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## Patient perspectives associated with intended duration of buprenorphine maintenance therapy

**Brandon S. Bentzley, Ph.D.<sup>a</sup>, Kelly S. Barth, D.O.<sup>b</sup>, Sudie E. Back, Ph.D.<sup>b</sup>, Garrett Aronson, B.S.<sup>c</sup>, and Sarah W. Book, M.D.<sup>b</sup>**

Brandon S. Bentzley: BSBentzley@gmail.com; Kelly S. Barth: stephen@musc.edu; Sudie E. Back: backs@musc.edu; Garrett Aronson: Garonson0702@gmail.com; Sarah W. Book: booksw@musc.edu

<sup>a</sup>Department of Neurosciences, Medical University of South Carolina, 173 Ashley Avenue, Charleston, SC 29425, United States

<sup>b</sup>Department of Psychiatry and Behavioral Sciences, Medical University of South Carolina, 67 President Street, Charleston, SC 29425, United States

<sup>c</sup>Department of Psychology, University of Florida, 945 Center Drive, Gainesville, FL 32611, United States

### Abstract

Patients with opioid use disorders frequently discontinue opioid maintenance therapy (OMT) prematurely, reducing retention and possibly limiting the efficacy of OMT. The current study is a cross-sectional survey of patients ( $N = 69$ ) enrolled in buprenorphine maintenance therapy (BMT). We examined patient demographics, BMT characteristics (e.g., dose, time in BMT), and patient perspectives regarding intended duration of BMT. In addition, patients' reasons for continuing or discontinuing BMT were investigated. Results revealed that the majority (82%) of participants reported wanting to continue BMT for at least 12 months. Age at first drug use, time in BMT, concern about pain, and concern about relapse were all positively associated with intended duration of BMT. The following were negatively associated with intended duration of BMT: recent discussion with a treatment provider about BMT discontinuation, prior attempt to discontinue BMT, concern about withdrawal symptoms, experiencing pleasurable effects from taking buprenorphine, and perceived conflicts of BMT with life, work, or school obligations. The most common reasons for wanting to continue BMT included concerns about withdrawal symptoms, relapse, and pain. Although preliminary, the findings highlight key issues with regard to patients' perspectives of BMT. The results of this study provide information that may be useful in improving OMT programs and treatment outcomes.

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**Corresponding Author:** Brandon S Bentzley, Department of Neurosciences, Medical University of South Carolina, 404 Basic Science Building, 173 Ashley Ave., Charleston, SC 29425, United States, Phone: (856) 449-7057, Fax: (843) 792-4423, BSBentzley@gmail.com.

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## Keywords

buprenorphine; opioid use disorder; opioid maintenance therapy; treatment cessation; patient perspectives

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## 1. Introduction

Opioid maintenance therapy (OMT) with methadone or buprenorphine is an efficacious treatment for opioid use disorders (Mattick, Breen, Kimber, & Davoli, 2009; Mattick, Kimber, Breen, & Davoli, 2008; Thomas et al., 2014). OMT reduces illicit opioid use (Mattick et al., 2008; 2009), mortality (Clausen, Anchersen, & Waal, 2008; Degenhardt et al., 2011), criminal activity (Bates & Pemberton, 1996; Dolan et al., 2005; Mattick et al., 2009), healthcare costs (Tkacz, Volpicelli, Un, & Ruetsch, 2014), and high-risk behaviors associated with transmission of Human Immunodeficiency Virus (HIV) (Gowing, Farrell, Bornemann, Sullivan, & Ali, 2011). Moreover, OMT increases quality of life (Giacomuzzi et al., 2003; Nosyk et al., 2011; Ponizovsky & Grinshpoon, 2007; Winklbaaur, Jagsch, Ebner, Thau, & Fischer, 2008). Unfortunately, although outcomes improve with longer OMT duration (Hubbard, Craddock, & Anderson, 2003; Zhang, Friedmann, & Gerstein, 2003), the benefits of OMT do not frequently endure after treatment cessation. Rates of relapse to illicit opioid use (Bentzley, Barth, Back, & Book, 2014; Dunn, Sigmon, Strain, Heil, & Higgins, 2011; Horspool, Seivewright, Armitage, & Mathers, 2008; Kornør, Waal, & Sandvik, 2007) and mortality (Clausen et al., 2008; Degenhardt et al., 2011) both increase when patients are no longer enrolled in OMT.

