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Buprenorphine Prescribing Availability in a Sample of Ohio Specialty Treatment Organizations

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Abstract

Objective—Buprenorphine, a medication for treating opioid dependence, is underutilized in specialty addiction treatment organizations. Only physicians who have obtained a buprenorphine prescribing license or “waiver” may administer this medication. A limited number of physicians are pursuing this waiver, and a concern in the substance use disorder treatment field is that the shortage of prescribers could be contributing to the low use of buprenorphine at specialty addiction treatment centers. The objective of this study is to assess Ohio specialty treatment organizations’ access to buprenorphine prescribers and the barriers they encounter when seeking new physician prescribing capacity.

Methods—Forty-one Ohio specialty addiction treatment organizations were invited to complete a survey of their buprenorphine practices and availability of buprenorphine prescribers during August–October 2014. Data was collected on pharmacotherapies used in the treatment of opioid dependence, arrangements treatment organizations have with prescribing physicians, buprenorphine prescribing capacity, and barriers encountered in recruiting new physician prescribers.

Results—Thirty-seven treatment organizations responded, for a response rate of 90.2%. Seventy-eight percent (n=29) of the sample provided buprenorphine therapy. Of those treatment organizations, 48.3% (n=14) reported insufficient prescribing capacity. Of those, 50% (n=7) indicated they had to turn patients away from buprenorphine therapy due to limited physician prescribing capacity.

Conclusion—The study suggests that buprenorphine use is constrained by limited physician prescribing capacity, to the degree that 24.1% of the organizations surveyed using buprenorphine therapy had to turn patients away. Potential remedies include encouraging more specialty treatment organizations to have physicians on staff, removing the Drug Addiction Treatment Act (DATA 2000) cap that limits physician buprenorphine caseloads at 100 patients (after year 1), and developing strategies to recruit physicians into addiction treatment practice. Additional research is needed to increase the knowledge of physician prescribing capacity as a barrier to buprenorphine

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use, how to overcome these barriers, and to understand the extent physician capacity shortages are affecting buprenorphine use.

Keywords

Buprenorphine; Buprenorphine prescribing; DATA 2000; Medication Assisted Therapy (MAT); Medication Assisted Therapy (MAT) barriers; Addiction treatment organizations; Health services research

Introduction

Buprenorphine and buprenorphine/naloxone combinations were projected to play an important role in the treatment of opioid addiction when made available by the Food and Drug Administration (FDA) in 2002 [1]. This legislation extended availability of buprenorphine beyond designated opiate treatment providers (OTPs) (the heavily-regulated delivery setting for methadone maintenance therapy), to office-based physician practices and specialty addiction treatment organizations. The intent of this legislation was to increase physician participation in addiction treatment pharmacotherapy and consequently patient access.

Factors in the prescribing of buprenorphine

Only physicians receiving a waiver under Drug Addiction Treatment Act of 2000 (DATA 2000) can receive the identification number (x-number) from the Drug Enforcement Administration (DEA) required to prescribe buprenorphine [2]. Buprenorphine prescribers are typically located in office-based general medical practices or specialty addiction treatment organizations [3,4]. These prescribers are not required to provide adjunct behavioral therapy as part of buprenorphine therapy [2]. Sometimes specialty treatment centers will refer patients to office-based physician practices, but specialty treatment centers are more likely to provide buprenorphine-prescribing services on-site [5]. Challenges have arisen in the delivery of buprenorphine in both office-based and specialty treatment settings. Physicians in office-based practices have been slow to prescribe buprenorphine due to the lack of institutional support and because they report not feeling adequately qualified to care for patients with addiction disorders [6]. Designated OTPs are also constrained in their ability to provide methadone or buprenorphine therapy due to their limited number of locations [7]. The stigma associated with daily in-person dosing and overcrowding at designated OTPs is also a deterrent to patients [8,9]. Specialty addiction treatment organizations, on the other hand, have a workforce dedicated to general addiction treatment and have many more locations than OTPs, placing them in an optimal position to offer buprenorphine therapy. Yet, only 17% percent of specialty addiction treatment organizations offer buprenorphine therapy [10]. A persistent barrier to buprenorphine use in specialty addiction treatment organizations is access to buprenorphine prescribers [10,11]. This situation could be exacerbated by the current lack of buprenorphine prescribers in the United States [12]. Another impediment in this area is that 22.9% of addiction organizations do not have access to any physician [13]. To implement and expand use of buprenorphine therapy, specialty treatment addiction organizations must have access to DATA 2000 waived physicians to prescribe buprenorphine.

