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Reinforcing integrated psychiatric service attendance in an opioid-agonist program: A randomized and controlled trial

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ABSTRACT

Background: The benefits of integrating substance abuse and psychiatric care may be limited by poor service utilization. This randomized clinical trial evaluated the efficacy of using contingency management to improve utilization of psychiatric services co-located and integrated within a community-based methadone maintenance treatment program.

Methods: Opioid-dependent outpatients ($n = 125$) with any current psychiatric disorder were randomly assigned to: (1) reinforced on-site integrated care (ROIC), with vouchers (worth $25.00) contingent on full adherence to each week of scheduled psychiatric services; or (2) standard on-site integrated care (SOIC). All participants received access to the same schedule of psychiatrist and mental health counseling sessions for 12-weeks.

Results: ROIC participants attended more overall psychiatric sessions at month 1 ($M = 7.53$ vs. 3.97, $p < .001$), month 2 ($M = 6.31$ vs. 2.81, $p < .001$), and month 3 ($M = 5.71$ vs. 2.44, $p < .001$). Both conditions evidenced reductions in psychiatric distress ($p < .001$) and similar rates of drug-positive urine samples. No differences in study retention were observed.

Conclusions: These findings suggest that contingency management can improve utilization of psychiatric services scheduled within an on-site and integrated treatment model. Delivering evidenced-based mental health counseling, or modifying the contingency plan to include illicit drug use, may be required to facilitate greater changes in psychiatric and substance abuse outcomes.

1. Introduction

The high prevalence of psychiatric disorders in people with substance use disorder (Brooner et al., 1997; McGovern et al., 2006), and the correspondingly low rates of psychiatric service utilization in this population (McGovern et al., 2006; Pringle et al., 2006), has facilitated study of on-site integrated treatment models (Donald et al., 2005; Sacks et al., 2008a). While integrated care models can improve access to enhanced and specialized psychiatric services by delivering them in a single treatment setting, available research has produced mostly equivocal results, with only some studies demonstrating even modest effects on psychiatric or drug use outcomes (see Donald et al., 2005, for a review). A potential explanation for these disappointing findings is the limited scope and utilization of on-site psychiatric services reported in the literature, which may limit the potential effectiveness of integrated care approaches (Donald et al., 2005; Sacks et al., 2008b).

Poor service utilization, which has been implicated as a primary reason for partial and poor response to a wide range of medical and psychiatric interventions (Sabate, 2003), is also apparent in the small number of published studies offering integrated services within substance abuse treatment settings (e.g., Bowen et al., 2000; Randall et al., 2001). Lydecker et al. (2010), for example, recently evaluated an ambitious 6-month protocol combining cognitive-behavioral group therapy and medication management for alcohol dependent individuals with comorbid depression. These authors found that group sessions were attended considerably less often than medication management appointments, and that both integrated and non-integrated protocols demonstrated reductions in depression symptoms. Utilization of scheduled services was positively associated with reduced depressive symptoms and drug use, suggesting that improving attendance rates in integrated care models might have good collateral effects on both psychiatric and substance use outcomes.

Engaging opioid dependent individuals in psychiatric care may be particularly challenging because they are often poorly adherent

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to even routine substance abuse services (see Kidorf et al., 2006, for a review). Brooner et al. (2004), for example, showed that opioid-dependent individuals randomly assigned to a control group that was offered both routine and intensified substance abuse care attended less than half of all scheduled services, with adherence considerably worse for any sessions offered supplemental to routine individual counseling. Low rates of utilization is also commonly found in studies evaluating the efficacy of specialized individual or group therapies (e.g., cognitive-behavioral or 12-step facilitation therapies) added to routine methadone maintenance practices (Carroll et al., 2012; Rawson et al., 2002).

Service delivery strategies that result in opioid abusers receiving a higher dose of prescribed services are likely to produce substantially better outcomes. One potential mechanism for improving adherence to scheduled services is contingency management, a motivational intervention that uses behavioral reinforcement principles to encourage behavior change (Higgins et al., 2004). Contingency management has been used most frequently within substance-dependent populations to reduce drug use (Lussier et al., 2006), and a growing literature supports its use for increasing treatment participation (e.g., attendance behavior). Voucher-based incentives as a delivery platform for behavioral reinforcement have shown efficacy in improving rates of substance abuse treatment enrollment (Kidorf et al., 2009), attendance to individual and group therapy (Helmus et al., 2003; Jones et al., 2001), and adherence to medication regimens (Sorensen et al., 2007).

