Integrating Buprenorphine Treatment into Office-based Practice: a Qualitative Study

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BACKGROUND: Despite the availability and demonstrated effectiveness of office-based buprenorphine maintenance treatment (BMT), the systematic examination of physicians' attitudes towards this new medical practice has been largely neglected.

OBJECTIVE: To identify facilitators and barriers to the potential or actual implementation of BMT by office-based medical providers.

DESIGN: Qualitative study using individual and group semi-structured interviews.

PARTICIPANTS: Twenty-three practicing office-based physicians in New England.

APPROACH: Interviews were audiotaped, transcribed, and entered into a qualitative software program. The transcripts were thematically coded using the constant comparative method by a multidisciplinary team.

RESULTS: Eighty percent of the physicians were white; 55% were women. The mean number of years since graduating medical school was 14 (SD=10). The primary areas of clinical specialization were internal medicine (50%), infectious disease (20%), and addiction medicine (15%). Physicians identified physician, patient, and logistical factors that would either facilitate or serve as a barrier to their integration of BMT into clinical practice. Physician facilitators included promoting continuity of patient care, positive perceptions of BMT, and viewing BMT as a positive alternative to methadone maintenance. Physician barriers included competing activities, lack of interest, and lack of expertise in addiction treatment. Physicians' perceptions of patient-related barriers included concerns about confidentiality and cost, and low motivation for treatment. Perceived logistical barriers included lack of remuneration for BMT, limited ancillary support for physicians, not enough time, and a perceived low prevalence of opioid dependence in physicians' practices.

CONCLUSIONS: Addressing physicians' perceptions of facilitators and barriers to BMT is crucial to supporting the further expansion of BMT into primary care and office-based practices.

KEY WORDS: opioid-related disorders; qualitative research; buprenorphine; physicians.

J Gen Intern Med 24(2):218-25

DOI: 10.1007/s11606-008-0881-9

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INTRODUCTION

Opioid dependence, loss of control over the use of prescription or illicit opioids (e.g., heroin)¹, has increased and affects a wide spectrum of individuals². Generalist physicians can play a unique role in the care of patients who are at risk for, or meet criteria for, opioid dependence. This role can include treatment of comorbid medical conditions (e.g., endovascular infections), recognition of problematic use of pain medications or heroin, referral to treatment, or provision of office-based treatment.

Prescription narcotics are the most commonly misused opioids. Non-medical use of prescription opioids is endorsed by 4.5% of the population in the United States, and 13% of these individuals meet criteria for dependence³. While the prevalence of opioid dependence in primary care is not known, aberrant medication-taking behaviors are seen in 5-24% of patients receiving opioids for chronic pain⁴. Despite this prevalence, it is estimated that only 20% of patients receive the most effective treatment in the form of opioid agonist treatment with methadone or buprenorphine⁵.

Treatment options for opioid dependence include pharmacologic withdrawal (detoxification), opioid antagonist medications (naltrexone), opioid agonist medication (methadone or buprenorphine), and psychosocial counseling. Relapse with pharmacologic withdrawal and naltrexone has been noted to be exceedingly high, while opioid agonist treatment has demonstrated efficacy in decreasing drug use and HIV transmission⁶⁻⁸. Treatment with opioid agonists that bind to opioid receptors and therefore decrease opioid craving has been endorsed by a National Institutes of Health consensus panel as the recommended treatment for opioid-dependent patients⁹. These medications effectively prevent withdrawal

The findings of this study were presented in part at the 31st Annual Meeting of the Society for General Internal Medicine, Pittsburgh, PA, April 10, 2008.

Received May 5, 2008

Revised October 6, 2008

Accepted November 17, 2008

Published online December 17, 2008

and block the effects of exogenous opioids. Expanding access to opioid agonist maintenance treatment has been identified as a national public health priority, and the role of office-based and generalist physicians in accomplishing this goal has been highlighted⁹⁻¹¹. The Food and Drug Administration (FDA) approval of buprenorphine and buprenorphine/naloxone in 2002 afforded physicians an unprecedented opportunity to prescribe opioid medications to treat opioid dependence in primary care and office-based settings, thus reversing a nearly 100-year prohibition against this activity in the US.