Despite OMT efficacy and the poor prognosis with treatment discontinuation, over half of patients with an opioid use disorder in the United States are not being treated with OMT (Kleber, 2008; SAMHSA, 2011). It is well-known that many external barriers exist to engaging in and sustaining OMT, including limited availability in certain geographic areas; however, there are also various patient perspectives that lead to lack of engagement in OMT and premature OMT cessation (Kleber, 2007; Reisinger et al., 2009). Patients who perceive they have a low risk for opioid relapse demonstrate less interest in engaging in OMT (Bailey, Herman, & Stein, 2013) and express a shorter intended duration of treatment (Winstock, Lintzeris, & Lea, 2011). For those patients who do engage in OMT, dissatisfaction with program rules drives much of OMT discontinuation (Gryczynski et al., 2013; Reisinger et al., 2009) despite high levels of patient satisfaction with the OMT treatment itself (Barry et al., 2007; Ling, Hillhouse, Ang, Jenkins, & Fahey, 2013). Patient perspectives, such as these, may contribute to suboptimal treatment outcomes. A more comprehensive understanding of patient perspectives regarding premature treatment discontinuation could provide targets for OMT program modifications and specific points to address with patients during treatment sessions to improve retention in OMT.

To further investigate this important question, we conducted a cross sectional study of patient perspectives among individuals maintained on buprenorphine for the treatment of an opioid use disorder. To date, only two reports have specifically addressed how patient perspectives of buprenorphine maintenance therapy (BMT) are associated with treatment

duration (Gryczynski et al., 2013; Winstock et al., 2011). One report revealed that intended treatment duration was longer in patients who had been enrolled in BMT for a longer period of time and who were more concerned about relapse (Winstock et al., 2011). Another report showed that perceived conflict of BMT with life, work, or school obligations was a major reason for treatment discontinuation (Gryczynski et al., 2013). However, these studies were limited by focusing on perspectives of patients naïve to BMT (Gryczynski et al., 2013), restricting the time course of treatment to 6 months (Gryczynski et al., 2013), and by including patients maintained on both methadone as well as buprenorphine (Winstock et al., 2011). In the current study, we investigated patients maintained exclusively on buprenorphine in a naturalistic sample in order to identify patient perspectives that may affect intended treatment duration in clinical practice.

## 2. Methods

### 2.1. Participants

Participants were adults ( $N = 69$ ) enrolled in BMT at the Center for Drug and Alcohol Programs at the Medical University of South Carolina (MUSC) in Charleston, South Carolina. All 100 patients enrolled in this treatment program were eligible and asked to complete the study survey. There were no other inclusion or exclusion criteria. Participants were not compensated for participating in the study. Baseline characteristics are shown in Table 1.

### 2.2. Clinic procedures

The Center for Drug and Alcohol Programs Opiate Recovery Group Program (ORG) at MUSC provides ongoing treatment for individuals suffering from dependence on prescription opioids or heroin. The program includes long-term treatment with a psychiatrist and psychotherapist in both group and individual sessions. Although the program offers Medication Assisted Therapy with either buprenorphine or naltrexone, only 1 of the 101 patients enrolled during the study was taking naltrexone. Patients enter the program through a walk-in evaluation clinic that is open every weekday without an appointment. If patients are diagnosed with an opioid use disorder, they are given an appointment with a psychiatrist who discusses with them the risks and benefits of Medication Assisted Therapy and begins the appropriate treatment. The American Society of Addiction Medicine Patient Placement Criteria are used to determine the appropriate level of care. Patients may be referred directly to the ORG, or, if appropriate, be referred to an Intensive Outpatient Treatment Program (IOP) that is completed prior to entering the ORG.

