

Buprenorphine Waiver Attitudes Among Primary Care Providers

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Abstract

Background: Despite efforts to improve access to Medications for Opioid Use Disorder (MOUD), such as buprenorphine, the number of opioid overdoses in the United States continues to rise. In April 2021, the Department of Health and Human Services removed the mandatory training requirement to obtain a buprenorphine waiver; the goal was to encourage more providers to prescribe buprenorphine, thus improving access. Little is known about the attitudes on buprenorphine prescribing after this policy change. **Objective:** The primary objective was to assess attitudes among primary care providers toward the removal of the buprenorphine waiver training requirement. A secondary objective was to identify other barriers to prescribing buprenorphine. **Methods:** We conducted a survey between September 15 and October 13, 2021 to assess the overall beliefs on the effectiveness of MOUD and attitudes toward the removal of the waiver training, current knowledge of buprenorphine, current practice styles related to screening for and treating OUD, and attitudes toward prescribing buprenorphine in the future. This survey was sent to 890 Mayo Clinic primary care providers in 5 US states. **Results:** One hundred twenty-three respondents (13.8%) completed the survey; 35.8% respondents agreed that the removal of the waiver training was a positive step. These respondents expressed a greater familiarity with the different formulations, pharmacology, and titration of buprenorphine. This group was also more likely to prescribe (or continue to prescribe) buprenorphine in the future. Approximately one-third (34.4%) of respondents reported perceived institutional support in prescribing buprenorphine. This group expressed greater confidence in diagnosing OUD, had greater familiarity with the different formulations, pharmacology, and titration of buprenorphine, and was more likely to prescribe (or continue to prescribe) buprenorphine in the future. Respondents who have been in practice for 11 to 20 years since completion of training were most likely to refer all OUD patients to specialists. **Conclusions:** Results of our survey suggests that simply removing the mandatory waiver training requirement is insufficient in positively changing attitudes toward buprenorphine prescribing. A key barrier is the perceived lack of institutional support. Future studies investigating effective ways to provide such support may help improve providers' willingness to prescribe buprenorphine.

Keywords

MOUD, OUD, buprenorphine, opioids, waiver training

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Background

The Covid-19 pandemic has exacerbated the opioid epidemic in the United States, which resulted in over 100 000 drug overdose deaths during a 12 month period ending in April 2021, the majority involved opioids.¹ Medications for opioid use disorder (MOUD), including methadone, buprenorphine, and naltrexone, have been shown to substantially decrease all-cause mortality and overdoses.^{2,3} Despite their proven efficacy and safety, MOUD, especially buprenorphine, continues to be underutilized.⁴ Approximately one-half of rural counties lack a buprenorphine prescriber.⁵ Among those with a buprenorphine waiver, only one-quarter of those are actively

prescribing this medication.⁶ The majority of patients with opioid use disorder (OUD) in the US are currently not receiving MOUD.⁷

In accordance with the Drug Addiction Treatment Act of 2000 (DATA 2000), clinicians are required to apply

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for a waiver in order to prescribe buprenorphine to treat OUD patients.⁸ Until recently, providers would have to undergo mandatory training in order to apply for a buprenorphine waiver; physicians were required to have 8 hours of training and advanced practice providers were required to have 24 hours of training.⁸ This training has been cited as one of the regulatory hurdles that has discouraged providers from applying for the waiver.⁷ Changes or removal of the waiver training was noted to be a potential facilitator to applying for the waiver.⁹ In April 2021, the Department of Health and Human Services removed the mandatory training requirement to prescribe buprenorphine.¹⁰ With this change, providers no longer need to take the mandatory training before they can apply for the waiver. The goal of this change was to simplify the waiver application process and to encourage more providers to start prescribing buprenorphine, thus expanding access to this important treatment.

