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Acceptability of Contingency Management among Clinicians and Clients within a Co-occurring Mental Health and Substance Use Treatment Program

Debra Srebnik, PhD¹, Andrea Sugar, BA¹, Patrick Coblentz, BA², Michael G. McDonell, PhD¹, Frank Angelo, BS¹, Jessica M. Lowe, BA¹, Richard K. Ries, MD¹, and John Roll, PhD³

¹Department of Psychiatry and Behavioral Sciences, University of Washington, Seattle, Washington

²School of Social Work, University of Washington, Seattle, Washington

³College of Nursing, Washington State University, Spokane, Washington

Abstract

Background—Emerging evidence supports the effectiveness of contingency management (CM) for addictions treatment among individuals with co-occurring serious mental illness (SMI). Addiction treatment for people with SMI generally occurs within community mental health centers (CMHCs) and it is not known whether CM is acceptable within this context. Client views regarding CM are also unknown.

Objectives—This study is the first to describe CM acceptability among CMHC clinicians, and the first to explore client views. Clinician-level predictors of CM acceptability are also examined.

Methods—This study examined views about CM among 80 clinicians and 29 clients within a CMHC within the context of a concurrent CM study.

Results—Three-quarters of clinicians reported they would use CM if funding were available. Clinicians and clients affirmed that incentives enhance abstinence motivation. Clinician CM acceptability was related to greater years of experience, and identifying as an addictions or co-occurring disorders counselor, more than a mental health clinician.

Conclusions—The findings provide preliminary evidence that CMHC clinicians, serving clients with addictions and complicating SMI, and client participants in CM, view CM as motivating and a positive tool to facilitate recovery.

Scientific Significance—As an evidence-based intervention, CM warrants further efforts toward funding and dissemination in CMHCs.

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Address correspondence to Dr. Srebnik, Department of Psychiatry and Behavioral Sciences, University of Washington School of Medicine, Box 359911, Harborview Medical Center, 325 9th Ave., Seattle, WA 98104-2499. debra.srebnik@kingcounty.gov.

Declaration of Interest

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

INTRODUCTION

Contingency management (CM) is a highly effective addiction treatment,^{1–5} with emerging efficacy for persons with co-occurring serious mental illnesses (SMI).^{6–10} However, only about half of addictions clinicians are interested in implementing CM, and concerns raised include: cost, incentivizing abstinence over other treatment goals, not addressing issues underlying addiction, undermining intrinsic motivation, and other philosophical differences.^{11–13}

CM acceptability has been shown to be related to increased addictions experience, a supervisory role, higher education, prior training in CM and, in some studies, being in addiction “recovery.”^{1,11,14–16}

The aforementioned studies examined perspectives of clinicians associated with addiction treatment settings who are not typically serving individuals with SMI. Addiction treatment for people with SMI generally occurs within community mental health centers (CMHCs) by individuals who may primarily view themselves as mental health clinicians rather than addictions counselors. Although one study found that adoption of CM (for adolescents) was more likely among clinicians within CMHCs rather than addiction treatment centers,¹⁷ it is not known whether CM acceptability is generally similar between CMHC and addiction center clinicians.

Client views regarding CM are also unknown. Clients do, however, express enthusiasm for CM when they can provide input about incentives.¹⁸

This study is the first to describe CM acceptability among CMHC clinicians, and the first to explore client views. Clinician-level predictors of CM acceptability are also examined.

METHODS

Design and Procedures

Data were collected as part of a randomized clinical trial (RCT) of CM for adults with co-occurring stimulant dependence and SMI at one multisite CMHC in Seattle, Washington.⁹ The study was conducted by University of Washington (UW) researchers and approved by the UW Institutional Review Board.

The CM intervention used a variable magnitude of reinforcement procedure in which study staff provided participants opportunities to make “draws” from a bowl of tokens contingent on abstinence from stimulant drugs. Token represented varying degrees of reinforcement. Draws increased weekly with continued abstinence.^{19–21}

Participants

The research intended to examine staff views about CM not specific to the RCT, and as such, staff participants were case managers, supervisors, and administrative staff recruited in staff meetings at all CMHC worksites, with only a minority referring participants to the RCT. Staff participants had varying levels of exposure to CM, from the brief verbal overview of CM provided by the RCT to referring clients to the RCT to having personally

used some form of incentives prior to the RCT. Ninety-eight clinicians were asked to complete a survey regarding views about CM, and 80 completed it.

