

## BRIEF REPORT

# Patient Satisfaction with Primary Care Office-Based Buprenorphine/Naloxone Treatment

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**BACKGROUND:** Factors associated with satisfaction among patients receiving primary care-based buprenorphine/naloxone are unknown.

**OBJECTIVE:** To identify factors related to patient satisfaction in patients receiving primary care-based buprenorphine/naloxone that varied in counseling intensity (20 vs 45 minutes) and office visit frequency (weekly vs thrice weekly).

**DESIGN AND PARTICIPANTS:** One hundred and forty-two opioid-dependent subjects.

**MEASUREMENTS:** Demographics, drug treatment history, and substance use status at baseline and during treatment were collected. The primary outcome was patient satisfaction at 12 weeks.

**RESULTS:** Patients' mean overall satisfaction score was 4.4 (out of 5). Patients were most satisfied with the medication and ancillary services and indicated strong willingness to refer a substance-abusing friend for the same treatment. Patients were least satisfied with their interactions with other opioid-dependent patients, referrals to Narcotics Anonymous, and the inconvenience of the treatment location. Female gender ( $\beta=.17$ ,  $P=.04$ ) and non-White ethnicity/race ( $\beta=.17$ ,  $P=.04$ ) independently predicted patient satisfaction. Patients who received briefer counseling and buprenorphine/naloxone dispensed weekly had greater satisfaction than those whose medication was dispensed thrice weekly (mean difference 4.9, 95% confidence interval 0.08 to 9.80,  $P=.03$ ).

**CONCLUSIONS:** Patients are satisfied with primary care office-based buprenorphine/naloxone. Providers should consider the identified barriers to patient satisfaction.

**KEY WORDS:** opioid-related disorders; primary health care; buprenorphine/naloxone; patient satisfaction.

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## INTRODUCTION

Patient satisfaction has increasingly been viewed as an important health care outcome and has been used as a measure of quality of care in different health care settings, including addiction treatment,<sup>1</sup> mental health services,<sup>2</sup> and primary care.<sup>3,4</sup> There is limited research that examines patient satisfaction with buprenorphine/naloxone treatment in primary care settings or the association between patient satisfaction and treatment outcome. This paucity of research is particularly noteworthy given the increasing availability and demonstrated efficacy of office-based buprenorphine/naloxone treatment.<sup>5-7</sup>

This study was designed to explore the satisfaction of patients with buprenorphine/naloxone treatment in a primary care setting. Our specific aim was to examine the association between five classes of variables—demographics, drug treatment history, baseline substance use status, treatment program characteristics/treatment conditions, and substance use during treatment—and patient satisfaction.

## METHODS

### Setting and Data Collection

The data for this study were collected as part of a 24-week randomized clinical trial, conducted in a primary care center to determine the efficacy of varying levels of psychosocial counseling provided with buprenorphine/naloxone maintenance in primary care.<sup>5</sup> Patients received daily buprenorphine/naloxone and were assigned to 1 of 3 treatment conditions varying in counseling intensity (20 vs 45 minutes) and medication dispensing (once weekly vs thrice weekly). Patients in standard medical management (SMM) were dispensed buprenorphine/naloxone either once a week (SMM-1) or thrice weekly (SMM-3), and attended a weekly 20-minute counseling session with a nurse and a monthly 20-minute appointment with a physician. Patients in enhanced medical management (EMM-3) were dispensed buprenorphine/naloxone thrice weekly and attended a weekly 45-minute counseling session with a nurse and a

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monthly 20-minute appointment with a physician. Of the 166 participants who enrolled in the trial, 142 completed the patient satisfaction measure midway (week 12) during treatment.

**Patient Satisfaction Questionnaire**

We developed a patient satisfaction measure that assessed domains explicated by patients in our previous clinical trials<sup>6,8</sup> and by Novick et al.<sup>9</sup> The Primary Care Buprenorphine Satisfaction Scale (PCBSS) comprised nineteen items that included satisfaction ratings in three areas: overall and specific service components; staff expertise, concern, and responsiveness; and helpfulness of overall and specific treatment components. PCBSS items were scored on a 5-point Likert-type scale (possible satisfaction scores ranged from 15 to 95). Principal component analysis results indicated that the most parsimonious solution was a one-factor solution, which accounted for 37.6% of the variance. Item-total correlations ranged from 0.29 to 0.77. The 19-item scale had a Cronbach alpha of 0.89. We correlated the total satisfaction score (obtained midway during treatment) with weeks in treatments ( $r=.22, P=.007$ ) to obtain an estimate of the measure’s predictive validity.