DATA 2000 certification limits the number of patients a physician can treat once waived: 30 patients in the first year and 100 patients in subsequent years [2]. This prescribing cap restricts the number of patients that can be treated, regardless of the demand for buprenorphine treatment. A national survey of DATA 2000-waived physicians suggests that the prescribing cap is a minor issue, with just 10–15% of physicians stating it was a concern [3]. This limited concern could be related to reports that 65–72% of physicians in office practice settings who receive the DATA 2000 waiver choose to not prescribe buprenorphine once waived, or only prescribe for a brief time, then stop [6,14]. In addition, the limited or lack of concern regarding buprenorphine physician prescribing capacity in office practice settings does not necessarily extend to the specialty addiction treatment community. Apprehension about buprenorphine prescribing capacity in the addiction treatment community has resulted in a call for federal legislation to remove the DATA 2000 prescribing cap [15]. Treatment organizations raise the issue that doctors who prescribe buprenorphine can eventually acquire a caseload of patients on long-term maintenance therapy. These patients effectively “clog” a physician’s buprenorphine prescribing capacity until some patients eventually discontinue therapy. Once physicians meet their buprenorphine-prescribing cap, the affiliated specialty addiction treatment organization must then secure a new physician to treat additional patients needing buprenorphine therapy. Recruiting new buprenorphine prescribers can be difficult [16] because many physicians feel they are not adequately trained to treat addiction disorders [17,18], lack interest in prescribing buprenorphine [19], and have concerns that buprenorphine is being diverted for improper use [20]. Treatment organizations have raised concerns about limited buprenorphine prescribing capacity, and physician disincentives to prescribing the medication have been reported. In spite of this, research literature to date reports little on efforts to measure buprenorphine prescribing capacity in specialty addiction treatment settings or on the barriers these organizations encounter in trying to address physician capacity constraints.

Methodology

Study setting and population

Ohio was selected as the site for this study because its county Addiction, Drug Abuse and Mental Health Services (ADAMHS) boards, as payers of publicly subsidized alcohol and other drug treatment, reflect varied and diverse payer environments for buprenorphine use throughout the state. Additionally, Ohio includes numerous urban and rural settings, has the 12th highest drug overdose mortality rate in the United States, and has implemented many of the same opioid prescription misuse policies tested in other states [21]. In 2011, 66.7 doses of prescription opioids were purchased per Ohio citizen and 1.2 Ohioans died per day due to unintentional overdose of prescription opioids [22]. The rapid increase in opioid misuse creates an appropriate environment for use of evidence-based medication therapies to treat opioid addiction. Buprenorphine therapy is seen as a key strategy for reducing the adverse effects of opioid misuse in Ohio [22,23].

Treatment organizations were selected based on a stratified sample, using a representative two-by-two matrix formed by treatment organizations located in county board areas that had

20% opioid admissions of total admissions (above/below) and 164,000 people covered for addiction treatment services (above/below). The stratification, based on local opioid disorder rates and population size, used data supplied by the Ohio Department of Mental Health and Addiction Services (OhioMHAS). The pre-survey two-by-two matrix had at least nine treatment organizations located in each cell. Forty-one treatment organizations were invited to participate in the survey. Individuals with direct knowledge of the organization's buprenorphine program, if they had one, and physician recruiting were asked to complete the survey. The respondents received no compensation for completing this survey, and the study received approval from the institutional review boards at the University of Wisconsin-Madison and the Ohio Department of Health.

Measures

A 22-measure survey instrument addressed types of opioid pharmacotherapy use, types of arrangements treatment organizations have with physician prescribers, perceived constraints on physician buprenorphine prescribing capacity, and barriers to physician recruitment. Survey data was combined with organizational data obtained from OhioMHAS. The levels of care measures were based on Knudsen [4] measures of availability of inpatient detoxification, outpatient detoxification, inpatient treatment services, mixture of inpatient/outpatient treatment services, and outpatient services. The survey specified medication for opioid pharmacotherapies based on an American Society of Addiction Medicine (ASAM) survey [24], and included all buprenorphine formulations, injectable naltrexone (Vivitrol®) and methadone. Naloxone or Narcan® was added to the analysis because of the attention it has received as a medication to treat opioid overdoses [21].