Patients assigned to the IOP meet M-F for a total of 20 days and urine drugs screens are performed several times per week. Patients assigned to the ORG attend biweekly group therapy (of no more than 12 patients per group), and urine drug screens are performed at least monthly. In both programs, urine drug screens are used to inform clinical care and would not be used as a sole criterion for determining patient discharge. Attendance is mandatory at both programs. Because ORG is a long-term treatment, patients who miss up to 2 groups per calendar quarter have the opportunity to make up the groups by attending a

“make up” group that occurs weekly. Patients in ORG are also encouraged to meet individually with their psychotherapist as often as needed.

### 2.3. Study procedures

The study was approved by the MUSC Institutional Review Board and a waiver of informed consent was received before any procedures were conducted. Data were collected and managed using Research Electronic Data Capture (REDCap) electronic data capture system (Harris et al., 2009). REDCap is a secure, web-based application designed to support data capture for research studies, providing 1) an intuitive interface for validated data entry; 2) audit trails for tracking data manipulation and export procedures; 3) automated export procedures to common statistical packages; and 4) procedures for importing data from external sources.

An electronic REDCap survey of demographic variables (e.g., age, gender), BMT characteristics (e.g., dose, time in BMT), and patient perspectives (e.g., concern about withdrawal symptoms after BMT discontinuation, experiencing pleasurable effects from taking buprenorphine) was created using items previously reported and hypothesized to be associated with patient intention to remain on BMT (Gryczynski et al., 2013; Winstock et al., 2011). The survey used in this study contained 45 items and took approximately 10 mins to complete. Participants were invited at one of their regularly scheduled appointments to complete this anonymous, self-report survey using computers located in private, individual workstations at the clinic.

### 2.4. Statistical analysis

All statistical analyses were performed with SPSS Statistics (Version 19, IBM Corp., Armonk, New York, USA). Ordered logistic regression tests were used to examine the association of intended length of BMT (<1, 1–6, 6–12, 12–24, >24 months) with demographic and BMT-perspective survey items. BMT perspectives were scored on a 5-point Likert scale, from 1 = strongly disagree to 5 = strongly agree. Although race was included in the survey, all but 4 patients were Caucasian; hence, race was not included in the logistic regression as an independent variable. Some survey items were determined to be collinear via variance inflation (e.g., heroin with injection drug use, and age at first drug use with age at first weekly drug use) and therefore were not included in the logistic regression. Internal validation of data was determined by comparing answers to an inverted question. Sixty-eight of 69 patients provided a response to the inverted question that was consistent with their response to the non-inverted form of the question asked earlier in the survey. Thus, the data were considered to represent participants' actual, non-random responses, and all patient responses were included in the analyses. The threshold for statistical significance ( $\alpha$ ) was set at 0.05.

## 3. Results

Sixty-nine of the 100 patients maintained on BMT responded to the survey. Participant demographics, BMT characteristics, BMT perspectives and their associations with intended duration of BMT can be found in Table 2. On average, participants had been taking

buprenorphine for almost 3 years, with an average dose of 14.4 mg/day. Half of participants (50.0%) reported that they intended to continue BMT for more than 24 months from the time of the survey, 31.8% intended to continue BMT for 12–24 months, 16.7% for 6–12 months, 1.5% for 1–6 months, and 0% for <1 month.

Participant demographics such as age, gender, level of education, regular cocaine use, and prior heroin use were not associated with intended duration of BMT in the full statistical model. In contrast, patient age at first drug use was found to be positively associated with intended BMT duration (odds ratio [OR] = 2.04; 95% confidence interval [CI] = 1.15–3.61;  $p = 0.015$ ) with older age at first illicit drug use being associated with longer intended BMT duration.

Discussing BMT discontinuation with a treatment provider in the previous 6 months (OR = 0.004, CI = 0.00–0.80,  $p = 0.041$ ) and attempting BMT discontinuation in the past (OR = 0.03, CI = 0.00–0.95,  $p = 0.047$ ) were significantly associated with shorter intended BMT duration. In contrast, the number of months a participant had been enrolled in BMT was associated with a longer intended duration of BMT (OR = 1.17, CI = 1.05–1.31,  $p = 0.006$ ), with longer BMT enrollment being associated with a longer intended duration of BMT. BMT dose was not associated with intended BMT duration.

