Adoption of buprenorphine and motivational incentives in OTPs: Correlates, barriers, and fidelity

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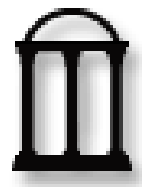

Funding provided by NIDA grants
R21DA20028 and R01DA14482

Presented at the 2007 AATOD conference, San Diego

Background

- Despite an increasing focus on the adoption of evidence-based practices (EBPs) in addiction treatment, little research has examined diffusion of EBPs to opioid treatment programs (OTPs).
- NIDA's CTN has completed trials of EBPs with specific applications to opioid treatment: buprenorphine and prize-based motivational incentives.
- It is assumed that the CTN sites are representative of the population of addiction treatment programs, and that findings regarding implementation of selected practices should generalize to programs outside the CTN.
- Neither the diffusion of these practices, nor the fidelity with which they are implemented, has been examined systematically.
- This study examines the adoption, implementation, adaptation, and purported barriers to the use of buprenorphine and motivational incentives in OTPs within and outside the CTN.

Research Questions

- What are the adoption rates of buprenorphine and motivational incentives among OTPs within and outside the CTN?
- Does direct exposure to an EBP via participation in a clinical trial enhance the likelihood of its adoption? Is indirect exposure via membership in the CTN alone enough to promote adoption?
- To what extent do OTPs “reinvent” these practices when implementing them outside a controlled trial?
- What are the barriers to the adoption of these EBPs?
- Are OTPs in the CTN representative of OTPs nationally?
  - If not, how might their differences impact the diffusion, implementation, and reinvention of these EBPs in the general population of opioid treatment programs?

Methods

- Data were collected via face-to-face interviews with the program directors of OTPs participating in the CTN (n=49 units) and a random sample of OTPs outside the CTN (n=50 units).
  - The sample reflects a 95% response rate among OTPs in the CTN, and an 82% response rate among non-CTN OTPs.
  - A $100 donation was made to each responding OTP.
- CTN units were interviewed between late 2005 and mid-2006. Non-CTN units were interviewed between mid-2006 and early 2007. Date of interview is controlled in all analyses to account for differential opportunity to adopt the focal practices over time.
- Interviews averaged 90 minutes in length, and covered organizational structure, financing, staffing, caseload characteristics, clinical practices, and exposure to a range of EBPs. CTN OTPs were also asked about their current and past participation in each of the CTN clinical trial protocols.

Sample Characteristics

	CTN OTPs (n=49)	Non-CTN OTPs (n=50)
Non-profit*	75%	52%
FTEs*	24.7	13.8
% Masters-level counselors*	42.4%	29.3%
Past year admissions*	327.5	159.8
Have a waitlist? (% yes)	18.4%	18.0%
Court system-involved clients*	15.0%	5.2%
Medicaid clients*	43.9%	23.1%
Self-paying clients*	28.3%	51.8%
Primary Rx opiate dependent	12.4%	18.7%
Clients on <60mg methadone	25.2%	20.3%
Clients on 60-100mg methadone	45.7%	44.5%

*p<.05

Adoption of Buprenorphine

- 16 of the 49 CTN OTPs participated in at least one of several buprenorphine clinical trial protocols
  - 10 of the 16 clinical trial participants (62.5%) were still using buprenorphine 6 months after the baseline interview
  - 11 of the 33 CTN OTPs that were not involved in any bup protocols (33%) were using buprenorphine at the 6-month follow-up
  - 12 of the 50 non-CTN OTPs (24%) were using buprenorphine at the time they were interviewed
- CTN OTPs were somewhat more likely to use bup as a maintenance therapy, despite the CTN trials' focus on detox protocols
- Non-CTN OTPs were somewhat more likely to use bup for detox
- Controlling for time, sample, and org variables, participating in a CTN protocol was a significant predictor of adoption. Being in the CTN was not itself predictive of adoption of bup.
- Controlling for time and CTN involvement, bup adoption was significantly associated with "low dose" OTPs (i.e., % clients with stable methadone dose of <60mg) and in for-profit OTPs.