Other previously cited barriers to prescribing buprenorphine include insufficient reimbursement, lack of knowledge and expertise, lack of time or interest, and a perception that patients with OUD may be “high maintenance.”¹¹⁻¹³ Some studies have identified logistical considerations surrounding prescribing including cumbersome regulations, inadequate office space and inadequately trained staff, as well as lack of institutional support and behavioral health resources.^{14,15} Provider concerns about “opening the flood gates” to OUD patients and beliefs about the usefulness of MOUD have also been identified as barriers.^{12,16-18} Multiple studies have reported stigma among healthcare providers against patients struggling with substance use disorder, which accounts for the hesitancy in prescribing MOUD.¹⁹⁻²² It is unclear if the recent removal of the buprenorphine waiver training requirement has changed attitudes toward some of these perceived barriers, especially among primary care providers who are at the forefront of the opioid epidemic.

This study is the first to assess primary care provider attitudes toward the removal of the buprenorphine training requirement, and whether this regulatory change has shifted attitudes toward buprenorphine prescribing in general. This is critically important in uncovering barriers beyond those that are related to waiver training.

Methods

Study Overview

The primary aim of this study was to assess attitudes toward the recent removal of the mandatory training to obtain the buprenorphine waiver, and the attitudes and practice patterns related to treating OUD patients with buprenorphine. Secondary aims of this study were to identify other barriers to prescribing buprenorphine, and whether practice patterns and attitudes toward buprenorphine prescribing are

associated with years in practice. To accomplish this, we designed and distributed a survey to all outpatient primary care providers at Mayo Clinic.

The survey assessed 4 domains: (1) attitudes on the effectiveness of MOUD and toward the removal of mandatory training requirements to prescribe buprenorphine; (2) current knowledge about buprenorphine and MOUD; (3) current practice patterns related to screening for and treating OUD; and (4) attitudes toward prescribing buprenorphine in the future and interest in education about MOUD. A separate section contained 2 case-based scenarios to further assess if respondents were able to accurately make a diagnosis of OUD.

This study was reviewed by the Institutional Review Board (IRB) at Mayo Clinic and was determined to be exempt under 45 CFR 46.101, item 2. During this study, all changes to the study design and procedures continued to be appropriately filed with the IRB.

Setting

Mayo Clinic and Mayo Clinic Health Systems is a non-profit healthcare organization with presence in 5 US States: Minnesota, Wisconsin, Iowa, Arizona, and Florida. There are 62 outpatient primary care clinics within the 3 Midwest States (Minnesota, Wisconsin, and Iowa), 4 outpatient primary care clinics in Jacksonville, Florida, and 6 outpatient primary care clinics in Scottsdale, Arizona. All outpatient primary care clinics consist of physicians and advanced practice providers (nurse practitioners and physician assistants) in Family Medicine and Internal Medicine. A total of 890 providers (staff physicians, resident physicians, and advanced practice providers) work in the above sites. The survey was electronically sent to all 890 Mayo Clinic primary care providers approximately 5 months after the removal of the buprenorphine training requirement on September 15, 2021.

Survey Content and Development

The survey was divided into the 3 sections of: (1) questionnaire assessing knowledge, skills, and practice patterns; (2) case-based scenarios; and (3) demographics.

The questionnaire section contained 4 domains. The first domain contained 17 items assessing attitudes on the effectiveness of MOUD and the removal of the buprenorphine waiver training requirement. The first item of this domain specifically asked respondents to rate their agreement/disagreement on whether the removal of the mandatory training to prescribe buprenorphine to treat OUD is a positive step. If respondents answered “strongly agree” or “agree” that removal of the waiver training is a positive step, the survey defaulted to asking respondents to select the

reason(s) why they agreed with the statement. If respondents answered “strongly disagree” or “disagree” that removal of the waiver training is a positive step, the survey defaulted to asking respondents to select the reason(s) why they disagreed with the statement. See Supplemental Material for a copy of the study survey. All other items in the first domain asked respondents to rate their level of agreement/disagreement on a 6-point Likert scale (“strongly agree,” “agree,” “neither agree nor disagree,” “disagree,” “strongly disagree,” “do not know”).

The second domain of the survey contained 7 items assessing respondents’ current knowledge of buprenorphine and MOUD. Respondents rated their level of agreement/disagreement using the same 6-point Likert scale as the first domain. The third domain of the survey contained 5 items assessing respondents’ current practice styles related to screening for and treating OUD. Respondents rated their level of agreement/disagreement using a 5-point Likert scale (“strongly agree,” “agree,” “neither agree nor disagree,” “disagree,” “strongly disagree”). The fourth domain of the survey contained 2 items assessing the respondents’ attitudes toward prescribing buprenorphine and improving knowledge of MOUD in the future. Respondents rated their level of agreement/disagreement using the same 6-point Likert scale as the first and second domains.

