably overrepresented within the justice system. This pilot study is one of the first to explore MOUD beliefs of predominantly non-clinical staff within problem-solving/dependency courts, exploring the impact of MOUD training on these beliefs. Our initial analysis indicates a potential impact of MOUD training on certain beliefs, while our subsequent examination suggests that court staff exposed to MOUD training harbor more favorable beliefs compared to their non-trained counterparts. Significantly, our findings posit that negative MOUD beliefs are not immutable, indicating a necessity for enhanced allocation of efforts and resources towards reshaping negative beliefs among court staff regarding MOUD. Furthermore, our study underscores the potential expediency of this belief transition, as evidenced by observable shifts within a relatively short timeframe (i.e., 12 months). Consequently, our findings suggest a substantial opportunity to effectuate meaningful changes within problem-solving court systems, thereby positively impacting individuals grappling with OUD within these settings.

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