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Illicit buprenorphine use, interest in and access to buprenorphine treatment among syringe exchange participants

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ABSTRACT

Poor access to buprenorphine maintenance treatment (BMT) may contribute to illicit buprenorphine use. This study investigated illicit buprenorphine use and barriers to BMT among syringe exchange participants. Computer-based interviews conducted at a New York City harm reduction agency determined: prior buprenorphine use; barriers to BMT; and interest in BMT. Of 102 opioid users, 57 had used illicit buprenorphine and 32 had used prescribed buprenorphine. When illicit buprenorphine users were compared to non-users: barriers to BMT ("did not know where to get treatment") were more common (64 vs. 36%, $p < 0.01$); mean levels of interest in BMT were greater (3.37 ± 1.29 vs. 2.80 ± 1.34, $p = 0.03$); and more participants reported themselves likely to initiate treatment (82 vs. 50%, $p < 0.01$). Illicit buprenorphine users were interested in BMT but did not know where to go for treatment. Addressing barriers to BMT could reduce illicit buprenorphine use.

1. Introduction

The epidemic of opioid addiction has grown rapidly with opioid overdose-related deaths more than tripling over the past decade (Centers for Disease Control and Prevention, 2011, 2013). Expansion of treatment for opioid addiction has failed to keep pace, and only one quarter of those who need treatment receive treatment leaving a large treatment gap (SAMHSA. Substance Abuse and Mental Health Service Administration, 2012; SAMHSA. Substance Abuse and Mental Health Services Administration & Center for Behavioral Health Statistics and Quality, 2012). Buprenorphine maintenance treatment (BMT), an option for opioid addiction treatment that has been available in the United States since 2002, is effective and may be more acceptable to patients than methadone maintenance, but it has failed to substantially reduce the treatment gap (Awgu, Magura, & Rosenblum, 2010; Mattick, Kimber, Breen, & Davoli, 2008). To date, most studies of barriers to BMT have examined the challenges of physicians or health systems to provide treatment (Korthuis et al., 2010; Roman, Abraham, & Knudsen, 2011; Savage, Abraham, Knudsen, Rothrauff, & Roman, 2012; Schuman-Olivier, Connery, et al., 2013; Schuman-Olivier, Hoeppner, et al., 2013), but many of the factors that prevent more people who use drugs (PWUD) from initiating BMT are still unknown.

Among potential barriers to BMT, access to treatment has been understudied. White race, private insurance, dependence on opioid analgesics, and living in an area with a high density of physicians waivered to prescribe buprenorphine are all associated with receipt of BMT, but access may be more limited for marginalized groups, such as the uninsured or heroin users (Ducharme & Abraham, 2008; Kissin, McLeod, Sonnefeld, & Stanton, 2006; Murphy, Fishman, McPherson, Dyck, & Roll, 2014; Stein et al., 2012). As recently as 2011, data from New York City demonstrated high levels of interest but low levels of enrollment in BMT among participants of syringe exchange programs, a marginalized group of PWUD with particularly high treatment needs (Fox et al., 2014). PWUD may not know how to find a buprenorphine provider; costs may be prohibitive; and the most marginalized PWUDs may be completely disconnected from traditional health care systems. Understanding these patient-level barriers to BMT will aid in developing strategies to overcome them.

While access to BMT has failed to meet demand, use of diverted or illicit buprenorphine is increasing and has recently received more attention (Dasgupta et al., 2010; Johanson, Arfken, di Menza, & Schuster, 2012). Existing data suggest that many illicit buprenorphine users take diverted buprenorphine to reduce symptoms of opioid withdrawal, not for intoxication or euphoria; thus, illicit buprenorphine use may in part be due to lack of access to BMT (Bazazi, Yokell, Fu, Rich, & Zaller, 2011; Genberg et al., 2013; Gwin Mitchell et al., 2009; Lofwall & Havens, 2012; Monte, Mandell, Wilford, Tennyson, & Boyer, 2009; Sohler et al., 2013). Among BMT patients, prior illicit buprenorphine use has not been associated with negative treatment

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outcomes (Cunningham, Roose, Starrels, Giovanniello, & Sohler, 2013), and clinical experience suggests that PWUD attempt to cut down or stop using opioids with illicit buprenorphine for a period of time before they actually initiate BMT. Therefore, illicit buprenorphine users who could benefit from BMT may be ready for treatment but experiencing barriers to care; however, additional data are necessary to confirm these clinical observations.

In this study we investigated illicit buprenorphine use, barriers to BMT, and interest in initiating BMT among syringe exchange participants. Our two main research questions were: are illicit buprenorphine users: (1) experiencing barriers to BMT; and (2) interested in initiating treatment with BMT? Findings can guide the development of interventions to improve access to BMT.

2. Materials and methods

The Albert Einstein College of Medicine, Montefiore Medical Center and Washington Heights CORNER Project (WHCP) collaborated on this cross-sectional study. The study was deemed exempt by affiliated institutional review boards.

