Published in final edited form as:

Am J Addict. 2013 September ; 22(5): 500–502. doi:10.1111/j.1521-0391.2013.12049.x.

Community-Based Treatment for Opioid Dependent Offenders: A Pilot Study

Randy Brown, MD, PhD¹, Michele Gassman, MA¹, Scott Hetzel, MS², and Lisa Berger, PhD³

¹Department of Family Medicine, University of Wisconsin-Madison, School of Medicine and Public Health, Madison, Wisconsin

²Biostatistics and Medical Informatics, University of Wisconsin-Madison, School of Medicine and Public Health, Madison, Wisconsin

³University of Wisconsin-Milwaukee, Helen Bader School of Social Welfare, Milwaukee, Wisconsin

Abstract

Background—Primary care opioid substitution treatment (OST) has not been compared to program-based OST for community-supervised offenders.

Objective—To compare primary care to specialist supervised OST for opioid dependent offenders in terms of substance use and HIV risk outcomes.

This project randomly assigned 15 jail diversion participants to either: (1) primary care buprenorphine OST, (2) specialist facility buprenorphine OST, or (3) specialist facility methadone OST. Participation lasted 13.5 months (12 month active treatment plus a post-participation visit).

Results—All subjects endorsed 0 days of opioid use in the previous 14 at follow-up. Specialty care reduced HIV risk (Risk Assessment Battery composite score) over 6 months (-0.24 ± 0.17) compared to primary care (0.02 ± 0.14 ; $p=0.032$).

Conclusion—Findings support primary care OST feasibility for a community-supervised offender sample. Specialist care may facilitate improvements in secondary outcomes, such as HIV risk behaviors.

Scientific significance—Further research is needed to clarify (1) the role of primary care in addicted offender management, and (2) the matching of offenders, based upon history and co-morbidity, to care coordination conditions.

Introduction

Opioid dependence is a devastating illness to individuals, families, and the health and well-being of communities. More than 26,000 deaths from unintentional drug poisoning occurred in the United States in 2006, and opioids were involved in more than half of these.¹ Opioid use also resulted in 324,000 emergency room visits and 85,000 hospitalizations.² Substance use disorders are linked to criminal behavior and are a significant burden on the criminal justice system. Approximately 30% of acquisitive crime is committed by individuals supporting drug use and the frequency of drug use correlates with the frequency of criminal

Address correspondence to Dr. Brown, Department of Family Medicine, University of Wisconsin – Madison, 1100 Delaplane Ct., Madison, WI 53715. randy.brown@fammed.wisc.edu.

Declaration of Interest:

The authors report no conflicts of interest. The authors alone are responsible for the content and writing of this paper.

behavior.^{3,4} Criminal justice involvement constitutes a critical contact point to involve a vulnerable population in effective treatment and prevention services.

Our research sought to test models to expand treatment access for opioid dependent offenders involved in two Dane County (Madison, WI) jail diversion programs: Drug Treatment Court and the Treatment Alternative Program. It was designed as a feasibility study of primary care opioid substitution treatment (OST) in comparison to OST through a specialty methadone treatment facility for opioid dependent offenders. Both medications are well-studied and effective in the treatment of opioid dependence. Relevant hypotheses to the design of this pilot feasibility study and future larger study based upon this design include: 1) subjects receiving primary care treatment will have reduced emergency room and hospital visits and, 2) reductions in opioid use and risky HIV behaviors will be comparable for primary care-referred versus specialty care-referred (methadone treatment facility) offenders.

Methods

Participants

Participants consisted of 15 Dane County jail diversion program participants enrolled in either the Drug Treatment Court (DTC) or Treatment Alternative Program (TAP).

Inclusion criteria were diagnosis of opioid dependence (via Mini International Neuropsychiatric Interview (MINI)), opioid positive urine drug screen, negative screening urine pregnancy test and willingness to use appropriate birth control methods throughout the study. Exclusion criteria (via MINI and initial medical history and physical exam) were current alcohol or sedative dependence, pregnancy, women who were breast-feeding, complex psychiatric co-morbidity, complex medical co-morbidity, or pharmacotherapy with an agent contraindicated in combination with Suboxone or methadone, according to drug labeling.