Generalist physician offices are well suited to the treatment of opioid dependence due to their relative abundance, geographic dispersion, and the absence of stigma that can be associated with some addiction specialty treatment programs (e.g., methadone clinics)¹². Moreover, generalist physicians routinely provide longitudinal care for chronic medical conditions that have both biologic and behavioral components (e.g., diabetes, hypertension) and are able to monitor and provide treatment for the medical complications that may accompany opioid dependence (e.g., hepatitis, HIV).

Generalist physicians can qualify to implement buprenorphine maintenance treatment by participating in a minimum of 8 h of approved training in the treatment and management of opioid-dependent patients. Since 2001, more than 12,000 physicians in the US have received training and are certified to prescribe buprenorphine. Of these, it is estimated that over 8,000 physicians nationwide prescribe buprenorphine to treat opioid dependence¹³.

Despite the availability and demonstrated efficacy and effectiveness of office-based buprenorphine treatment¹⁴⁻¹⁷, the systematic examination of physicians' attitudes on buprenorphine maintenance treatment has been largely neglected. This study was designed to identify perceived facilitators and barriers to the potential or actual implementation of buprenorphine maintenance treatment by office-based physicians.

METHODS

Participants

Office-based physicians in New England were contacted about study participation through e-mail and postal mailing from two of the authors (KSI, DAF). Physicians who provide primary care, participated in medical student education, and/or provided buprenorphine treatment were targeted for enrollment. In order to ensure a spectrum of experiences and viewpoints, we solicited participation from: (1) physicians who had provided office-based methadone maintenance in a previous research study¹⁵, (2) physicians with no experience providing addiction care for opioid-dependent patients, (3) physicians with experience providing buprenorphine maintenance treatment, and (4) non-academically affiliated community physicians. Participants provided informed consent, and the protocol was approved by the Yale University School of Medicine.

Interviews

Face-to-face interviews were conducted with 23 participants between October 2002 and June 2005. Individual interviews were conducted with 20 physicians, while the remaining three

physicians were interviewed as a group. The interviews followed a semi-structured guide that was pilot tested on two participants. The guide targeted four key domains: (1) experience, interest, and concerns regarding caring for opioid-dependent patients, (2) physician and staff training needs, (3) actual and desired relationships with formal narcotic treatment programs, and (4) appropriate reimbursement strategies (Table 1). Questions probing these domains were tailored to whether the interviewee had prior experience implementing office-based buprenorphine maintenance treatment.

Interviews were conducted by two investigators (DAF, KSI) who have extensive experience conducting qualitative interviews. Interviews lasted approximately 1 h and were audio-taped and transcribed. Demographic data (age, gender, race/ethnicity, area of specialization, employment setting, and years since graduation) were collected at the beginning of each interview.

Data Analysis

Data analysis followed the principles of grounded theory, using the constant comparative method for systematic inductive analysis¹⁸. Data coding was performed by a multidisciplinary team consisting of four physicians, a sociologist, a medical anthropologist, and a clinical psychologist. All group members reviewed a subset of transcripts to identify broad themes using the open coding technique. Upon reaching consensus of broad thematic codes and their working definitions, the team then revisited the data with this preliminary coding scheme to develop a set of axial codes, conceptually grouping open codes into paradigmatic areas, and then further specified sub-themes in each domain. The relevance of the initial themes and subthemes was tested by repeated comparative assessment of succeeding data and continued until theoretical saturation had been reached. Upon reaching team consensus on the coding scheme and code definitions, each transcript was independently coded by a minimum of two independent team members to enhance reliability. Manual coding was then electronically applied to the textual data using N6® QSR (International Pty Ltd, 1991 to 2002, Doncaster, Victoria, Australia), a software program designed to facilitate the analysis of qualitative data. The software facilitates the direct association of coding categories to specific text segments throughout the transcripts, whereupon segments may be retrieved and compared to develop and explore hypotheses.

Table 1. Interview Guide Excerpts

(1) Experience, interest, and concerns regarding caring for opioid-dependent patients
"I would like to ask you about your anticipated level of satisfaction with caring for opioid addicted patients. Can you think of some specific aspects of providing this type of care with which you expect that you will be either satisfied or dissatisfied?"
(2) Physician and staff training needs
"Please describe any effects that you anticipate this kind of practice will have on your staff."
(3) Actual and desired relationships with formal narcotic treatment program
"Please describe any prior interactions that you have had with a narcotic treatment program or methadone clinic."
(4) Appropriate reimbursement strategies
"How much would you charge per month for: MD time? Nurse time? Office staff time?"