Several patient perspectives of BMT were found to be associated with intended duration of BMT. Concern about experiencing increased pain (OR = 19.34, CI = 1.77–211.03,  $p = 0.015$ ) and relapse (OR = 7.71, CI = 1.55–38.32,  $p = 0.013$ ) as a result of BMT discontinuation were both associated with longer intended BMT duration. In contrast, the perception that BMT conflicts too much with life, work, or school obligations was associated with a shorter intended duration of BMT (OR = 0.08, CI = 0.01–0.68,  $p = 0.020$ ). Similarly, concern about experiencing withdrawal with BMT discontinuation (OR = 0.19, CI = 0.04–1.04,  $p = 0.055$ ) and liking the way buprenorphine makes one feel (OR = 0.18, CI = 0.04–0.94,  $p = 0.042$ ) were associated with a shorter intended duration of BMT. Patients were also asked to describe in their own words how buprenorphine makes them feel. Forty-five of 69 patients responded with words such as “normal”, “level-headed”, or “OK”, and 8 patients reported positive feelings such as “better”, “driven”, or “motivated”. The remainder of patients reported sedation ( $n = 4$ ), analgesia ( $n = 3$ ), reduced opioid craving ( $n = 4$ ), or the response was ambiguous ( $n = 4$ ).

Participants were allowed to choose multiple reasons for why they wanted to continue BMT and/or provide a written response. These responses are summarized in Table 3. Most patients (90% of all patients surveyed) indicated that a major factor for continuing BMT was concern of withdrawal symptoms. The majority of patients (65%) indicated that concern of relapse kept them enrolled in BMT, and over half (52%) cited concern of pain prevented them from discontinuing BMT. Approximately one-third of patients indicated that primary reasons for continuing BMT were unsuccessful past attempts to taper off (35%), physician advice (32%), or influence of family/friends (29%).

The most frequent reasons participants reported wanting to discontinue BMT included the cost (26% of all patients surveyed) and the taste (20%) of buprenorphine. Less frequent

reasons included conflicts with life, work, or school obligations (12%), difficulty in travelling to the clinic (12%), and influenced of family/friends (10%). A tenth of participants provided a written response to this question, and all 7 of these participants indicated that they viewed BMT as another form of addiction. These responses are summarized in Table 4.

#### 4. Discussion

The current study examined patient demographics, BMT characteristics, and patient perspectives associated with intended duration of BMT among individuals with an opioid use disorder. Reasons for wanting to continue or discontinue BMT were also explored. On average, patients in this study were maintained on what is considered an “intermediate” dose of buprenorphine (Mattick et al., 2008), and 38% of patients had a history of heroin and intravenous drug use. Overall, patients in this sample were not interested in discontinuing BMT within the next year.

We predicted from past studies (Gryczynski et al., 2013; Mitchell et al., 2013) that the perception that BMT conflicts too much with life, work, or school obligations would be associated with shorter intended duration of BMT. Indeed, we found that this perception was significantly associated with a shorter intended duration of BMT, an association that reflects prior reports that found an association between perceived conflicts with methadone maintenance programs and treatment retention (Reisinger et al., 2009). In light of the association between a perceived conflict of BMT with life obligations and shorter intended duration of BMT, patient retention in BMT may be augmented by reducing the burden of BMT. Although the current survey did not query patients specifically about how BMT conflicted with their life obligations, our clinical experience with these patients leads us to speculate that much of this perceived burden is related to the time commitment of coming to the clinic for the required twice monthly therapy sessions. Many patients must travel 3–4 hours to the clinic, as our institution is one of very few Medicaid providers within this radius. Thus, the burden of BMT might be reduced by increasing the number of providers, increasing the interval between medication management appointments, or reducing or eliminating the need for counseling in select patients, as counseling has not been shown to improve outcomes beyond BMT alone (Amato, Minozzi, Davoli, & Vecchi, 2011; Downey, Helmus, & Schuster, 2000; Fiellin et al., 2013; 2006; Ling et al., 2013).