Procedures

This community-based protocol was approved by the University of Wisconsin Health Sciences Institutional Review Board. Participants were referred by the Clinical Assessment Unit at the Mental Health Center of Dane County, where all potential jail diversion program participants receive initial clinical evaluation. After giving permission to be contacted by the project coordinator, potential participants were scheduled for an initial baseline visit. Eligible participants were randomly assigned to one of 3 study arms: (1) primary care plus Suboxone, (2) specialist treatment facility plus Suboxone, or (3) specialist treatment facility plus methadone. Total participation lasted 13.5 months, including a 12 month treatment period and a one-time follow up six weeks post treatment.

Measures

Primary outcomes included ongoing drug use (as measured by Timeline Followback Method (TLFB)⁵ and ASI-Lite⁶), HIV risk behaviors (RAB-short version)⁷, and health services utilization. TLFB is a reliable, calendar-based technique for retrospectively assessing the frequency and patterns of daily drug use and was administered at baseline, bi-weekly for the first six months, and monthly thereafter. All other measures were assessed at baseline, month 6, month 12 and follow up. Urine drug screens were collected as a part of routine management in DTC and TAP.

Statistical Analysis

Analysis of demographic and clinical characteristic variables compared the two groups (primary care versus specialist treatment) with t-tests, Fisher exact tests, or Wilcoxon rank sum tests. Analysis of outcome data compared the paired differences from baseline to month 6 between the two groups by t-tests and Wilcoxon rank sum test. All tests were conducted at $\alpha=0.05$.

RESULTS

Participants were predominantly male (53.3%), Caucasian (80.0%), with a mean average age of 27.5 and mean education level of 12.1 years. There was no significant difference in any demographic variables between the two groups. Two (22.2%) subjects were terminated by the court prior to month 6 from the specialty care group compared to 1 (16.7%) subject in the primary care group ($p=1$). Median (Range) TLFB at baseline was 12 (0–14) days for specialty care and 7 (0–14) days for primary care. All subjects had TLFB of 0 days at 6 month follow-up. RAB results are shown in Figure 1 as a difference between baseline RAB score and RAB score at subsequent follow-up visits. Specialty care subjects had significantly higher composite RAB scores at baseline (0.35 ± 0.21) compared to primary care subjects (0.16 ± 0.10 ; $p=0.036$). Specialty care subjects significantly reduced composite RAB scores over 6 months (-0.24 ± 0.17) compared to primary care (0.02 ± 0.14 ; $p=0.032$). No serious adverse medication effects were experienced by any participant.

DISCUSSION

The current study demonstrated the feasibility of collaboration between primary care and criminal justice programming in following and providing services to opioid dependent offenders who participate in community supervision. The study retention rate of 80 percent clearly exceeded typical rates of retention for a study of an adult opioid dependent population.^{8–10} This, in great part, may be due to the coercive nature of participation in a jail diversion program, in which successful completion may result in dismissal or reduction of criminal charges and/or penalties.

A finding of interest, however, was the significant reduction for HIV risk behaviors in the program-based group when compared to the primary care condition. The higher baseline HIV risk in the specialist study condition, and, hence, greater potential for risk reduction, may have affected this result. In other words, the relatively low prevalence of global HIV risk behaviors in the primary care group may have contributed to a “floor effect” or greater difficulty achieving improvement on this factor. This outcome warrants further examination vis a vis the possible differential impact of primary care vs. specialist treatment approaches in addressing risk behaviors associated with opioid use.