A second section of the survey contained 2 case-based scenarios to assess respondent ability to recognize OUD in their patients. Respondents were asked to determine if a hypothetical patient met the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition criteria for OUD.²³

The final section of the survey assessed respondent role (eg, physician, advanced practice provider, or others), specialty (internal medicine or family medicine), practice location, gender, age, and years in practice.

Pilot Testing

Eleven participants (3 registered nurses, 2 pharmacists and 6 physicians) pilot-tested the survey to provide feedback on wording, content, and length. The majority (9) of respondents took 5 to 20 minutes to complete the electronic survey; the other 2 respondents took less than 5 min to complete the survey. Survey items were not validated.

Survey Deployment

The final version of the anonymized electronic survey was sent to 890 primary care providers on September 15, 2021. The survey was open for a 4-week period (September 15-October 13, 2021), and email reminders were sent for uncompleted surveys 2 weeks, 1 week, and 48 hours before survey closing.

Data Analysis

SAS v9.4 was used to summarize all survey questions and conduct statistical analyses. Fisher’s exact tests were used to test for associations between pairs of survey question responses. These responses were predicted by agreement of removal of waiver training and institutional support using 2 separate logistic regression models adjusting for gender and type of provider (advanced practice providers versus physicians). *P*-values of less than .05 were considered statistically significant.

During data analysis, the choices “strongly agree” and “agree” were collapsed into one answer category, and the choices “strongly disagree” and “disagree” were collapsed into one answer category. In the domains where “neither agree nor disagree” and “do not know” were offered as answer choices, these 2 choices were also collapsed into one answer category.

Results

Demographic Characteristics

One hundred twenty-three responses were received (123/890; response rate 13.8%). The majority of respondents (61.7%) were physicians, worked in the department of Family Medicine (78.9%) and identified as female (59.1%). Most respondents practiced in the Mayo Clinic Health Systems (Table 1).

Attitudes Toward Changes in Mandatory Buprenorphine Prescribing Training

Forty-four respondents (35.8%) strongly agreed or agreed that the removal of the mandatory buprenorphine waiver training is a positive step toward opioid use disorder (OUD) treatment. The remainder of the respondents (79; 64.2%) did not express agreement to this statement.

Figure 1 displays the statistically significant comparisons between providers who strongly agreed/agreed and providers who did not agree that removal of training for buprenorphine is a positive step. A significantly higher percentage of respondents who agreed expressed greater confidence in diagnosing a patient with OUD ($P=.014$). In addition, a significantly higher proportion of these respondents reported a greater familiarity with currently available formulations of buprenorphine ($P=.015$), pharmacology of buprenorphine ($P=.015$), and titration of buprenorphine doses to treat OUD patients ($P=.001$). This group was also statistically more likely to prescribe (or continue to prescribe) buprenorphine to OUD patients in the future ($P=.003$). These associations held after accounting for provider gender and provider type (advanced practice providers versus physicians).

Table 1. Primary Care Opioid Use Disorder Treatment Survey Respondent Demographics (N= 123).

Current role	N (%)
Physician (MD/DO)	71 (61.7%)
Advanced practice provider (nurse practitioner or physician assistant)	43 (37.4%)
Other	1 (0.9%)
Missing	8
Specialty	
Internal medicine	23 (21.1%)
Family medicine	86 (78.9%)
Missing	14
Practice location	
Rochester	29 (25.2%)
Mayo Clinic Health System (satellite rural sites in Minnesota, Iowa, & Wisconsin)	72 (62.6%)
Arizona/Florida	14 (12.2%)
Missing	8
Gender	
Male	44 (38.3%)
Female	68 (59.1%)
Did not wish to answer	3 (2.6%)
Missing	8
Age	
26-40	39 (34.8%)
41-55	44 (39.3%)
>55	29 (25.9%)
Missing	11
Years since training	
1-5	25 (23.6%)
6-10	17 (16.0%)
11-20	30 (28.3%)
>20	34 (32.1%)
Missing	17