RESULTS

Participant Characteristics

Twenty-three office-based physicians participated in the study. Demographic data were collected from 20 of these physicians. Percentages reported below are based on these 20 respondents. Approximately 80% were white; 55% were women. The mean number of years since graduating medical school was 14 (SD=10). The primary areas of clinical specialization were general internal medicine (50%), infectious disease (20%), addiction medicine (15%), psychiatry (10%), and family medicine (5%). Participants' practices were located in small to medium cities (80%) or suburban areas (20%), and comprised a clinic affiliated with a teaching hospital (55%), individual practice (25%), other hospital clinic (5%), staff model HMO outpatient (5%), single specialty group (5%), and community clinic (5%). Physicians reported that during an average month they apportioned their work time as follows: patient treatment (70%), administration (13%), research (12%), and other activities (5%). Five respondents—three specializing in addiction medicine, one in infectious disease, and one in psychiatry—reported experience with buprenorphine and had the appropriate DEA registration to prescribe buprenorphine. Of these five providers, four worked in individual practice, and one worked in a clinic and had teaching responsibilities.

Main Themes

Respondents described three main themes that served as facilitators or barriers to the potential or actual implementation of buprenorphine maintenance treatment: physician factors, patient factors (i.e., physicians' perceptions of patient factors), and logistical factors. These factors or themes are further subdivided into specific subthemes (Table 2). A selec-

tion of representative quotes that illustrate these themes and subthemes is provided below.

Physician Factors

Competing activities. Some respondents reported that competing clinical activities impeded the introduction of buprenorphine maintenance treatment into their practices.

We are pretty overwhelmed. We have a couple of vacancies. I think the staff would think [buprenorphine maintenance treatment] is an additional thing.

Expertise in treating addiction. Many respondents noted that they would feel uncomfortable implementing buprenorphine maintenance treatment given their perceived lack of expertise in treating addiction.

I wouldn't feel comfortable as a primary care person giving buprenorphine to people without someone who specializes in addiction being involved as well. I've just had the luxury of being able to refer patients with addiction to people who specialize in it.

Specifically, some physicians noted that they had received no formal training in addiction.

I guess because it's something we're not really taught about at all. It's not like it comes up in your 'pathophys' class or comes up in your third year rotation and I've done nothing in addiction medicine through medical school or residency or other training. So, it kind of seems like an outside of medicine subspecialty of psychiatry to me.

Table 2. Barriers and Facilitators to Integrating Buprenorphine Maintenance Treatment into Office-based Practice

Themes	Subthemes	Barrier or facilitator	Examples
Physician factors	Competing activities	B	Dissimilarity between BMT and present clinical activities
	Expertise in addiction treatment	B	Absence of formal training in addiction treatment
	Interest in addiction treatment	B	Negative characterization of opioid addicted patients
	Co-existing disorders	B	Difficulty in treating co-occurring psychiatric disorders
	Continuity of care	F	Enhanced physician self-efficacy
	Alternative to MMT	F	Health focus of BMT
Physicians' perceptions of patient factors	Perceptions of BMT	F	Favorable side-effect profile
	Satisfaction with BMT	F	Fewer appointments than MMT
	Confidentiality	B	Concern about insurance companies having access to sensitive diagnostic information
Logistical and systemic factors	Cost	B	Shortage of insurance carriers covering BMT
	Motivation	B	Patient ambivalence about cessation of illicit drug use
	Prevalence of opioid dependence	B	Low prevalence of opioid dependence among patients
	Assessment	B	Absence of systematic assessment of substance use disorders
	Ancillary staff	B	Lack of confidence in ancillary staff's training
	Anticipated staffing	B	Anticipated need for mental health professionals
	Norms of existing practice	B	Workplace favors MMT over BMT
	Time	B	Time spent in completing administrative tasks related to BMT
	Space	B	Absence of clinic space to support BMT
	Remuneration	B	Concern about BMT reimbursement
	Thirty patient limit	B	Concern about reaching DEA cap of 30 patients per practice*
	Availability of buprenorphine	B	Reduced buprenorphine stocking levels in local pharmacies
	Regulatory concerns	B	Regulations associated with buprenorphine dispensing

MMT = Methadone maintenance treatment, BMT = buprenorphine maintenance treatment

*The Drug Abuse Treatment Act of 2000, which limited the number of patients per provider and provider group to 30, was changed in December, 2006

Additionally, some physicians were concerned that completion of the required training would insufficiently prepare them to treat addicted patients.