Client participants who were randomized to the CM intervention were interviewed about their opinions of CM during the RCT 12-week follow-up phase. Interviews were initiated after 62 of the 91 CM participants had completed the RCT's follow-up phase and so were not available to be approached. All 29 available individuals completed the interview. Clients were 18–65 years old, used stimulants within 30 days prior to admission, and met diagnostic criteria for stimulant dependence and SMI (schizophrenia, schizoaffective disorder, bipolar disorder, or major depression).

Instruments

Clinicians were surveyed using the 22-item provider survey on incentives (PSI)¹¹ that includes positively valenced items (eg, CM focuses on what is good in a client's behavior, CM provides abstinence motivation, etc.) and negatively valenced items (eg, incentives are a bribe, abstinence will only last as long as incentives are given, etc.). The survey also included questions about whether tangible incentives that cost \$10 (or \$50 or \$150) per month “are worth it considering how effective they are.” Paired statements, “My treatment facility could not find funds for tangible incentives that cost \$10 (or \$50 or \$150) per consumer per month” were also included. In addition, clinicians were asked, “Would you use an incentive program if funding was available for an incentive program at your agency?”

The clinician survey also included open-ended questions regarding CM strengths and barriers to implementation. Respondents also reported education level, credentials, job position, years of experience, exposure to CM (having provided a structured incentive program or being in an organization where incentives were used), and whether they were in recovery from addictions and/or mental illness.

Clients were interviewed with the following questions: “What did you like about the study (prompt also for how it helped)?”; “Did earning prizes help you show up and stay sober?”; “What did you not like about the study?”; and “If any agency offered CM again, would you sign up?”.

Data Analysis

Percent agreement with each PSI item was calculated as well as a total CM acceptability score.¹¹ CM acceptability was correlated with continuous predictors and tested using analysis of variance for non-continuous predictors. Inductive content analysis, with the Atlas qualitative analysis program, was used to identify, code, and organize themes within open-ended clinician and client questions.^{22,23} Responses were coded independently by two research assistants. If both coders agreed that the theme was present at least three times in the textual evidence, the theme was retained.

RESULTS

Characteristics of Clinician Participants

Clinician participants were eight supervisors and 72 line staff with an average of 8.6 (SD = 7.4) years of experience. Credentials were Master's degrees ($n = 49$, 61%), Bachelor's degrees (17, 9%), addictions certificates (9, 11%), high school diplomas (3, 4%), or doctorates (2, 3%). Twelve (15%) were in addictions recovery and 11 (14%) were in mental health recovery. Twenty-four (30%) reported having prior exposure to incentives. Fifty-eight (73%) identified themselves as mental health clinicians, 10 (13%) as addictions counselors, and 8 (10%) as co-occurring disorders counselors (4 unknown).

Clinician Views Regarding CM

Three-quarters of the responding 75 clinicians (58, 77%) reported that they would use incentives if funding were available. Most (47, 59%) believed an incentive of \$150 per person per month was not feasible, however a slight majority (41, 51%) believed \$50 per person per month would be feasible.

Table 1 shows that at least two-thirds of respondents agreed with all but one positively valenced survey item. The most frequently endorsed strengths of incentives are that they focus on what is good in client behavior and that they provide abstinence motivation irrespective of underlying issues of addiction. No negative survey item was endorsed by more than one-third of respondents, although more than 25% of respondents felt that incentives were not useful for short-term treatment, could be seen as a bribe, and would negatively impact treatment goals and the therapeutic relationship. However, as noted above, the most commonly endorsed concern—reported by more than half of clinicians—was the cost of implementing incentives (particularly if the cost was \$150/month).

In response to the open-ended question regarding CM strengths, staff noted that incentives: engage clients in treatment ($n = 29$), motivate clients ($n = 16$), provide a reason for clients to come to the CMHC ($n = 6$), provide external motivation until internal motivation develops ($n = 6$), generally work ($n = 5$), and focus on positive behavior ($n = 4$). Reported barriers to implementing CM included: funding ($n = 29$), client focusing on incentives and not treatment ($n = 9$), interference with the therapeutic relationship ($n = 9$), work involved in using incentives ($n = 7$), potential for relapse after incentives are withdrawn ($n = 5$), potential for client abuse of incentives for financial gain ($n = 5$), challenges of developing an equitable CM plan ($n = 5$), and conflicts with other treatment modalities ($n = 5$).