The study team for this analysis developed the measures of buprenorphine prescribing capacity because no existing appropriate measures could be found. The two dichotomous (yes/no) questions were: "Over the past six months, our organization has had sufficient access to buprenorphine prescribers" and "Over the past six months, we have turned away patients eligible for buprenorphine because of the limit on the number of patients a physician can prescribe buprenorphine."

The assessed projected barriers to physician recruitment were based on barriers found to curtail physician use of buprenorphine. These barriers were: poor reimbursement rates [1], physicians not wanting to work with substance abuse clientele [18], needing to apply for DATA 2000 waiver [25], diversion concerns [20], or being too busy [19]. A five-point Likert scale was used for this analysis.

Data collection and analysis

The survey data was collected from August 1, 2014 to September 30, 2014. Percentages, means, and standard deviations were used to report survey results. The data were stratified by treatment organizations actively engaged or not engaged in medication therapy for opioid dependence. An analysis was conducted to determine differences in the perceived barriers to buprenorphine prescribing between small organizations (those with fewer than 500 annual admissions) and large organizations (those with more than 500 annual admissions), as well

as between organizations who employ or have contacted physicians and those who do not. A Kendall tau-b test of association between ordinal variables was used to test differences.

Results

From the survey sample, 37 surveys were returned, for a 90.2% return rate. The job titles of the individuals completing the survey for their organizations included: clinical director (n=19); CEO/COO (n=11), process improvement specialist (n=4), and counselor (n=3). A diverse set of organizations participated, with annual addiction admissions ranging from 56 to 4118 (Table 1). On average, 29.9% of admissions in the survey sample of treatment organizations had an opioid diagnosis, which compares to 27.7% in the Ohio's non-survey population and 26.0% nationally [26]. In the respondent sample, 5.4% (n=2) of the organizations provided inpatient only services, 45.9% (n=17) provided only outpatient services, and 48.6% (n=18) provided both inpatient and outpatient services. Across these levels of care, 78.4% (n=29) of treatment organizations included buprenorphine as a treatment therapy; 35.1% (n=13) included injectable naltrexone (Vivitrol®), 13.5% (n=5) included methadone, and 40.0% (n=14) included Naloxone (Narcan®).

Of the organizations that utilize buprenorphine therapy, 96.6% (n=28) had a physician on site. Conversely, for those not engaged in buprenorphine therapy, just 50.0% had a physician on site. Of the organizations with a physician on site, 40% only used a physician on staff; 12% only used a contracted physician, and 48% used a combination of both on-staff and contracted physicians.

When asked about sufficient physician prescribing capacity, for those using buprenorphine therapy, 48.3% (n=14) indicated they had insufficient prescribing capacity over the previous 6 months. Of those, 50% (n=7) indicated they had to turn patients away from buprenorphine as a treatment option because of the federal patient cap on buprenorphine prescribing. The (n=7) organizations that had turned patients away had a combined total of 1040 buprenorphine patient slots at the time and expressed the need for 800 additional slots.

Of organizations that were currently using buprenorphine therapy (n=29), the highest rated reason for difficulty in recruiting physicians for buprenorphine prescribing was "community physicians not wanting to work with substance use disorder clientele," with a 3.62 Likert mean (SD=.94) (Table 2). Conversely, reimbursement concerns were the lowest rated of the barriers, with a 3.13 Likert mean (SD=.83).

No statistical differences appeared in the perceived barriers to physician recruitment between organizations with admissions above or below 500 per year. One significant perceived barrier for each condition emerged for organizations that employed or contracted with physicians. For organizations that employed a physician, the perceived barrier "Physician not wanting to take DATA 2000 training" was significantly different, at $p=.011$. For organizations that had contracted physicians, the perceived barrier "Physician concerns about poor reimbursement rates" was significantly different, at $p=.038$.

Discussion

The study found that 48.3% of respondents had concerns with physician prescribing capacity and 50.0% of those reported having to turn patients away from buprenorphine therapy over the previous 6 months. The 50% (n=7) represented 18.9% of the total respondents or 17.1% of the total sample (n=41) and 24.1% of the respondents providing buprenorphine therapy. This suggests that limited physician capacity is restricting access to buprenorphine treatment.