2.1. Setting

WHCP is a community-based harm reduction agency that provides syringe exchange and diverse social services within an area of New York City that is severely impacted by drug use, HIV/AIDS, and hepatitis C. Its mission is to improve the health and quality of life of people who use drugs. From its office, WHCP provides: sterile syringes; case management; referrals for medical, dental, or addiction treatment; HIV risk reduction education and interventions; and harm reduction counseling. WHCP serves more than 1500 clients, the majority of whom are Hispanic or Black, male, 40–49 years old, and use injection drugs. Over a 6 week period, we recruited a convenience sample of WHCP's syringe exchange participants who received office-based services.

2.2. Participants

Between July and August 2013, WHCP staff informed all clients receiving office-based services about the study and those interested were referred to the research staff. Eligibility criteria included: (1) at least 18 years of age; (2) fluent in English or Spanish; and (3) history of opioid use. Following referral to the study, research staff described study goals and procedures and obtained informed consent.

2.3. Data collection

Participants completed a 25-minute 100-item interview in a private room at the WHCP office. Interviews were conducted in English or Spanish using audio computer-assisted self-interview (ACASI) technology, which plays an audio recording of questions as items are displayed on a computer screen. Participants entered responses directly on the computer. After completing the interview, participants were compensated with $10 in cash and a $5 transit pass.

2.4. Measures

Interviews focused on three domains: (1) prior use of buprenorphine (illicit and prescribed); (2) barriers to BMT; (3) interest in initiating BMT (overall interest in BMT, motivation, and likelihood of initiating BMT).

2.4.1. Illicit buprenorphine use

The Addiction Severity Index (ASI) was adapted to assess recent (i.e. within the previous 30 days) and lifetime (i.e. any regular use for >1 year) buprenorphine use (McLellan et al., 1992). For buprenorphine (and other substances on the ASI that can be prescribed), when participants answered that they had used at least 1 day of a substance, they were asked a follow-up question about whether the substance was prescribed to them. Participants were also asked directly, "Have you ever taken Suboxone *that was NOT prescribed to you*? (for example, have you ever taken Suboxone that was from the streets, from a friend, or from a family member?)" Participants reporting non-prescribed buprenorphine use on the ASI or answering yes to the previous question were considered to have used illicit buprenorphine. Participants were also asked whether they had been prescribed buprenorphine by a doctor, so participants could have had illicit buprenorphine use only, prescribed buprenorphine use only, or both illicit and prescribed buprenorphine use.

2.4.2. Barriers to BMT

We adapted a previously published questionnaire to measure self-perceived barriers to BMT (Kalichman, Catz, & Ramachandran, 1999). Participants were asked whether the following seven barriers had prevented them from receiving BMT, if they had wanted to start or continue treatment: inability to pay, unsure of where to obtain care, lack of transportation, having been treated poorly at the clinic, wanting to avoid being seen at the clinic, distrusting doctors, or lack of child care. Responses to each item were dichotomous (yes/no).

2.4.3. Interest in initiating BMT

We assessed overall interest in BMT, motivation for opioid addiction treatment, and likelihood of initiating BMT at three potential treatment locations.

2.4.3.1. Overall interest. Agreement with the statement, "I am interested in starting treatment with Suboxone" was assessed on a 5-point Likert scale (1 = strongly disagree, 5 = strongly agree). Those agreeing or strongly agreeing were considered to have overall interest in BMT.

2.4.3.2. Motivation. Motivation for opioid addiction treatment was assessed using three items that were adapted from the Stages of Change Readiness and Treatment Eagerness Scale (SOCRATES) (Miller & Tonigan, 1996). These items assessed problem recognition, desire to make changes, and taking action to reduce opioid use, which are important steps in changing addiction-related behaviors (Prochaska, 1996). Agreement with each statement was assessed on a 5-point Likert scale as above, and those agreeing or strongly agreeing to each item were considered to endorse that statement, and those endorsing all three items were considered to be motivated for treatment.

2.4.3.3. Likelihood of initiating treatment by location. Likelihood of initiating BMT at different treatment locations was assessed in three items that each referenced a different location where BMT could potentially be prescribed (harm reduction agency, general medical clinic, or drug treatment program). Participants were asked whether they agreed with the statement, "It is very likely that I would start treatment," if BMT was available at each location. Agreement with each statement was assessed on a 5-point Likert scale (1 = strongly disagree, 5 = strongly agree), and those agreeing or strongly agreeing were considered likely to initiate treatment at the potential location.

2.4.4. Covariates

Other data collected during the interviews included: demographic characteristics (age, gender, race/ethnicity, education, health insurance); current and lifetime substance use (from the Addiction Severity Index); presence of psychiatric co-morbidities (depression, anxiety, bipolar disorder, schizophrenia, other); experiences with different treatment options for opioid dependence (methadone maintenance, residential or inpatient, self-help groups, or other forms of group treatment); and awareness of BMT.