Several other results from this study are also in agreement with previous research (Winstock et al., 2011). Recently discussing BMT discontinuation with treatment providers was associated with the desire for a more imminent discontinuation of BMT. This association is an intuitive finding and likely indicates that patients considering treatment termination are more apt to speak with their treatment providers about discontinuation. Also similar to the study by Winstock et al. (2011), patients who had been in BMT for a longer period of time were more interested in remaining in BMT for a longer duration. This could indicate that patients most interested in remaining in BMT had consequently accrued more time in treatment; i.e., those individuals who may have found BMT unappealing have already left treatment. Alternatively, this association could indicate that patients who had remained in treatment for longer periods of time may have perceived more advantages of BMT, as they may have had more time to rebuild their lives in the context of reduced illicit opiate use

afforded by continued BMT. Finally, as in this past report (Winstock et al., 2011), we found that concern about relapse with BMT discontinuation was associated with longer intended treatment duration.

The association between perceived risk of relapse and intended BMT duration found in this study and others (Winstock et al., 2011) may be particularly important given that relapse rates after BMT discontinuation are very high (Bailey et al., 2013; Bentzley et al., 2014; Dunn et al., 2011; Horspool et al., 2008; Kornør et al., 2007), and some patients may underestimate their risk of relapse with treatment discontinuation. It is known that individuals with high perceived risk of relapse have greater interest in maintenance medications after detoxification (Bailey et al., 2013). Therefore, if perceived risk of relapse is found to be causally related to retention in BMT, then treatment retention might be improved by patient education about the high risk of relapse when BMT is discontinued.

In addition to the parallels between the current study and the reports of Gryczynski et al. (2013) and Winstock et al. (2011), we observed several previously unreported positive associations between patient perspectives of BMT and intended duration of BMT. Concern about pain with BMT discontinuation was found to be associated with longer intended BMT duration, and pain was a major reason patients reported remaining in BMT (52%). Over half of surveyed patients (62.3%) were primary prescription opioid users, and prescription opioid misuse often stems from initial use for pain (Barth et al., 2013). A hyperalgesic state associated with opioid withdrawal is well described (Compton, Charuvastra, & Ling, 2001; Hooten, Mantilla, Sandroni, & Townsend, 2010; Younger et al., 2008); thus, the association between concern about pain and the desire to remain in BMT for longer periods of time may reflect an analgesic effect provided by sustained buprenorphine use that alleviates the hyperalgesic state and motivates continued BMT. It is interesting to note that a previous report that exclusively surveyed heroin users did not observe this association (Winstock et al., 2011), indicating that this association could be unique to primary prescription opioid users.

Patient age at first drug use was also found to be associated with intended treatment duration, with older age at first drug use being associated with longer intended treatment duration. Older age at first drug use has also been found to be associated with increased retention in methadone maintenance therapy (Zhou & Zhuang, 2014). It has been hypothesized that patients who began using opioids at a later age may have experienced, or perceive the possibility of experiencing, larger relative social, legal or economic losses as a result of an opioid use disorder, thus motivating continued participation in treatment (Zhou & Zhuang, 2014). Because age was also included in the statistical model, this association cannot be accounted for by assuming that patients who began drug use at a later age are likely to be older when in treatment. Thus, the association between patient age at first drug use and longer intended treatment duration is unlikely to be an extension of the association between patient age and better treatment outcomes with BMT (Dreifuss et al., 2013). The average age of first opioid use has been increasing over time (Cicero, Ellis, Surratt, & Kurtz, 2014; Guichard et al., 2013), and this trend could indicate that increases in retention in OMT may also be observed.