I don't know why a physician would want to get credentialed and then advertise to bring in patients that are likely to be more difficult than others to treat... they're not trained in addictions in general; they didn't get it in medical school, they take an eight hour course or look at a CD-ROM and I'm sure they are not going to feel that comfortable.

Interest in treating addiction. Several physicians reported limited interest in providing addiction treatment. Examples involved perceived difficulties associated with addiction treatment and negative characterizations of patients receiving controlled substances.

I just cannot do their primary care anymore because of them not coming to appointments or the whole appointment being focused on 'I want five pills a day, you give me four.'

Co-existing disorders. Some respondents cited a lack of expertise and/or interest in treating psychiatric and medical disorders that co-occur frequently with opioid dependence, including hepatitis C, HIV/AIDS, and mood and anxiety disorders, as barriers to implementing buprenorphine maintenance treatment.

As physicians, we have never been comfortable dealing with 'Hep C' and other disorders associated with addiction management; this is a totally new experience. I don't know how many physicians would be keen to undergo the training.

Continuity of Care. Some physicians reported that buprenorphine maintenance treatment could facilitate continuity of care. Examples included the obviation of difficulties inherent in care coordination with off-site addiction providers, enhanced physician self-efficacy regarding patient treatment delivery, and the belief that their patients might be more likely to comply with on-site buprenorphine maintenance treatment than a referral to an off-site addiction provider.

I could do it [buprenorphine maintenance treatment] with the patient myself and say, "Look: I think we may have a problem here; we could try this [buprenorphine maintenance treatment] and you wouldn't have to go anywhere else, we could do it ourselves." So, I think that that would be nice.

Some respondents noted that patients were often unreceptive to referrals for off-site addiction providers.

You're trying to help a patient with opiate addiction. You send them and they come back and they say, "I hated that guy. Why did you send me there?" Whereas, if you actually had established a good relationship with the patient, you could be the one treating them.

Physicians who had implemented buprenorphine maintenance treatment reported that they had experienced an enhanced sense of control in treating their opioid-dependent patients.

The most satisfying part to me is to get all of their treatment under our [physicians'] control and ...managing patients in one clinic setting.

Alternative to methadone. Several physicians regarded buprenorphine maintenance treatment as a viable alternative to methadone maintenance treatment.

A positive would be that I have a bunch of patients who associate going to a methadone clinic with waiting for their buddies and there's a lot of using; it's tempting to go off and use with them. I think that it [buprenorphine maintenance treatment] might help them get treatment in a more clinical setting; it's connected to health, positive health behaviors, and health maintenance.

Conversely, some respondents felt that methadone maintenance treatment was more effective than buprenorphine maintenance treatment for their opioid addicted patients.

From what we know from the patients that we work with, there's a lot more to opiate dependency than just getting on a pill. And we think that our methadone program is much better equipped than primary care for dealing with the psychosocial issues—and with the medical for that matter.

Perceptions of buprenorphine maintenance treatment. Many providers reported that although they had not undergone buprenorphine maintenance treatment training, they were inclined to do so since they had heard and/or read positive reviews of buprenorphine maintenance treatment, and they had heard positive feedback from colleagues who had implemented it and from patients who had received it. Examples included treatment efficacy, a favorable side-effect profile, low abuse potential and diversion risks, and ease of managing buprenorphine detoxification/taper.

The positive things about [buprenorphine maintenance treatment] are the effectiveness, patient satisfaction, the lack of side effects, and the conveniences.

Conversely, some physicians questioned the rationale and usefulness of providing office-based buprenorphine maintenance treatment.

I'll be honest with you, I don't think [buprenorphine maintenance treatment] would be something that would work here for many, many reasons just because why take something that is being well managed by specialists and kind of half train a generalist to do it. I don't see it happening any time soon.

Patient Factors

Satisfaction with buprenorphine maintenance treatment. Many providers believed that their opioid-dependent patients would

be more satisfied receiving treatment in a primary care setting than in a methadone clinic. They cited reduced stigma associated with office-based treatment, convenience afforded by receiving addiction and medical treatments in one setting, fewer appointments than is required in methadone maintenance treatment, and having a primary care provider oversee addiction.

The patient already knows you as opposed to having to see another person and divulge problems. There is a stigma attached to substance abuse. To talk about heroin or Oxycontin is not the most comfortable thing in the world; so, removing the multiple steps would be nice for them.