Perception of Institutional Support in Providing MOUD

Forty-two respondents (34.4%) perceived that their institution was supportive of them prescribing buprenorphine to treat OUD patients. As shown in Figure 2, a significantly larger proportion of these respondents expressed greater confidence in diagnosing OUD when compared to respondents who did not perceive institutional support ($P=.004$), and they endorsed greater familiarity with the different formulations ($P<.001$), pharmacology ($P=.001$), and titration of buprenorphine to treat OUD patients ($P<.001$). A significantly larger percentage of respondents who perceived institutional support also expressed greater familiarity with buprenorphine clinics and substance use resources in their communities ($P<.001$), were more likely to provide information about alcoholic anonymous or narcotic anonymous meetings to OUD patients ($P=.002$), felt that there is adequate continuing medical education already available to improve their comfort level in treating OUD patients with

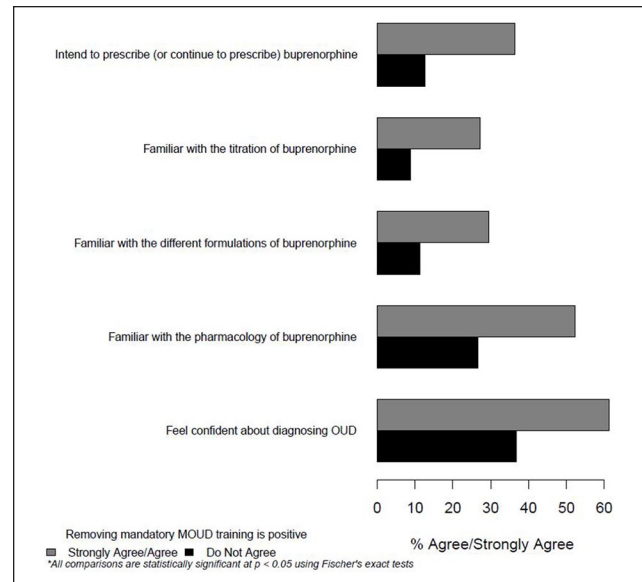


Figure 1. Comparison of knowledge, attitudes, and practice patterns between providers who strongly agree/agree and providers who do not agree that removal of training for buprenorphine prescribing is positive step (N= 123).

buprenorphine ($P=.001$), and intended to prescribe or continue to prescribe buprenorphine to OUD patients ($P<.001$). A greater percentage of these respondents felt that treating OUD patients is rewarding ($P=.002$), and that their clinic support staff also felt comfortable interacting with OUD patients ($P<.001$). These associations held after accounting for provider gender and provider type (advanced practice providers versus physicians).

Perception of MOUD and Referral Pattern Based on Years in Practice

A significantly larger percentage of respondents (62.1%) who have been in practice for 11 to 20 years since graduation from residency/fellowship training or NP/PA school reported referring all their OUD patients to specialists for management when compared to respondents with more and fewer years of experience (20.8% among those in practice for 1 to 5 years; 41.2% in practice for 6 to 10 years; 32.4% in practice for 20 or more years) ($P=.019$). This same group of respondents, however, unanimously (100%) disagreed with the statement that “MOUD is not the best treatment option for patients with OUD” (compared to 4% in practice for 1-5 years; 17.7% in practice for 6-10 years; 2.9% in practice for 20 or more years) ($P=.050$).

Case Scenarios

The majority of respondents (95.6%) were able to correctly identify that a hypothetical patient had OUD. The majority of respondents (92.1%) were also able to correctly identify