Variables associated with shorter intended duration of BMT included previous attempts at BMT discontinuation and concern about withdrawal symptoms. Whereas the former association is an intuitive finding, the later association between concern about withdrawal symptoms and shorter intended duration of BMT is less clear. Patients in this sample mostly endorsed concern about experiencing withdrawal if they were to taper off buprenorphine (mean = 4.07 on a 5-point scale), and fear of withdrawal was the most frequently cited reason patients remained in BMT (90%). Yet, concern about buprenorphine withdrawal symptoms was associated with shorter intended BMT duration. There are several possible explanations for this. This could reflect that the population with the more imminent buprenorphine taper would expectedly have higher levels of concern about withdrawal. Alternatively, patients who most fear withdrawal may be burdened by this concern and desire to discontinue medication to eliminate a source of stress. Lastly, this could also be attributed to a perception by patients that longer use of buprenorphine might lead to an exacerbated withdrawal syndrome. Future studies should further explore the relationship between fear of withdrawal symptoms and intended BMT duration.

Finally, we found that liking the way buprenorphine makes one feel was associated with a shorter intended duration of BMT. Forty-five of 69 patients responded to the open-ended question of how buprenorphine makes them feel with neutral words such as “normal”, “level-headed”, or “OK”. Far fewer patients ( $n = 8$ ) indicated positive feelings such as “driven”, “motivated”, or “better”. No patients indicated that buprenorphine made them feel “high”. Although we can only speculate on this preliminary finding, it is plausible that the effectiveness of buprenorphine in making people feel “normal” lead them to believe they were “cured” and thus ready to discontinue BMT. Clearly, further research on this topic is needed before drawing any definitive conclusions.

The current study had several limitations. First, we relied on self-report within a convenience sample. Second, our sample was comprised mostly of individuals with years of experience with BMT, and therefore the findings may not generalize to patients who are early in their course of BMT. Participants were almost exclusively Caucasian, and the average participant had some college education, also limiting generalizability to more diverse populations. Additionally, the duration in BMT treatment was found to be associated with longer intended duration of BMT treatment, raising the possibility that those individuals who found BMT unappealing already left treatment and were not included in the sample; thus, there may be a sampling bias among the individuals who remained in treatment and completed the survey. Finally, we note that patients’ intended duration of treatment may not be strongly associated with actual treatment duration (Gryczynski et al., 2013); however, the existence of such an association has not yet been addressed for patients with extensive experience with BMT.

In summary, the findings indicate that patient demographics, BMT characteristics, and BMT perspectives are associated with intended duration of treatment. Age at first drug use, time in BMT, concern about pain, and concern about relapse were positively associated with intended duration of BMT. These positive associations suggest that BMT retention may be particularly high in patients who experience an analgesic effect of the medication, and augmented patient education about the high probability of relapse may increase retention in



BMT. Recently speaking with a treatment provider about BMT discontinuation, attempting BMT discontinuation in the past, concern about withdrawal symptoms, liking the way buprenorphine makes one feel, and perceived conflicts of BMT with life, work, or school obligations all were negatively associated with intended BMT duration. These associations may help inform providers of patients likely to desire treatment discontinuation and suggest that remodeling BMT programs to conflict less with patients' day-to-day lives may also enhance retention. Taken together, the findings from this study add to an incipient line of research investigating how patient perspectives influence BMT treatment. Future lines of investigation that consider more diverse populations and how patient perspectives ultimately affect treatment outcomes will aid in the development of more efficacious BMT programs.

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**Highlights**

- We performed a survey of patients in buprenorphine maintenance therapy (BMT).
- The majority (82%) of participants wanted to continue BMT for at least a year.
- Time in BMT and age at first drug use were associated with longer intended BMT.
- Concern of relapse and pain were associated with longer intended BMT.
- Conflicts between BMT and life obligations related to shorter intended BMT.

