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Brief articles

Patient Perspectives Associated with Intended Duration of Buprenorphine Maintenance Therapy☆

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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.

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; Winklbaur, 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, 2015; 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

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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 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.

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

Variable	M (SD)
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)
	***n* (%)**
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)

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 min 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 (α) was set at 0.05.