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## Preliminary survey of office-based opioid treatment practices and attitudes among psychiatrists never receiving buprenorphine training to those who received training during residency

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### Abstract

**Objective**—To compare the characteristics, attitudes, and current prescribing practices of recently graduating psychiatrists who completed buprenorphine training during residency to those who never completed any training..

**Methods**—A total of 359 psychiatrists completing residency training between 2008 and 2011 were recruited to complete an on-line survey.

**Results**—Responses from 93 psychiatrists were included for a response rate of 25.9%. Psychiatrists completing any buprenorphine training during residency were more likely to be male and report more favorable views of OBOT with buprenorphine than compared to those who never completed any training. Twenty (38.5%) of those psychiatrists who completed training during residency reported the current prescribing of buprenorphine.

**Conclusions**—Completion of buprenorphine training during residency may be a factor in shaping future attitudes towards OBOT and buprenorphine prescribing practices . Further research is needed to clarify the impact of buprenorphine training during residency.

**Scientific Significance**—Buprenorphine training during residency training may be a contributing factor in shaping future physician attitudes towards office-based opioid treatment and buprenorphine prescribing practices.

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## Keywords

Buprenorphine; opioid dependence; psychiatry residents; office-based opioid treatment; substance use disorder

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## Introduction

Opioid use disorders continues to be a major public health problem in the United States, with approximately 2 million persons over age 12 meeting criteria for opioid abuse or dependence in the past year in 2010 (1). Since 2002, physicians have had the ability to treat opioid dependence in office-based settings using buprenorphine, a muopioid partial agonist with demonstrated efficacy (2). To qualify, most physicians complete a training sponsored by designated medical societies before obtaining a waiver from the Drug Enforcement Administration (DEA) that permits prescribing (2). The training is an 8-hour course, either in-person, on-line, or a combination of both in-person and self-study. If offered with an in-person component, the training involves both didactic teaching and small group case discussions. As of 2009, 19,000 physicians had obtained the waiver, approximately 28% of those being psychiatrists (3,4).

Psychiatrists are well suited for office-based opioid treatment because of the training they receive in psychotherapy, and because opioid-dependent patients have high rates of co-morbidity with other psychiatric disorders. However, the available research has suggested that psychiatrists may be reluctant to prescribe buprenorphine. A survey of 1203 psychiatrists reported that 80.6% of general psychiatrists and 42.7% of addiction psychiatrists did not feel comfortable with office-based opioid treatment with buprenorphine (5). In a survey of 495 psychiatrists treating substance use disorders, only 4% of general psychiatrists were prescribing buprenorphine, compared to 63% of addiction psychiatrists (6). Among 235 physicians in Massachusetts who obtained the DEA waiver, primary care physicians were more likely to prescribe buprenorphine than psychiatrists (7).

In order to expand the number of psychiatrists trained to prescribe buprenorphine for opioid dependence (5), training in office-based opioid treatment (OBOT) is now increasingly being recommended for inclusion in psychiatry residency training. However, the impact of buprenorphine training during residency has not been examined previously. As such, the objective of this study was to compare attitudes about OBOT in psychiatrists who did and did not complete any buprenorphine training during residency.

## Methods

### Recruitment

The Partners Human Research Committee approved the study. The study population included psychiatrists who graduated from psychiatry residency programs in the United States between 2008 and 2011. Between August of 2011 and August of 2012, 183 psychiatry residency training programs were contacted by email to request either 1) that they send us the names and email addresses of residents who graduated their program between 2008 and 2011, or 2) that the training program contact their recent graduates on our behalf

for recruitment. If the program provided the names of recent graduates, a recruitment email was sent asking for participation in an anonymous survey about buprenorphine prescribing. Up to three reminder emails were sent at least a month apart to potential survey participants. If the training programs agreed to undertake the email recruitment, we sent reminder emails to the programs up to three times at least a month apart. The study was conducted in two phases. In the first phase, residency programs in the New England states were approached for inclusion in the study. Subsequently, the study was expanded to include the remaining psychiatry residency programs in the United States.