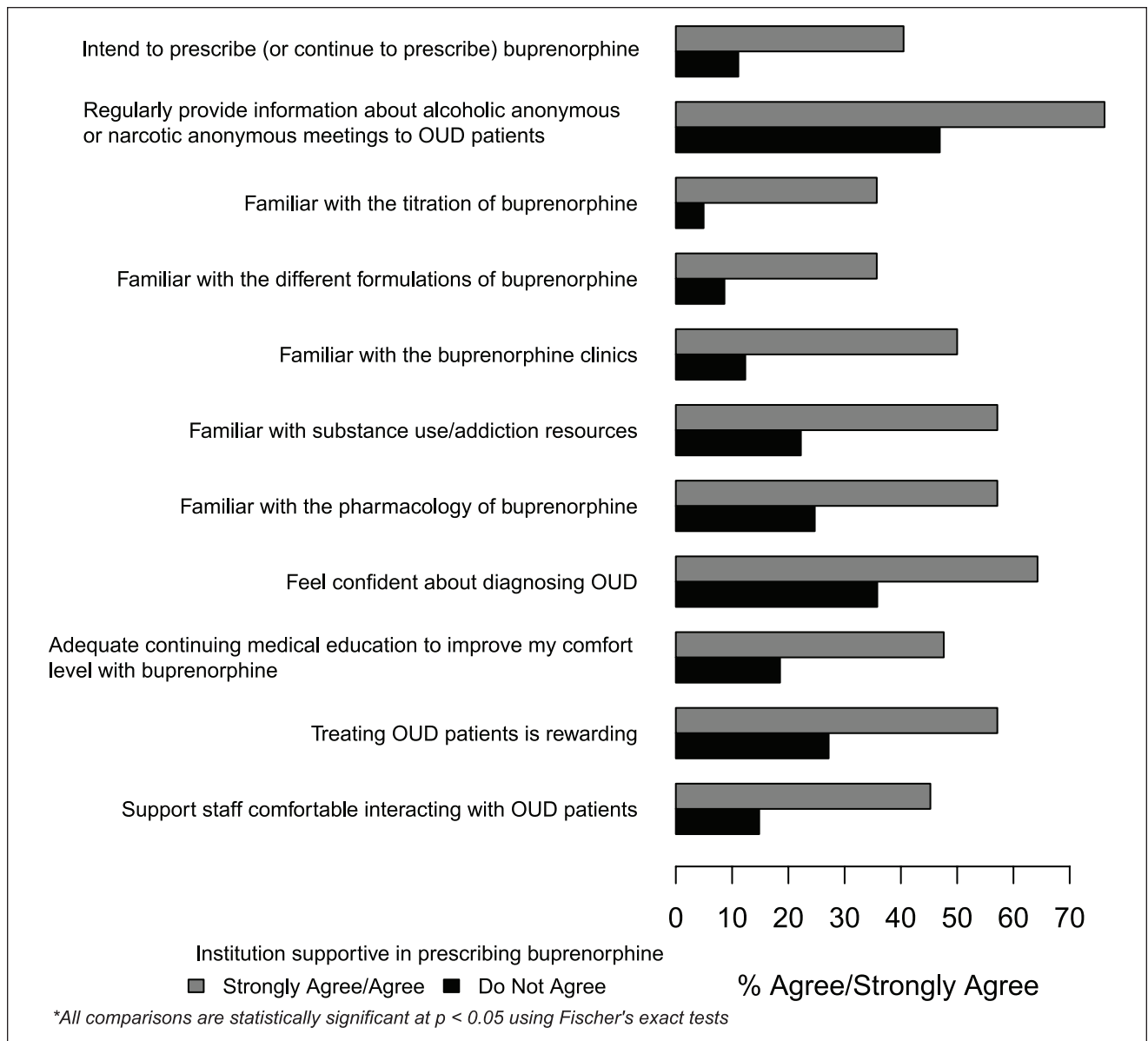


Figure 2. Comparison of knowledge and attitudes between providers who strongly agree/agree and do not agree that their institution is supportive of providing medications for opioid use disorder (N=123).

that a hypothetical patient did not meet diagnostic criteria for OUD.

Discussion

Training to obtain the buprenorphine waiver has been cited as a barrier to increasing access to MOUD.^{9,24,25} The removal of the mandatory waiver training in April 2021 should theoretically reduce this barrier and improve access to treatment. Our study demonstrates that only 35.8% of primary care respondents felt that the removal of this training was a positive step toward improving access. This group of respondents expressed greater confidence in diagnosing patients with

OUD and familiarity with the pharmacology of buprenorphine. They were also more likely to prescribe or continue to prescribe buprenorphine to OUD patients in the future.