Overall, the two perceived recruitment barriers that had a 95% confidence interval range above the scale's midpoint of 3, on the 5-point Likert scale, were due to "Physicians not wanting to work with addiction treatment clientele" and "Physicians are too busy." Perceptions of the barriers "Physician not wanting to take the DATA 2000 training" and "Physician concerns about poor reimbursement rates" varied based on whether the organization already employed physicians or had contracted physicians. Those who employ physicians reported greater difficulties in finding physicians who will take the DATA2000 training, suggesting they may have some difficulties in engaging physicians already on staff in their mental health area. Organizations that rely on contract physicians perceived that reimbursement rate concerns might create recruiting difficulties.

Policy implications

Arfken [3] suggests sufficient capacity may exist for buprenorphine prescribing. This perceived capacity may not be actual capacity, since not all DATA 2000 waived physicians are using their waivers [6] and many physicians in office-practice settings do not fully utilize their DATA 2000 buprenorphine prescribing slots [3]. This research suggests that there is a constraint in physician capacity in specialty treatment settings and the cap on DATA 2000 slots presents a barrier. Removing the barrier would increase physician capacity to prescribe buprenorphine.

Moreover, buprenorphine therapy was supposed to promote use of pharmacotherapy to address opiate dependence because using office-based practices made it possible to provide opiate treatment outside of specialty addiction treatment locations. This could be a limited assumption. First, because office-based practices can be resistant to buprenorphine use due to the five barriers to engaging physicians described in this study. Second, if buprenorphine diversion is a concern, practices to avert it, such as adjunct behavioral therapy, drug screening for presence buprenorphine and other substances, and random pill counts [27], are more common in specialty treatment than office-based practice settings. These two scenarios naturally encourage continued reliance on specialty treatment organizations to provide buprenorphine.

Limitations

The analysis primarily addresses buprenorphine prescribing and buprenorphine prescriber recruiting issues, not allowing a comparison to other opioid treatment pharmacotherapies to determine if the recruiting issues are unique to buprenorphine. This is also a limited sample from one state and it could be overrepresented by organizations that provide access to

buprenorphine therapy. In selecting the sample, the study team took actions to make it representative. In addition, the sample only represents the public treatment system in Ohio. Ohio has been considered to be at the forefront of states seeking to remedy non-medical use prescription opioids as a public health hazard [28].

Conclusion

The study indicates that physician constraints are evident in buprenorphine prescribing in specialty treatment organizations. Potential remedies include encouraging more treatment organizations to have physicians on site; removing the DATA 2000 cap, and developing better strategies to recruit physicians into addiction treatment practice. Additional research is needed to monitor this trend longitudinally, to understand the buprenorphine prescribing capacity trends in other states; and to develop better practices for recruiting physicians into addiction treatment settings.

TM created the first draft of the survey in early August 2014, and received feedback from CS, MZ, SS, Andy Quanbeck of the University of Wisconsin-Madison, and Dennis McCarty of Oregon Health Sciences University. CS created the online survey in Qualtrics, tested it between 8/22–26, and finalized after feedback on 8/26/14.

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Table 1

Organizational Characteristics.

		Count
Admissions	<100	2
	100–499	12
	500–999	16
	1000+	7
		Count
Opiate Admissions	<10%	9
	10–19%	9
	20–29%	10
	30–39%	5
	40%+	4
		Percent
Ethnicity Served	Black/African American	23%
	American Indian	<1%
	Hawaiian/Pacific Islander	<1%
	White Caucasian	71%
	Hispanic	3%
	More than one race	2%

Table 2

Physician Recruitment Barriers (In Rank Order).

Recruitment Barrier	Mean (Standard Deviation)	Confidence Interval (@.95)
Physician not wanting to work with substance use disorder clientele	3.62 (.94)	3.32–3.92
Physicians are too busy	3.41 (.82)	3.15–3.67
Physician concerns about diversion	3.24 (.95)	2.93–3.55
Physician not wanting to take DATA 2000 training	3.17 (.97)	2.86–3.48
Physician concerns about poor reimbursement rates	3.13 (.83)	2.86–3.40

Likert Scale choices of (1=Strongly Disagree, 2, 3, 4, and 5=Strongly Agree)