### Data collection

Potential participants received an email that contained a link to the on-line survey, created through [www.surveymonkey.com](http://www.surveymonkey.com). The survey asked a series of questions including demographics, history of buprenorphine training, current practice characteristics, attitudes about OBOT, and perceived barriers to prescribing buprenorphine. Attitudes about OBOT were obtained using a 4-point scale (1=disagree strongly, 2=disagree, 3=agree, 4=strongly agree). Respondents were asked to indicate their level of agreement or disagreement to each statement. Respondents were also asked to select barriers to prescribing that apply to them from a list (see **Table 1**). The survey was structured so that all responses remained anonymous. Respondents were offered a chance to win a \$100 gift card from [Amazon.com](http://Amazon.com), as part of a reward system administered through the on-line survey program.

### Data analysis

Descriptive statistics were used to summarize the results. Responses to the attitude items were dichotomized to either “agree” or “disagree”, by combining responses from “strongly agree” and “agree,” and combining responses from “strongly disagree” and “disagree.” Chi-square and Fisher's exact test were performed for categorical data analysis, and t-tests were used for continuous data analysis to compare variables between those psychiatrists who did and did not complete any buprenorphine course. Post-hoc, statistically significant differences in attitudes and barriers towards OBOT were re-analyzed using both prior buprenorphine training and gender as predictors in a regression analysis.

### Results

Of the 359 psychiatrists contacted to participate, 148 were contacted by their residency program and 211 were contacted by the study team. A total of 110 psychiatrists completed the survey. Seventeen were excluded because they did not graduate between 2008 and 2011. Ninety-three responses were included in the final analysis, representing a response rate of 25.9%.

The results are summarized in **Table 1**. Fifty-two reported completing at least one buprenorphine course during residency, 20 (38.5%) of whom reporting the current prescribing of buprenorphine. In contrast, 41 respondents did not complete any buprenorphine course during or after residency training, none of whom reported the current prescribing of buprenorphine. Those completing any buprenorphine course during residency were more likely to be male (50.0% vs 26.8%,  $\chi^2=5.24$ ,  $p=0.022$ ), and were more likely to

report confidence in treating opioid dependence (84.6% vs 46.3%,  $\chi^2=9.57$ ,  $p<0.001$ ), that opioid dependence is treatable (98.1% vs 75.6%, Fisher's  $p<0.05$ ), that buprenorphine is effective in treating opioid dependence (98.1% vs 75.6%, Fisher's  $p<0.05$ ), and that buprenorphine training should be offered to all psychiatry residents (100.0% vs 80.5%, Fisher's  $p<0.05$ ). Those completing any buprenorphine course were less likely to report that detoxification should be attempted prior to maintenance treatment (32.7% vs 51.2%,  $\chi^2=4.81$ ,  $p<0.05$ ).

Those completing any buprenorphine course during residency were less likely to report barriers to prescribing buprenorphine, including the desire to avoid attracting patients with opioid dependence to their practice (15.4% vs 34.2%,  $\chi^2=4.46$ ,  $p<0.05$ ), lack of training in treating addiction (15.4% vs 36.5%,  $\chi^2=5.54$ ,  $p<0.05$ ), concerns about diversion of medications (15.4% vs 36.6%,  $\chi^2=5.54$ ,  $p<0.05$ ), and low patient demand (1.9% vs 17.1%,  $\chi^2=7.18$ ,  $p<0.05$ ). In our post-hoc analysis controlling for gender, the desire to avoid attracting patients with opioid dependence ( $b=0.180$ ,  $p=0.051$ ) was the only attitude or barrier that was no longer significantly different between those who did and did not complete any buprenorphine training. All other significant differences remained even after adjusting for gender.

Of those completing any buprenorphine training, 13 (25.0%) reported the prescribing of buprenorphine under supervision during residency, and 20 (38.5%) reported the current prescribing of buprenorphine. In our post-hoc analysis, the prescribing of buprenorphine during residency was not significantly associated with the prescribing of buprenorphine after graduation.