Strengths and Limitations

The high retention rate for the study relative to that typical of investigation in substance dependent samples is a clear strength of the current work and supports the feasibility of OST in a primary care setting. The pilot nature of the study and the small sample size do not allow for strong inferences to be drawn regarding the relative effectiveness of specialist vs. generalist environment for the management of opioid substitution. Additionally, urine drug testing was not collected randomly DTC and TAP where severity of use affects frequency of testing. Hence, urine drug test results are likely to present a biased picture and be difficult to interpret in aggregate in this community-based setting. Follow up studies will include random urine drug testing as part of study procedures.

Conclusions

The study provides further, albeit pilot, data supporting the effectiveness, in terms of treatment retention, of opioid substitution via primary care settings for an offender sample. Further collaboration between health care and criminal justice in reducing the public health and safety harms of opioid use and dependence warrants investigation and expansion.

Acknowledgments

The project described was supported by the Clinical and Translational Science Award (CTSA) program, previously through the National Center for Research Resources (NCRR) grant 1UL1RR025011, and now by the National Center for Advancing Translational Sciences (NCATS), grant 9U54TR000021. Funding was also provided by the Vilas Foundation.

The authors would like to acknowledge the University of Wisconsin, Department of Family Medicine, ICTR, and the Vilas Foundation for providing funding, an institutional base and collegial support. The authors would also like to express appreciation to the Dane County Drug Treatment Court, Treatment Alternative Program, and the Mental Health Center of Dane County (now Journey Mental Health). They would also like to thank Madison Health Services and Wingra Family Medical Center.

Literature Cited

1. Bohnert AS, Fudalej S, Ilgen MA. Increasing poisoning mortality rates in the United States 1999–2006. *Public Health Rep.* 2010 Jul-Aug;125(4):542–547. [PubMed: 20597454]
2. SAMHSA. Drug Abuse Warning Network, 2006: National Estimates of Drug-Related Emergency Department Visits. Rockville, MD: Substance Abuse & Mental Health Services Administration, Office of Applied Studies; 2008.
3. Magura S, Kang SY, Shapiro JL. Measuring cocaine use by hair analysis among criminally involved youth. *J. Drug Issues.* 1995; 25:683–701.
4. Nurco DN. A long-term program of research on drug use and crime. *Subst. Use Misuse.* 1998 Jul; 33(9):1817–1837. [PubMed: 9718181]
5. Sobell, LC.; Sobell, MB. Timeline follow-back: A technique for assessing self-reported alcohol consumption. In: Litten, RZ.; Allen, JP., editors. *Measuring alcohol consumption: Psychosocial and biochemical methods.* Totowa, NJ: Humana Press; 1992. p. 41-72.
6. McLellan AT, Kushner H, Metzger D, et al. The Fifth Edition of the Addiction Severity Index. *J. Subst. Abuse Treat.* 1992; 9(3):199–213. [PubMed: 1334156]
7. Metzger, DS. The risk assessment battery (RAB): Validity and reliability; Paper presented at: Annual Meeting of the National Cooperative Vaccine Development Group for AIDS; 1993.
8. Stein MD, Cioe P, Friedmann PD. Buprenorphine retention in primary care. *Journal of General Internal Medicine.* 2005 Nov; 20(11):1038–1041. [PubMed: 16307630]
9. Fischer G, Gombas W, Eder H, et al. Buprenorphine versus methadone maintenance for the treatment of opioid dependence. *Addiction.* 1999 Sep; 94(9):1337–1347. [PubMed: 10615719]
10. Soyka M, Zingg C, Koller G, Kuefner H. Retention rate and substance use in methadone and buprenorphine maintenance therapy and predictors of outcome: results from a randomized study. *Int J Neuropsychopharmacol.* 2008 Aug; 11(5):641–653. [PubMed: 18205978]

Figure 1.

HIV risk behaviors as measured by composite score on the Risk Assessment Battery--differences from baseline at study weeks 24, 52 and at post-participation follow-up as compared to baseline. (MHS = specialist treatment site, Madison Health Services, Wingra = primary care site, Access Community Health Centers-Wingra). The “box plot” depicts information regarding the mean (dot within boxes) difference between baseline RAB score and the result of re-administration at weeks 24, 52, and 58 (FU).