Physicians who had implemented buprenorphine maintenance treatment reported receiving very positive patient feedback.

They use words like “magic,” like “I’ve come out of a coma,” “it’s excellent.”

Specifically, some providers noted that patients were more satisfied with buprenorphine maintenance treatment than methadone maintenance treatment.

The sense that I have from talking to the few patients who have taken buprenorphine, they just feel more normal on the buprenorphine than the methadone. They just kind of feel drugged on the methadone.

By contrast, some physicians indicated that they had opioid-dependent patients who were stable on methadone and might be unwilling to transfer to buprenorphine maintenance treatment.

Methadone is very stable. They have enormous anxiety problems, one in particular, I could never imagine her agreeing to go off the methadone, even for the short time she would need to, to go on the buprenorphine.

Confidentiality. Some providers noted that their patients were concerned about confidentiality and might be reluctant to seek buprenorphine maintenance treatment. Examples included patient concerns about insurance companies and employers having access to information about their addiction.

Our patients seem very aware that Yale is the provider of health care and the[ir] employer and they have concerns.

Cost. Some respondents felt that their patients would be concerned about buprenorphine maintenance treatment costs. Examples included the perceived high cost of buprenorphine and shortage of insurance carriers that cover buprenorphine maintenance treatment.

Who is going to pay for the buprenorphine? Is Medicaid going to approve? Or, is [the] patient going to pay from his pocket?

Motivation/Diversion. Some physicians opined that their opioid-dependent patients, especially those addicted to prescription analgesics, might lack motivation to succeed at buprenorphine maintenance treatment.

Some of them have multiple practitioners providing the same medications; they lose prescriptions and say, “only the opiates work.” Those kinds of things, you worry about.

Some physicians had concerns regarding buprenorphine diversion and developed strategies to minimize this possibility.

I am not comfortable prescribing it and letting people come and go with a month’s worth of medication. I was very concerned about diversion and what not. So, starting off on induction, when they come back every day, you sort of form a relationship. And then you kind of stretch it out every day or every couple of days until a minimum would be once a week where they would come back and check in.

Physicians who prescribed buprenorphine maintenance treatment noted that, given the low abuse potential of the buprenorphine/naloxone combination, patients would be less prone to divert buprenorphine/naloxone.

Given its low abuse potential, I don’t think that diversion is going to be a big problem.

Logistical Factors

Prevalence of opioid dependence. Some respondents did not see a need for introducing buprenorphine maintenance treatment into their practice because of the perceived low prevalence of opioid dependence.

We’ve discussed it. We don’t see that there is much need in our clinic.

Assessment/Screening. Some respondents indicated that substance use disorders were not systematically screened for in their practices. Given the lack of assessment, physicians noted that it was difficult to estimate the need for addiction treatment.

We do formal assessments for alcohol but not for other types of abuse, drugs, etc. We ask people about them but we don’t do formal assessments.

Ancillary staff. Several physicians expressed concern that their staff were ill-equipped to implement buprenorphine maintenance treatment. Examples included physicians’ lack of confidence in staff’s training and/or competence to provide it.

Our nurses flinch if a patient becomes light headed, they really don’t know how to deal with anything out of the ordinary. So unless the nurses—and head nurses really—become highly trained to a level I haven’t seen exhibited

yet, I don't think they could handle it, certainly no one in active withdrawal unless they learn a lot more than they know right now.

Additionally, some physicians expressed concern about the amount of additional training that their staff would need to undergo to support buprenorphine maintenance treatment.

I mean this is not something we do at all. I don't think the nurses would feel comfortable with it; they would need to be trained.

Anticipated Staffing. Many respondents were concerned that their practice did not have the necessary staffing resources to support buprenorphine maintenance treatment. Examples included the anticipated need for mental health professionals, on-call providers, and administrative support.

I would want some help just because there's so much more than medication prescription and we don't really have the capacity and the support here to do everything else that goes along with it. We have inadequate social services in the clinic itself, in terms of social work, drug and substance abuse counseling, psychiatric mental health counseling—it's inadequate.

Some physicians anticipated that they would need on-call providers with expertise in opioid dependence and buprenorphine maintenance treatment.

Then also probably somebody that's on call 24 hours a day, we have weekend issues that come up, I don't know if people would be worried about their drug interactions, their HIV meds, and I think I'd need a fellow on call to be able to address that. It seems great in theory but for me to do it properly I'd want more backup.