**Potential Correlates of Patient Satisfaction**

We considered demographics (i.e., gender, ethnicity/race [White, African-American, Hispanic], age, employment [yes/no], marital status [yes/no], monthly income, and education [<high school, ≥high school]), drug treatment history (i.e., prior methadone maintenance, years of methadone maintenance, and prior drug detoxification), baseline substance use status (i.e., alcohol, cocaine, and illicit opiate frequency; injection drug use status [yes/no]; and prescription opioid use only [yes/no]), treatment program characteristics/treatment conditions (which varied in intensity of counseling and frequency of buprenorphine/naloxone dispensing), and substance use during treatment as potential correlates of patient satisfaction. Demographic information and drug treatment history were collected at baseline by self-report; baseline substance use status was assessed via self-report and urinalysis. Illicit substance use during treatment was measured by means of weekly patient self-report of the frequency of drug use and the weekly urinalysis.

**Data Analysis**

We examined group differences on satisfaction using analysis of variance or *t* tests. Pairwise comparisons were performed using Scheffe post hoc tests. We also examined demographic and substance use during treatment variables (univariate correlates of patient satisfaction with a *P* value <.20) as predictors of participants’ dimensional score reflecting patient satisfaction using a simultaneous multiple regression, controlling for treatment condition assignment. We used the overall PCBSS score to examine patient satisfaction.

**RESULTS**

**Description of the Study Sample**

Table 1 summarizes descriptive characteristics of the study sample and correlations between study sample characteristics and patient satisfaction.

**Table 1. Description of the Study Sample and Correlations Between Study Sample Characteristics and Patient Satisfaction (N= 142)**

	Number (%) or Mean ± SD	R	P Value
<b>Demographics</b>			
Male (%)	114 (80.3)	.17	<b>.04</b>
White ethnicity/race*	109 (76.8)	-.22	<b>.01</b>
Full-time employment	85 (59.9)	.03	.77
Age	35.8±9.2	.15	<b>.08</b>
Never married	80 (56.4)	-.03	.78
Monthly income in dollars	1354±1480	.04	.61
≥High school education	116 (81.7)	-.09	.25
Years of opioid dependence	7.8±7.8		
Days of alcohol use in last 30 days	2.9±5.4	-.03	.75
Days of cocaine use in last 30 days	1.6±3.2	.02	.84
<b>Drug treatment history</b>			
Prior methadone maintenance	92 (64.8)	-.05	.59
Years of methadone maintenance	2.7±2.3	-.01	.98
Prior drug detoxification	92 (64.8)	.08	.34
<b>Baseline substance use status</b>			
Injection drug use	41 (28.8)	-.08	.38
Prescription drug use only	25 (17.6)	.04	.66

Items in bold have *P* values < .20.

\*White ethnicity/race was scored as 0=non-White, 1=White.

**Description of Patient Satisfaction**

Table 2 summarizes initial descriptive characteristics of the PCBSS, including means and standard deviations. Patients were satisfied with their primary care buprenorphine/naloxone treatment: their mean satisfaction ratings for overall satisfaction, overall and specific service components, staff expertise, concern, and responsiveness, and helpfulness of overall and specific treatment components were all greater than 4.

With regard to overall and specific service components, the highest rated satisfaction items were the treatment that participants had received in the primary care center and the courteousness of staff members (both had mean ratings of 4.7). The lowest rated satisfaction items were interaction with other opioid-dependent patients and the convenience of the primary care location, which had mean ratings of 2.9 and 3.7, respectively.

With regard to the helpfulness of overall and specific treatment components, the highest rated satisfaction items related to the primary care services in helping patients to cope better with drug abuse problems, the buprenorphine/naloxone medication, and the perception of being treated like a patient rather than a drug addict, which had mean ratings of 4.8, 4.8, and 4.6, respectively. The lowest rated item concerned the helpfulness of referrals to Narcotics Anonymous or other self-help groups, which had a mean rating of 3.2.

**Factors Associated with Patient Satisfaction**

In univariate analyses, overall patient satisfaction was significantly associated with sex, race, and the percentage of opiate-free urine tests during treatment but was not associated with drug treatment history or baseline substance use status. Non-White participants reported significantly greater patient

**Table 2. Means and Standard Deviations for the Primary Care Buprenorphine Satisfaction Scale (N=142)**

Patient satisfaction item	Mean (SD)
Subscale 1: overall and specific service components	4.3 (0.6)
How satisfied are you with the treatment that you have received in the Primary Care Center?*	4.7 (0.8)
Rate the PCC with respect to <i>prompt service</i>	4.4 (0.8)
Rate the PCC with respect to <i>convenient appointments</i>	4.4 (0.8)
Rate the PCC with respect to <i>courteous staff</i>	4.7 (0.6)
Rate the PCC with respect to <i>clinic comfort</i>	4.1 (0.9)
Rate the PCC with respect to <i>quality of care</i>	4.3 (0.8)
Rate the PCC with respect to <i>convenience of location</i>	3.7 (1.2)
Rate the PCC with respect to <i>interaction with other patients*</i>	2.9 (1.5)
Subscale 2: staff expertise, concern, and responsiveness subscale	4.5 (0.5)
How well do the physician and nursing staff seem to understand your substance abuse problem?	4.3 (0.7)
How competent and knowledgeable do the physician and nursing staff seem to be about treating your substance abuse problem?	4.2 (0.7)
How interested is the physician and nursing staff in helping you with your substance abuse problem?	4.6 (0.6)
If a friend needed similar treatment for a substance abuse problem, would you recommend the PCC to him or her?	4.8 (0.4)
How responsive was the physician to your requests for treatment?	4.7 (0.7)
How concerned is the physician about you as a patient?	4.7 (0.7)
Subscale 3: helpfulness of overall and specific treatment components	4.3 (0.7)
Have the services you received helped you deal more effectively with your drug problem? Rate how helpful each of the following has been for you?	4.8 (0.4)
Medication	4.8 (0.6)
Talking about my problems with the doctor	4.2 (1.1)
Talking about my problems with the nurse	4.3 (1.0)
Being treated like a patient instead of a drug addict	4.6 (0.7)
Referral to Narcotic Anonymous	3.2 (1.6)
Monitoring of drug use	4.2 (1.1)
Overall satisfaction score	4.4 (0.5) or 82.7 (9.6)