**Table 1**Baseline sample characteristics ( $N = 69$ )

<b>Variable</b>	<b>M (SD)</b>
Age, years	36.4 (11.4)
Education, years	13.2 (3.1)
Age at first use of any drug	19.8 (8.7)
Age at first weekly use of any drug	23.9 (8.2)
Buprenorphine dose (mg/day)	14.4 (9.4)
Time on buprenorphine, months	33.7 (27.5)
	<b><i>n</i> (%)</b>
Gender	
Female	37 (53.6)
Male	32 (46.4)
Race	
Caucasian	65 (94.2)
African American	3 (4.35)
Heroin user	26 (37.7)
Injection drug user	27 (39.1)

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**Table 2**

Variables associated with intended duration of buprenorphine maintenance treatment

Variable	Mean or %	Odds ratio (95% CI)	<i>p</i>
Age, years	36.4	1.17 (0.98–1.39)	0.078
Gender, female	53.6	3.46 (0.20–59.09)	0.392
Education, years	13.2	0.34 (0.06–1.93)	0.223
Heroin user	37.7	7.55 (0.20–285.43)	0.276
Cocaine user	20.3	0.19 (0.01–3.97)	0.284
Age at first use	19.8	2.04 (1.15–3.61)	0.015*
Buprenorphine dose, (mg/day)	14.4	0.97 (0.77–1.22)	0.784
Time on buprenorphine, months	33.7	1.17 (1.05–1.31)	0.006**
Ever discussed BMT <sup>#</sup> duration with treatment provider	58.0	0.23 (0.01–4.06)	0.316
Discussed BMT discontinuation with treatment provider during previous 6 months	36.2	0.004 (0.00–0.80)	0.041*
Attempted BMT discontinuation in past	42.0	0.03 (0.00–0.95)	0.047*
<b>Survey Items<sup>§</sup></b>			
“I am concerned about experiencing withdrawal if I were to taper off of buprenorphine”	4.07	0.19 (0.04–1.04)	0.055 <sup>‡</sup>
“I am concerned about experiencing increased pain if I were to taper off of buprenorphine”	3.68	19.34 (1.77–211.03)	0.015*
“I am concerned about having a relapse if I were to taper off of buprenorphine”	3.48	7.71 (1.55–38.32)	0.013*
“If there were a medication to help with withdrawal, pain and relapse, I would be more interested in trying to taper off of buprenorphine”	3.83	1.44 (0.32–6.42)	0.634
“I like the way buprenorphine makes me feel”	3.41	0.18 (0.04–0.94)	0.042*
“My treatment provider wants me to continue taking buprenorphine”	3.74	3.52 (0.38–32.39)	0.266
“My family/friends want me to continue taking buprenorphine”	3.51	0.88 (0.09–8.33)	0.914
“Buprenorphine treatment conflicts too much with life, work, or school obligations”	2.14	0.08 (0.01–0.68)	0.020*
“I don’t like the way buprenorphine tastes”	3.75	3.16 (0.60–16.61)	0.174
“It is difficult for me to afford the cost of buprenorphine”	3.23	0.40 (0.11–1.46)	0.167
“Addiction recovery is not possible while I am taking buprenorphine”	1.88	5.95 (0.75–47.37)	0.092

<sup>#</sup>Buprenorphine maintenance therapy<sup>§</sup>Rated on a Likert scale from 1 (strongly disagree) to 5 (strongly agree).<sup>‡</sup>*p* = 0.05,\*  
*p* < 0.05,\*\*  
*p* < 0.01

**Table 3**Primary reasons participants want to continue buprenorphine maintenance therapy ( $N = 69$ )

<b>Reason</b>	<b><i>n</i></b>	<b>%</b>
Concern about withdrawal	62	89.9
Concern about relapse	45	65.2
Concern about pain	36	52.2
I tried unsuccessfully in the past	24	34.8
My physician advised me to stay on buprenorphine	22	31.9
My family/friends want me to continue taking buprenorphine	20	29.0

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**Table 4**Primary reasons participants want to discontinue buprenorphine maintenance therapy ( $N = 69$ )

<b>Reason</b>	<b><i>n</i></b>	<b>%</b>
It is difficult for me to afford the cost of buprenorphine	18	26.1
I don't like the way buprenorphine tastes	14	20.3
Buprenorphine treatment conflicts too much with life, work, or school obligations	8	11.6
It is difficult for me to travel to the clinic	8	11.6
My family/friends don't want me to take buprenorphine any longer	7	10.1
Other	7	10.1

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