Norms of existing practice. Some respondents believed that their workplace norms favored methadone maintenance treatment over buprenorphine maintenance treatment. Examples were related to extant norms of the practice and concerns about the costs of implementing buprenorphine maintenance treatment. In particular, some physicians noted that their practice supported referring opioid-dependent patients to addiction providers.

I think maybe we have nurtured a culture here that tends to use this available referral service with substance abuse, etc., rather than trying to handle that yourself, when there are so many other things going on at the same time and probably out of a little bit of fear, lack of training.

At [my workplace] it's really not encouraged for us to do buprenorphine; I sit on the committee that approves the medicines, and they were talking about buprenorphine—it's so expensive; they were like 'why wouldn't we just do methadone maintenance,' ... [buprenorphine] is so much more expensive than methadone.

Time. Some physicians were concerned about the time involved in providing buprenorphine maintenance treatment.

Examples included concerns regarding implementation and support.

I think the biggest lack of service at the clinic is administrative help, which involves the biggest waste of my time: having to make phone calls, deal with insurance companies, make special arrangements for patients, fill out papers for patients to get transportation, all that crap. I would expect that with buprenorphine there will come a certain amount of bureaucratic crap and paperwork, so to me that is the biggest problem. If it adds to my time, it's not worth it.

Space. Some providers were concerned that their practices did not have adequate space to support buprenorphine maintenance treatment.

We don't have space... type of thing you need to consider before doing something like this.

Remuneration. Some physicians expressed concerns about actual or prospective buprenorphine maintenance treatment reimbursement.

I've had issues with [buprenorphine maintenance treatment]... with insurance companies not paying for it.

Regulatory concerns. Some physicians expressed concern that providing buprenorphine maintenance treatment would invite greater regulatory oversight of their clinical activities and charting procedures.

...maintaining all of those records; having them ready for DEA evaluation; having charts that could not be mixed up with a general chart in the medical records department.

In particular, some respondents expressed concern about regulations if they elected to stock and dispense buprenorphine.

It results in problems in inventory, appropriately throwing out the expired drugs, just couldn't be done by regular clinicians. We can just go and grab Zoloft and if we don't have it, we grab Paxil. But nobody is writing that I took 20 mg or 15 capsules and gave it to you... so it became outlandish.

Some physicians also expressed concern about confidentiality regulations surrounding treating opioid dependence interfering with the coordination of care and provision of buprenorphine maintenance treatment.

The pharmacist couldn't call me and talk to me without the patient's okay...I could not believe this, unless [the patient] signed the form, saying that the pharmacist can tell me.

DISCUSSION

In this study, practicing office-based physicians identified a set of physician, patient, and logistical factors that intersect to

either facilitate or impede the incorporation of buprenorphine maintenance treatment for opioid dependence into office-based practice. The strength of this approach was that we were able to assess forthright opinions in an open-ended manner from “front-line” office-based physicians using face-to-face interviews. These qualitative methods yielded clear-cut themes.

Physician Factors. Several physicians reported that they were uninterested in providing treatment for their patients’ addictive disorders. This lack of interest was linked with a negative characterization of addicted patients and supports previous research on physicians’ and clinic directors’ attitudes on treating addicted patients^{19–21}. Some of these attitudes seem to result from physicians feeling unprepared to treat addiction. This finding reinforces previous research on physicians’ attitudes regarding their training in substance-related disorders^{22,23}, highlights the need for improved training in addiction at the medical school and post-graduate levels, and suggests potential issues and areas of concern that might be more fully explored in the 8-h training program designed to prepare physicians who are interested in providing buprenorphine treatment. Our data suggest that the following topics might be important to address: (1) the research and practice evidence that supports the appropriateness of office-based addiction treatment^{19–21,24}, (some respondents viewed addiction treatment as outside their realm of medicine); (2) when and how to seek guidance on patient care (some physicians expressed concern about treating addiction without access to specialists). Our experience indicates that having support from buprenorphine providers (on-site, by phone or email) is often sufficient²⁵; (3) strategies for working with “difficult-to-treat” patients—the majority of the difficulties reported by physicians related to discomfort in setting appropriate boundaries; (4) treatment of co-existing disorders (many physicians expressed concern about their competence in treating medical and psychiatric problems associated with opioid dependence).