SD = standard deviation, PCC = Primary Care Center.

\*These items were omitted from the overall patient satisfaction score.

satisfaction than Whites ( $t=2.63$ ,  $df=140$ ,  $P=.01$ ). Whereas treatment outcomes did not vary significantly by treatment condition,<sup>5</sup> patient satisfaction did ( $F[2, 139]=3.16$ ,  $P=.03$ ). The SMM-1 treatment group had significantly higher patient satisfaction than the SMM-3 treatment group (mean difference 4.9, 95% confidence interval [CI] 0.08 to 9.80,  $P=.03$ ) but did not differ significantly from the EMM-3 treatment group (mean difference 2.6, 95% CI -2.22 to 7.39,  $P=.42$ ). Although the EMM-3 treatment group reported higher satisfaction than the SMM-3 treatment group (mean difference 2.4, 95% CI -2.43 to 7.14,  $P=.48$ ), it was not at a level of statistical significance ( $P=.48$ ).

### Predictors of Patient Satisfaction

A simultaneous multiple regression to determine the joint and independent contributions of the specific variables to predicting the strength of patient satisfaction revealed a significant relationship for the overall sample ( $R^2=.16$  [ $R=.40$ ];  $F[7, 134]=$

3.59,  $P=.001$  [Adjusted  $R^2=.11$ ]). Significant standardized regression coefficients were found for female gender ( $\beta=.17$  [ $P=.04$ ]) and non-White ethnicity/race ( $\beta=.17$  [ $P=.04$ ]), indicating that these variables were significantly associated with greater patient satisfaction.

## DISCUSSION

This study, to our knowledge, is among the first to examine patient satisfaction in buprenorphine/naloxone-maintained patients in a primary care office-based setting. Overall, patients reported high levels of satisfaction with this treatment, including overall and specific service components; staff expertise, concern, and responsiveness; and helpfulness of overall and specific treatment components. Women reported greater satisfaction than men and non-White participants reported greater satisfaction than Whites. Female gender and non-White ethnicity/race were significant independent predictors of patient satisfaction even after controlling for other baseline factors. Patients who received buprenorphine/naloxone weekly (SMM-1) had higher satisfaction than those who received it thrice weekly (SMM-3).

These findings extend those reported in a recent study concerning the acceptance of office-based agonist treatment among primary care providers.<sup>10</sup> Our findings of high patient satisfaction support the role of office-based buprenorphine/naloxone treatment, a relatively new treatment option in the United States, in increasing access to opioid-agonist therapy.

Buprenorphine/naloxone treatment appears to be accepted by patients who are new to opioid-agonist treatment and those who have previously received treatment. Furthermore, baseline substance use status was not associated with treatment satisfaction.

Determining the optimal level of patient contact associated with patient satisfaction is important. Studies on community-based drug treatment programs found that patients who spent more time with a drug counselor reported greater satisfaction,<sup>11,12</sup> although a different pattern of findings emerged in our study. Specifically, patients who were assigned to the condition with the fewest medication dispensing appointment requirements reported the most satisfaction, even after controlling for substance use during treatment. Thus, it appears that participants were more satisfied with fewer medication appointments and possibly more intense counseling.

Limitations to the current study are worth noting. Our use of a single time point in treatment limits statements concerning ongoing effects. The limited variability in patient satisfaction scores may reflect social desirability bias; however, it is important to note that satisfaction data were collected by research assistants and patients were informed that their responses were confidential. While participants' demographic characteristics were similar to those reported in other U.S. and international studies of office-based buprenorphine/naloxone maintenance, our study sample is not necessarily representative of all opioid-dependent patients.<sup>13-15</sup>

In conclusion, this study suggests that office-based buprenorphine/naloxone treatment is associated with high levels of patient satisfaction. This finding supports ongoing efforts to expand opioid-dependent patients' treatment options. Future research should address factors that promote or thwart

patient and provider satisfaction with office-based buprenorphine/naloxone treatment to ensure that its expansion is not impeded.<sup>10</sup>

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