Reasons for Not Adopting Buprenorphine

(as N of non-adopters)

	CTN OTPs	Non-CTN OTPs
OTP currently “working on it”	1	5
Cost issues / clients can’t afford it	11	13
Licensing/waivers/regulations	10	4
No client demand	1	2
Not what we do here	2	9
Not clinically effective	0	3

Concerns about licensing/waivers/regulations included inability to find waivered physicians, state regulations limiting meds that can be used in OTP settings, and requirements for dispensing bup in OTPs. A substantial proportion of OTPs outside the CTN viewed bup as a competing practice that would drain resources from methadone services. And only OTPs outside the CTN cited concerns about the evidence base for buprenorphine.

Adoption of Motivational Incentives

- We defined motivational incentives as “small prizes or other rewards targeted toward specific goal behaviors for clients in treatment.”
  - The term “contingency management” was also used in explaining the technique.
- 46.9% of CTN OTPs had adopted incentives as of the 6-month follow-up interview, and 54% of non-CTN OTPs indicated use of incentives at the time of their interview.
- Involvement in the CTN protocols, or in the CTN itself, did not increase the likelihood of adopting incentives.

Fidelity / Reinvention of Incentives

- Both samples showed significant variation in the ways they implemented motivational incentives
  - Only 56% of OTPs said their staff had received formal training on using incentives as a treatment technique
  - Target behaviors included clean urines (80%), attendance (72%), and arriving on time (56%)
  - Only 28% used a “fishbowl” or similar approach (“chance” distribution of incentives); the remainder rewarded all goal behaviors
  - 58% indicated the use of escalating incentives (i.e., value of reward or number of chances increases with each consecutive desired behavior)
- CTN sites did not differ from non-CTN OTPs in their methods of implementing motivational incentives

Incentives Provided to Clients

(as N of adopters)

	CTN OTPs	Non-CTN OTPs
Food/celebrations/certificates	4	3
Consumer electronics	2	1
Trinkets (keychains, small items)	2	1
Gift certificates, movie/bus passes	10	8
Take-home doses	4	7
Reduced fees / rebates	1	4

Few OTPs in either sample implemented incentives in a manner that resembled the CTN clinical trial protocol (chance-based rewards and escalating incentives for specific, targeted, and objective outcomes). Proportionately more OTPs outside the CTN used manipulation of take-home doses as incentives.

Conclusions

- It is important to track the diffusion of EBPs, and to understand (a) the extent to which practices are reinvented in everyday use, and (b) whether such reinvention compromises the clinical effectiveness of the EBP.
- While there are relatively straightforward protocols for the use of buprenorphine, OTPs face structural and regulatory impediments to its adoption. Participation in a CTN protocol appeared to give OTPs a head start on meeting these challenges.
- CTN involvement was not associated with the likelihood of adopting incentives, perhaps because the comparatively "low tech" approach posed fewer barriers to adoption.
- OTPs appear to have substantially adapted the use of incentives to match their resources and ability to implement the practice. More detailed interviews are planned to determine whether all of these practices are appropriately characterized as "contingency management."

Further Research

- Since these interviews were completed, the CTN (in conjunction with SAMHSA's ATTCs) developed and released "blending products" designed to teach community-based treatment programs to implement buprenorphine and motivational incentives in their practices.
- Beginning in Spring 2008, we will re-interview all CTN sites about their use of EBPs that have been examined in the CTN.
  - Interviews will examine subsequent adoption of EBPs, extent of implementation, fidelity to the core concepts specified in the blending products, and barriers to adoption.
- The release of the blending products provides a benchmark for describing the implementation of these practices in treatment programs outside the CTN. Attention to reinvention/adaptation, and its potential effect on client outcomes, is an essential area for future research.