Clinician Characteristics Associated with CM Acceptability

Using the total of the 7 positively valenced survey items and 12 reverse-scored negatively valenced survey items, CM acceptability did not differ between supervisors and line staff ($t = .260$, $df = 78$, n.s.), credential type ($F = 1.67$, $df = 4$, n.s.), or having prior exposure to CM ($t = 1.23$, $df = 78$, n.s.). However, greater CM acceptability was related to more years of experience ($r = .24$, $p = .04$). Acceptability was higher in clinicians who identified themselves primarily as an addictions counselors ($x = 83.7$, $SD = 9.4$) or co-occurring disorders clinicians ($x = 85.3$, $SD = 12.9$), relative to mental health clinicians ($x = 74.2$, SD

= 14.6) ($F = 3.76$, $df = 2$, $p = .03$). Clinicians in addictions recovery trended toward greater acceptance of CM than those not in recovery ($t = 1.78$, $df = 78$, $p = .08$), a difference not observed for mental health recovery ($t = .67$, $df = 77$, n.s.).

Client Views Regarding CM

Table 2 shows that most of the 29 consumer participants reported that they liked CM because it helped them remain abstinent and provided a mechanism for accountability to do so. They also expressed enthusiasm for the prizes.

Twenty-four of the 29 participants responded affirmatively when asked, “Did earning prizes help you show up and stay sober?” All 29 agreed that they would “sign up” if another such CM program were made available.

In response to the question, “What did you not like about the study?,” no theme was identified across three or more interviews. Two people noted that they would have preferred to be in the control group in which prizes were not contingent on having “clean” urinalyses.

DISCUSSION

This study examined CM acceptability among CMHC clinicians and clients. Over three-quarters of clinicians (77%) reported that they would use CM if funding were available, a higher rate than in prior studies.¹¹ Both clinicians and clients reported that incentives enhance abstinence motivation. As in prior research, the most prominent concern about CM among clinicians was funding for incentives.¹¹ However, at \$255/ person for a 12-week intervention,⁹ the cost is quite low compared with typical addiction and SMI treatments.

Consistent with prior literature,¹¹ years of experience was positively related to CM acceptability. In contrast with a prior study of CM with adolescents,¹⁷ although consistent with findings that greater addictions experience is related to CM acceptability,¹⁵ we found that adult-serving addictions counselors and co-occurring disorders clinicians reported greater CM acceptability than mental health clinicians. Also differing from past studies, CM acceptability did not differ by education level, between supervisors and line staff, or by reported exposure to CM.^{11,14} Variability regarding exposure to CM might have been constrained in the current study as all staff participants received an overview of CM by the RCT researchers, however staff were not provided CM training nor did they have direct experience with the CM protocol. A more fine-grained analysis of the relationship of CM exposure to views regarding CM with addictions counselors by Rash et al.¹⁵ demonstrated that specific prior training in CM is negatively associated with general perceived barriers to CM (as well as training-related barriers), and those with prior direct CM experience are less likely to endorse training-related barriers, but not general CM barriers.

Client participants demonstrated uniformly positive attitudes toward CM; however, they were interviewed after completing a CM intervention. While it was not part of the current study, it would be useful to explore views about CM among individuals who are resistant or refuse to participate in a CM intervention. Anecdotes from two participants did suggest that some would have preferred to be in the non-contingent group so that they could receive

rewards without the effort to stay clean and sober. Along these lines, our larger RCT⁹ experienced some refusals at the point of randomization to the contingent condition, and, consistent with other studies²⁴ there was significantly higher attrition for the contingent group relative to the non-contingent group.⁹ To address this issue, some have suggested an initial engagement period in which incentives are used simply to reinforce attendance, prior to their use to reinforce abstinence.²⁴

Although the study is limited by a relatively modest sample size drawn from only one CMHC, the findings provide preliminary evidence that CMHC clinicians, serving clients with addictions and complicating SMI, and client participants in CM, view CM as motivating and a positive tool to facilitate recovery. Concerns regarding funding can be addressed by noting the cost-effectiveness of CM.^{9,25} As both a cost-efficient and desirable evidence-based intervention, CM warrants efforts toward further funding and dissemination. Our study suggests that initial efforts could be fruitfully targeted toward more seasoned clinical staff, especially those with an addictions focus, who may be able to help demonstrate to others the benefits of CM to enhance therapy and clinical outcomes.