The present study provides data from the first known randomized clinical trial evaluating the efficacy of voucher-based reinforcement to improve attendance to specialized psychiatric services integrated within an outpatient program for opioid-dependent patients. Opioid-dependent participants receiving methadone maintenance in a community-based program were provided co-located and integrated psychiatric care that included psychiatrist appointments, individual and group mental health counseling sessions, and good access to prescribed psychiatric medications for 12-weeks. Psychiatric care was integrated primarily by having substance abuse clinical staff deliver the psychiatric treatment protocol. One half of the participants received voucher reinforcement (i.e., $25.00) for each week they attended all scheduled psychiatric treatment services. The reinforced attendance condition was expected to attend more of their scheduled counseling and psychiatrist appointments, achieve greater reductions in psychiatric distress, and submit lower proportions of drug-positive urine samples.

2. Methods

2.1. Participants

Study participants were 125 opioid-dependent outpatients enrolled in a community-based opioid-agonist clinic (see Consort Diagram, Fig. 1). Participants were recruited from 12/15/09 to 4/30/12. Forty percent ($n = 50$) of participants were new admissions; the remainder ($n = 73$) had been in the program for at least 60-days. Patients were study eligible if they met DSM-IV-R criteria for a current psychiatric diagnosis and expressed interest in receiving psychiatric treatment offered within the program. Patients were not eligible for the study if they were pregnant, had an acute medical problem that required immediate and intense medical management, or had cognitive impairment that interfered with comprehension of study procedures. The study was approved by the Johns Hopkins University Institutional Review Board.

Table 1 shows that the most participants were Caucasian and female, and the mean age at study enrollment was 39.1 years. Major depression was the most prevalent DSM-IV Axis I psychiatric disorder, followed by Post Traumatic Stress Disorder, and Panic Disorder. Over 40% of the sample was diagnosed with Antisocial Personality Disorder, and 44% of the urine samples collected during the one-month baseline tested positive for at least one illicit drug. Comparisons of randomized ($n = 125$) and non-randomized ($n = 33$) enrollees on demographic variables found only one significant difference – fewer randomized participants were classified as new admissions (40% vs. 61%; $\chi^2 = 4.49$, $p = .03$).

2.2. Assessments

Participants completed the Structured Clinical Interview for the DSM-IV (SCID-I and SCID-II; First et al., 1995) during the second week of baseline. The SCID-I is a structured interview that uses a decision-tree approach for determining diagnoses of many DSM-IV Axis I psychiatric disorders; the SCID-II was used for making

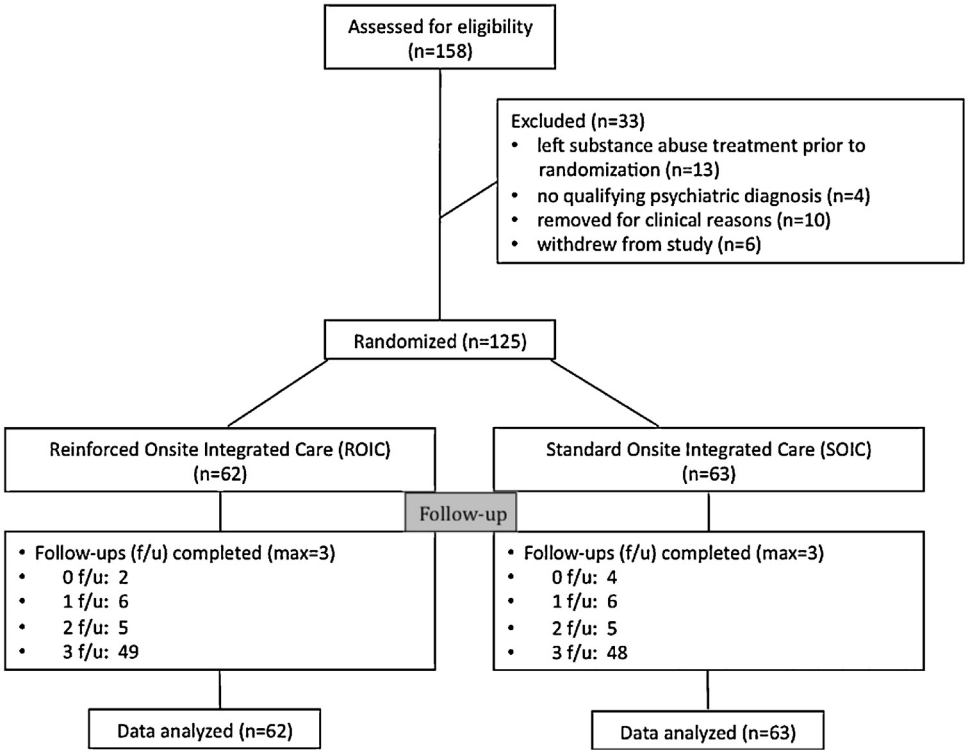

Fig. 1. Consort diagram.