## Discussion

The study results indicate that psychiatrists who completed any buprenorphine training during residency, compared to those who never completed any training, held more favorable views of OBOT and reported fewer barriers to prescribing buprenorphine. Furthermore, a significant proportion (38.5%) of psychiatrists who completed any buprenorphine training during residency was currently prescribing buprenorphine for the treatment of opioid dependence. On the other hand, those who did not complete any training were more likely to report less favorable views of OBOT. Nevertheless, these results are encouraging because the majority of respondents reported generally positive attitudes toward OBOT and opioid-dependent patients. For example, among those who never completed any training, 75.6% felt buprenorphine maintenance treatment was effective and that opioid dependence was a treatable illness, and 80.5% felt all psychiatry residents should be offered buprenorphine training. Taken together, the results suggest that many psychiatry residents may be open to treating opioid-dependent patients, hold generally favorable views towards buprenorphine and OBOT, and the inclusion of buprenorphine training in psychiatry resident training curricula could have a positive impact on future prescribing practices of psychiatrists.

Factors other than buprenorphine training are also likely to influence psychiatrists' prescribing patterns and attitudes toward OBOT following graduation. Our study results indicate that those completing any buprenorphine course had an interest in OBOT even

before the training, suggesting they may have held positive views about OBOT and opioid-dependent patients regardless of their exposure to buprenorphine training during residency. Additionally, residency programs more supportive of OBOT may be more likely to offer or recommend buprenorphine trainings, or have more supervisors available to mentor residents in addiction treatment. Whether they took the buprenorphine course or not, our study respondents overall did not feel strongly that their residency programs prepared them adequately to treat patients with opioid dependence. Even with the greater interest in OBOT and reporting fewer barriers, the majority of those who completed any buprenorphine training were not currently prescribing buprenorphine. Indeed, all respondents reported barriers to buprenorphine prescribing similar to prior reports—lack of training, concerns about medication diversion, desire to avoid attracting patients with opioid dependence to their practice, lack of counseling support, logistical issues to setting up a practice, and lack of organizational support (7–10).

Those respondents not completing any buprenorphine training in this study were significantly more likely to be female. In a survey study of 2323 psychiatrists, male psychiatrists were twice as likely to report feeling comfortable with OBOT than female psychiatrists(5). Studies have also shown that addiction specialists tend to be male physicians(5-6). Given the increasing proportion of female psychiatrists in the US, it may be critical to identify issues or concerns specific to female psychiatrists(11).

There are important limitations to this study. The sample size is small which makes our results preliminary, and severely limits the generalizability to all psychiatrists completing residency training. It is also possible that psychiatrists who currently prescribe buprenorphine were more likely to respond to the survey, inflating the proportion of psychiatrists who held positive views about OBOT. Additionally, we do not know the actual proportion of respondents who have or are about to complete an addiction psychiatry fellowship—such respondents may be much more likely to prescribe buprenorphine and report favorable views about OBOT. Finally, given the limited information obtained regarding the respondents' attitudes prior to the buprenorphine training, the findings of this study may reflect more about the pre-existing attitudes about OBOT and less on the impact of buprenorphine training.

Residency training is an important developmental period for physicians, and additional research is needed to further identify the impact of buprenorphine training during residency on psychiatrists' attitudes and behaviors following graduation.

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**Table 1**

Summary of results comparing psychiatrists who did and did not complete any buprenorphine course during residency.