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REFERENCES

1. Bride BE, Abraham AJ, Roman PM. Diffusion of contingency management and attitudes regarding its effectiveness and acceptability. *Subst Abuse*. 2010; 31:127–135.
2. Prendergast M, Podus D, Finney J, et al. Contingency management for treatment of substance use disorders: A meta-analysis. *Addiction*. 2006; 101:1546–1560. [PubMed: 17034434]
3. Lussier JP, Heil SH, Mongeon JA, et al. A meta-analysis of voucher-based reinforcement therapy for substance use disorder. *Addiction*. 2006; 101:192–203. [PubMed: 16445548]
4. Petry NM, Peirce JM, Stitzer ML, et al. Effect of prize-based incentives on outcomes in stimulant abusers in outpatient psychosocial treatment programs: A national drug abuse treatment clinical trials network study. *Arch Gen Psychiatry*. 2005; 62:1148–1156. [PubMed: 16203960]
5. Dutra L, Stathopoulou G, Basden SL, et al. A meta-analytic review of psychosocial interventions for substance use disorders. *Am J Psychiatry*. 2008; 165:179–187. [PubMed: 18198270]
6. Roll JM, Chermack ST, Chudzynski JE. Investigating the use of contingency management in the treatment of cocaine abuse among individuals with schizophrenia: A feasibility study. *Psychiatry Res*. 2004; 125:61–64. [PubMed: 14967553]
7. Sigmon SC, Higgins ST. Voucher-based contingent reinforcement of marijuana abstinence among individuals with serious mental illness. *J Subst Abuse Treat*. 2006; 30:291–295. [PubMed: 16716843]
8. Ries RK, Dyck DG, Short R, et al. Outcomes of managing disability benefits among patients with substance dependence and severe mental illness. *Psychiatr Serv*. 2004; 55:445–447. [PubMed: 15067161]
9. McDonnell MG, Srebnik D, Angelo F, et al. A randomized controlled trial of contingency management for psycho-stimulant use in community mental health outpatients with co-occurring severe mental illness. *Am J Psychiatry*. 2013; 170:94–101. [PubMed: 23138961]
10. Weinstock J, Alessi SM, Petry NM. Regardless of psychiatric severity the addition of contingency management to standard treatment improves retention and drug use outcomes. *Drug Alcohol Depend*. 2007; 87:288–296. [PubMed: 17005329]

11. Kirby KC, Benishek LA, Dugosh KL, et al. Substance abuse treatment providers' beliefs and objections regarding contingency management: Implications for dissemination. *Drug Alcohol Depend.* 2006; 85:19–27. [PubMed: 16650657]
12. Ritter A, Cameron J. Australian clinician attitudes towards contingency management: Comparing down under with America. *Drug Alcohol Depend.* 2007; 87:312–315. [PubMed: 16971057]
13. McCarty D, Fuller BE, Arfken C, et al. Direct care workers in the National Drug Abuse Treatment Clinical Trials Network: Characteristics, opinions, and beliefs. *Psychiatr Serv.* 2007; 58:181–190. [PubMed: 17287373]
14. Ducharme LJ, Knudsen HK, Abraham AJ, et al. Counselor attitudes toward the use of motivational incentives in addiction treatment. *Am J Addict.* 2010; 19:496–503. [PubMed: 20958844]
15. Rash CJ, Petry NM, Kirby KC, et al. Identifying provider beliefs related to contingency management adoption using the contingency management beliefs questionnaire. *Drug Alcohol Depend.* 2012; 121:205–212. [PubMed: 21925807]
16. Benishek LA, Kirby K, Dugosh KL. Beliefs about the empirical support of drug abuse treatment interventions: A survey of outpatient treatment providers. *Drug Alcohol Depend.* 2010; 107:202–208. [PubMed: 19959299]
17. Henggeler SW, Chapman JE, Rowland MD, et al. Statewide adoption and initial implementation of contingency management for substance-abusing adolescents. *J Consult Clin Psych.* 2008; 76:556–567.
18. Walker R, Rosvall T, Field CA, et al. Disseminating contingency management to increase attendance in two community substance abuse treatment centers: Lessons learned. *J Subst Abuse Treat.* 2010; 39:202–209. [PubMed: 20598838]
19. Petry NM, Tedford J, Austin M, et al. Prize reinforcement contingency management for treating cocaine users: How low can we go, and with whom? *Addiction.* 2004; 99:349–360. [PubMed: 14982548]
20. Silverman K, Chutuape MA, Bigelow GE, et al. Voucher-based reinforcement of attendance by unemployed methadone patients in a job skills training program. *Drug Alcohol Depend.* 1996; 41:197–207. [PubMed: 8842632]
21. Stitzer M, Petry N. Contingency management for treatment of substance abuse. *Annu Rev Clin Psychol.* 2006; 2:411–434. [PubMed: 17716077]
22. Elo S, Kyngas H. The qualitative content analysis process. *J Adv Nurs.* 2007; 62:107–115. [PubMed: 18352969]
23. Hsieh HF, Shannon SE. Three approaches to qualitative content analysis. *Qual Health Res.* 2005; 15:1277–1288. [PubMed: 16204405]
24. Silverman K, Wong CJ, Needham M, et al. A randomized trial of employment-based reinforcement of cocaine abstinence in injection drug users. *J Appl Behav Anal.* 2007; 40:387–410. [PubMed: 17970256]
25. Sindelar J, Elbel B, Petry NM. What do we get for our money? Cost-effectiveness of adding contingency management. *Addiction.* 2007; 102:309–316. [PubMed: 17222286]