Our findings suggest that a lack of familiarity with buprenorphine is associated disagreeing that removal of the mandatory training is a positive step. This is in line with previous studies showing that inadequate training, mentorship, and training are important barriers to buprenorphine prescribing.²⁶ Interestingly, in a recent study in which primary care providers were offered free and easily accessible training together with wrap-around support with experienced mentors, only a small number of those who completed the study went on to apply for the buprenorphine waiver, and

even fewer were prescribing buprenorphine 12 months after training.²⁷ This suggests that training and mentorship alone will not likely improve access to this lifesaving treatment.

Multiple previous studies suggest that a lack of institutional support pose as a significant barrier to prescribing buprenorphine.^{7,15,28} Our study findings are consistent with these previous observations. We observed that only one-third (34.4%) of respondents expressed agreement of perceived institutional support for them to prescribe buprenorphine to treat OUD patients. Among those who perceived institutional support, a higher percentage intended to prescribe or to continue to prescribe buprenorphine to OUD patients in the future.

Our study also demonstrates an association between perceived institutional support and a higher comfort level with buprenorphine, a greater familiarity with substance use disorder treatment resources in their practice community, perception of adequate continuous medical education opportunities related to MOUD, and greater sense of satisfaction in treating OUD patients. All our respondents work in the primary care setting for the same institution with similar policies, albeit in different geographic locations. Therefore, clinic-level or region-level factors may contribute to the perception of institutional support. Alternatively, perhaps providers who are already more knowledgeable based on previous training and experience, and who have a greater interest in MOUD already serve as local “champions” or “experts” for other colleagues, thus they may find such work more rewarding and perceive a higher level of institutional support. Future studies looking into the practice and provider characteristics between these 2 groups may be helpful to improve overall perception of institutional support.

Our survey shows that mid-career providers overwhelmingly felt that MOUD is an important treatment, and yet were most likely to refer all their OUD patients to specialists for management. This group of providers completed their training between 2001 and 2010. During this period, there was increased public awareness of overdoses and deaths related to prescription opioids, especially to oxycodone controlled-release (OxyContin) originally approved in December 1995.²⁹ By the early 2000s, multiple measures were put in place to address the opioid crisis in the United States, including inter-agency collaborations to modify warnings of prescription opioids, re-scheduling certain opioids, and the expansion of State Prescription Drug Monitoring Programs.^{29,30} It is possible that these changes made the greatest impression on trainees and clinicians in their early years of practice at that time given the media attention and the emphasis on the potential harms caused by prescription opioids. These providers, therefore, are more likely to recognize the importance of treating OUD patients but may also view this condition as one that requires specialty care given the complexity of legislative changes during that period.

Our study has several strengths. First, our survey was distributed and completed by primary care providers across a wide geographic location with adequate representation across years in practice, age, and urban/suburban/rural practice settings. Second, our survey is the first to examine the attitudes of primary care providers regarding the recent removal of the mandatory waiver training requirement to prescribe buprenorphine.

Our study was limited by the low response rate of 13.8%. Our study was conducted during the Covid-19 pandemic around the time when primary care providers were on the front line of the delta-variant surge in the United States which may explain our low response rate. In addition, we only surveyed primary care providers within our own institution; we did not survey providers in other specialty groups or those working in other institutions. Therefore, our observations may not be generalizable to all practice settings and could be limited by selection bias.

With a larger response rate, future studies could also evaluate differences in the perception of the removal of the mandatory waiver training based on urbanicity of practice. Future investigations on how best to improve perceived institutional support could also be of value given our findings demonstrating an association between institutional support and attitudes in buprenorphine prescribing.

We observed that only a minority of primary care clinicians endorsed that eliminating the mandatory training requirement for buprenorphine prescribing was a positive step in clinical care, and that knowledge of buprenorphine and practice patterns around OUD treatment were associated with this perception. We also observed that knowledge and attitudes regarding buprenorphine were influenced by perceptions of institutional support of OUD treatment. Future studies should explore how access to buprenorphine could be enhanced by leveraging institutional leadership support of MOUD.

Declaration of Conflicting Interests

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Supplemental Material

Supplemental material for this article is available online.

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