Physician comfort implementing buprenorphine maintenance treatment increases as a function of experience²⁶. Contrary to the expectations of some participants, expertise in mental health and addictions is not a prerequisite for providing office-based buprenorphine maintenance treatment, and as such, uptake is more likely related to the scope of practice that physicians wish to undertake—as is seen in the realms of HIV treatment and pain management²⁷.

Some physicians were aware of the positive attributes of buprenorphine maintenance treatment: its documented efficacy, favorable side-effect profile, low abuse potential and risk of diversion, and positive impact on patients’ lives. Similar to prior studies^{20,28}, these respondents viewed buprenorphine maintenance treatment as a positive alternative to methadone maintenance treatment: they emphasized the medical focus of buprenorphine maintenance treatment and its reduced stigma relative to methadone maintenance treatment. Some physicians emphasized that buprenorphine maintenance treatment afforded them the opportunity to provide continuity of care for their opioid-dependent patients. Physicians who had already implemented buprenorphine maintenance treatment noted an enhanced sense of control in their treatment of opioid-dependent patients, a potentially important facet of the general

satisfaction reported in previous studies on buprenorphine maintenance treatment providers²⁹.

Patient Factors. Many physicians believed that their opioid-dependent patients would be more satisfied with buprenorphine maintenance treatment than methadone maintenance treatment. Physicians who had implemented buprenorphine maintenance treatment reported receiving positive feedback from patients, including their sense of “feeling normal” while on the medication. These findings support previous research indicating that buprenorphine maintenance treatment patients exhibit high treatment satisfaction²⁸.

Logistical Factors. Some of the logistical barriers noted by participants are not unique to buprenorphine maintenance treatment. New office-based interventions often need to overcome logistical constraints, such as space, time, and reimbursement^{30,31}. Respondents’ concerns about limited backup and support staff and availability of on-call providers have been noted by clinic directors as potential barriers to implementing buprenorphine maintenance treatment²⁰. These concerns were expressed primarily by physicians who had not provided buprenorphine maintenance treatment rather than those who had, indicating that they may be amenable to training and experience. Some respondents noted that illicit drug use was not systematically assessed in their practice; consequently, the routine use of a brief validated substance use screening instrument³² might increase physicians’ awareness of opioid dependence and identify patients who might benefit from buprenorphine maintenance treatment.

Our study has several potential limitations. The qualitative design and analytic strategy were not intended to provide quantitative data on frequency of responses, to determine whether attitudes toward buprenorphine maintenance treatment differed by provider type, thereby limiting our ability to draw conclusions about the relative importance of the themes to different types of providers. At the same time, the primary goal of this study was to identify key themes and not to quantify the relative importance of the factors. Physicians’ perceptions of patients’ barriers and facilitators may or may not match actual patient perceptions; consequently, further research is needed to determine the extent to which physicians’ perceptions accurately reflect those of patients. We employed a convenience sample of physicians in New England, and therefore our findings may not be representative of all office-based physicians in the US. While the focus of our study was buprenorphine maintenance treatment, future research investigating physicians’ attitudes on the use of buprenorphine for opiate withdrawal may be needed. In addition, future research in this area might benefit from further examination of the attitudes of different types of providers (e.g., those with and without the ability to prescribe buprenorphine, providers who have and have not exercised their ability to prescribe buprenorphine).

Despite these limitations, our findings provide a rich delineation of the barriers and facilitators pertaining to office-based buprenorphine maintenance treatment that may have important implications for program development. Assessing and addressing physician facilitators and barriers regarding buprenorphine maintenance treatment may help ensure that its expansion is not impeded. If office-based physicians were to

routinely implement buprenorphine maintenance treatment, the current critical shortage of treatment slots for opioid-dependent individuals in the US could be significantly reduced.

Acknowledgments: The primary support for this project was a Robert Wood Johnson Foundation Generalist Physician Faculty Scholar Award to Dr. Fiellin. Dr. Sullivan was supported by the National Institute on Drug Abuse (NIDA) Physician Scientist Award (K12 DA00167). Dr. Sullivan is currently a Robert Wood Johnson Foundation Physician Faculty Scholar. This work was also supported by grants from NIDA to Dr. Barry (K23 DA024050-01), Dr. Schottenfeld (K24 DA000445-03 and R01 DA009803-07), and Dr. Fiellin (R01 DA020576-01, R01 DA019511-03).

Conflict of Interest: None disclosed.

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