TABLE 1

Clinician survey responses

Positively valenced items	N	% Agreement
An advantage of incentive programs is that they focus on what is good in the consumer's behavior (ie, the ability to become abstinent), not what went wrong in their recovery	64 (of 79)	81.0
Any source of abstinence motivation, not just internal motivation, is a good thing for treatment	60 (of 79)	75.9
Incentives can be useful whether or not they address the underlying issues of addiction	58 (of 78)	74.3
Overall, I would be in favor of adding an incentive program to my treatment program	54 (of 80)	67.5
Incentives help consumers achieve sobriety, allowing the counselor to focus on helping them make other life changes	52 (of 79)	65.9
Incentives are more likely to have positive effects on the consumer than they are to have negative effects	50 (of 80)	62.5
Overall, incentives are good for the consumer/counselor relationship	26 (of 80)	32.6
Negatively valenced items		
Incentives are not useful for short-term treatments (eg, 1 month or less)	24 (of 79)	30.4
Incentives are a bribe	22 (of 79)	27.9
It is not right to give an incentive to someone for being clean when they are not fulfilling other treatment goals, such attending a group	22 (of 80)	27.5
Overall, incentives have negative effects on the consumer/counselor relationship	21 (of 80)	26.3
It is not right to give incentives to consumers for goals such as attendance when they are not testing drug negative (clean)	18 (of 78)	23.0
If the consumer is abstinent just to get the incentive, it could hurt the treatment process	28 (of 80)	22.5
Incentive programs are not consistent with my philosophy of treatment	17 (of 79)	21.5
Many consumers will see rewards for abstinence as cheesy or artificial	16 (of 80)	20.1
Incentives will stop the consumer from seeing beyond the external reward and prevent them from realizing their internal motivation	13 (of 79)	16.4
Abstinence will only last for as long as the incentives are given	9 (of 78)	11.6
There are enough rewards in being clean, incentives are not necessary	7 (of 79)	8.8
Incentives are not right because they are rewarding the consumer for what he/she should be doing in the first place	7 (of 79)	8.8
Consistently providing the consumer with incentives is likely to push the consumer back into denial	6 (of 79)	7.6
Giving incentives for treatment attendance does not improve attendance	5 (of 78)	6.4
Incentives are more likely to have negative effects on the consumer than they are to have positive effects	4 (of 80)	5.0

TABLE 2

Client views regarding CM

What liked about the study	N	Example quote
CM was incentive to abstain	19	It's an incentive to continue to do good
Abstinence—accountability	17	Gave me accountability to keep clean and sober—it was a deterrent because I know you are going to UA
Prizes	14	Prizes—help me with groceries because I do not have much money
Study staff are great	14	I enjoyed the staff and the environment
Monitor drug use	4	I liked that I got to watch my cocaine use