	<b>Completed buprenorphine training (n=52)</b>	<b>Did not complete buprenorphine training (n=41)</b>	<b>P</b>
Age	35.0 (SD 3.9)	34.8 (SD 4.7)	NS
Gender	M: 26 (50.0%) F: 26 (50.0%)	M: 11 (26.8%) F: 30 (73.2%)	$\chi^2=5.24, p=0.022$
Ethnicity	W: 31 (59.6%) B: 3 (5.8%) H: 6 (11.5%) A: 12 (23.1%)	W: 32 (78.1%) B: 0 (0%) H: 2 (4.9%) A: 7 (17.1%)	NS
Year completed psychiatry residency			
2008	0	1 (2.4%)	NS
2009	9 (17.3%)	9 (22.0%)	NS
2010	14 (26.9%)	12 (29.3%)	NS
2011	29 (55.8%)	19 (46.3%)	NS
Practice setting			
Solo practice	6 (11.5%)	1 (2.4%)	NS
Single specialty group	2 (3.9%)	4 (9.8%)	NS
Hospital-owned practice	20 (38.5%)	13 (31.7%)	NS
Solo practice shared space	3 (5.8%)	3 (7.3%)	NS
Multidisciplinary practice	8 (15.4%)	3 (7.3%)	NS
Staff model HMO	0	1 (2.4%)	NS
Sub-specialty fellowship training	10 (19.2%)	6 (14.6%)	NS
Research fellowship training	1 (1.9%)	1 (2.4%)	NS
Research	1 (1.9%)	2 (4.9%)	NS
Other	11 (21.2%)	12 (29.3%)	NS
Estimated proportion of patients currently in treatment with heroin dependence (%)	7.5 (SD 19.5)	14.3 (SD 20.7)	NS
Estimated proportion of patients currently in treatment with prescription opioid dependence (%)	8.9 (SD 10.4)	14.9 (SD 19.5)	NS
Buprenorphine course taken (some residents took more than one course)	H&H course: 22 (33.3%) On-line course: 13 (25.5%) 8-hour course: 21 (40.3%)	None	N/A
Prescribed buprenorphine in residency under supervision	13 (25.0%)	0	N/A
Currently prescribing	20 (38.5%)	N/A	N/A
Listed on SAMHSA site	13 (25.0%)	N/A	N/A
<b>Attitudes</b> (number of respondents reporting either “strongly agree” or “agree”)			
I am confident in my ability to treat opioid addiction	44 (84.6%)	19 (46.3%)	$\chi^2=9.57, p<0.001$
I had no intention of prescribing buprenorphine before the training	16 (30.8%)	N/A	N/A
My residency training prepared me adequately to treat patients with opioid addiction	30 (57.7%)	19 (46.3%)	NS

	Completed buprenorphine training (n=52)	Did not complete buprenorphine training (n=41)	P
Opioid addiction is a treatable illness	51 (98.1%)	31 (75.6%)	Fisher's, p<0.05
Buprenorphine maintenance is an effective treatment for opioid addiction	51 (98.1%)	31 (75.6%)	Fisher's, p<0.05
Buprenorphine diversion is a significant problem	33 (63.5%)	25 (61.0%)	NS
Patients on buprenorphine maintenance are not really in recovery	4 (7.7%)	4 (9.8%)	NS
Detoxification should be attempted before maintenance treatment	17 (32.7%)	21 (51.2%)	$\chi^2=4.81$ , p<0.05
Buprenorphine training should be offered to all psychiatry residents	52 (100.0%)	33 (80.5%)	Fisher's, p<0.05
The buprenorphine training made me more confident about treating opioid addiction	49 (94.2%)	N/A	N/A
<b>Barriers to prescribing</b>			
Lack of training in treating opioid addiction	8 (15.4%)	15 (36.5%)	$\chi^2=5.54$ , p=0.019
No supervision from experienced mentors	14 (26.9%)	14 (34.2%)	NS
Do not believe the effectiveness of buprenorphine	1 (1.9%)	3 (7.3%)	NS
Worried about patients overdosing on buprenorphine	0	2 (4.9%)	NS
Do not want to attract patients with opioid addiction to my office	8 (15.4%)	14 (34.2%)	$\chi^2=4.46$ , p=0.035
Worried about patients becoming addicted to buprenorphine	3 (5.8%)	3 (7.3%)	NS
Patient demand for buprenorphine too low	1 (1.9%)	7 (17.1%)	$\chi^2=7.18$ , p=0.007
Concerns about patients diverting buprenorphine	8 (15.4%)	15 (36.6%)	$\chi^2=5.54$ , p=0.019
Concerns about DEA visits	4 (7.7%)	2 (4.9%)	NS
Lack of counseling support	16 (30.8%)	10 (24.4%)	NS
Logistical problems of setting up buprenorphine practice	26 (50.0%)	21 (51.2%)	NS
Lack of organizational and institutional support	16 (30.8%)	13 (31.7%)	NS
High cost of providing buprenorphine	2 (3.9%)	4 (9.8%)	NS
Difficulty with reimbursement	4 (7.7%)	3 (7.3%)	NS