



The Effect of Recovery Management Checkups on the Transition from Substance Use to Treatment and from Treatment to Recovery

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Introduction

Historically, addiction treatment systems and research have been organized around an acute care model that assumes that a single episode of treatment lasting a period of weeks or months is sufficient to achieve full recovery (McLellan et al., 2000). This orientation stands at variance with clinical experience and research that suggest that more than half the people entering publicly funded addiction programs require multiple episodes of treatment over several years to achieve and sustain recovery (Dennis, Scott, Funk, & Foss, 2005; Dennis and Scott, 2007).

This experiment is the second clinical trial that tests the impact of Recovery Management Checkups (RMC; see Dennis, Scott & Funk 2003; Scott, Dennis & Foss, 2005). This poster provides the results from a 3-year experiment designed to test the effectiveness of quarterly RMC to reduce the time to readmission and improve participants' outcomes. RMC was assessed in the context of conventional treatment and self-help (e.g., 12 step) interventions and cognitive, environmental and motivational factors with respect to two important transitions: (1) using in the community to treatment, and (2) treatment to recovery. It is hypothesized that relative to participants assigned to the control group, RMC participants will be: (1) more likely to return to treatment, (2) receive more total treatment, and (3) have better treatment outcomes

Methods

Participants. 446 volunteers were recruited from sequential admissions to a treatment program (93% participation). The sample was 46% female, 80% African American, 8% Caucasian, 12% Other/Mixed, and 77% aged 30-49. All met criteria for dependence (mostly cocaine, alcohol, heroin, and marijuana), with 62% reporting prior episodes of addiction treatment. In addition, 82% reported a lifetime history of involvement with the justice system, 71% reported prior victimization, 56% reported one or more mental health disorders, 32% reported an infectious disease in the past year, 25% had major health problems (including 12% of the women reporting pregnancy), and 27% were homeless.

Design. Participants were randomly assigned to either (a) a control group that was assessed quarterly or (b) an experimental Recovery Management Check (RMC) group. Quarterly follow-ups were completed on an average of 95% per quarter for 3 years (ranging from 93 to 97%) with interviews lasting an average of 64 minutes.

Analysis. In addition to descriptive statistics, random-effect logistic regression was employed to examine the individual and joint relationship between transition (using to treatment, treatment to recovery) and RMC, treatment, self-help, environmental, cognitive and motivational factors.

Recovery Management Checkup (RMC)

- Step 1: Research interviewer completes a screener to determine eligibility and need for RMC.
- Step 2: RMC Participants in need transferred to Linkage Manager (LM) for linkage meeting.
- Step 3: Using motivational interviewing, the LM: (a) provides feedback to participants regarding their current substance use and related problems; (b) assesses and discusses level of motivation for treatment; and (c) identifies treatment barriers.
- Step 4: LM schedules appointments for treatment and next quarterly checkup.
- Step 5: LM transports RMC participants to treatment intake and stays through the process.
- Step 6: LM implements RMC Engagement and Retention Protocols to make sure participants stay at least two weeks.

In an average quarter, 42% of the 223 RMC participants were in need of treatment. Of those (n=89 per quarter) 100% received linkage meetings, 47% agreed to a treatment intake assessment, 40% showed to their assessment, and 33% showed to treatment. Of the latter (n=29), 57% stayed for at least 7 outpatient sessions or 14 days of residential treatment.

Results

Figure 1 shows the average percent staying in and transitioning to each condition during an average quarter. Three-fourths of persons using at the beginning of a quarter were also using at the end of the quarter, 10% went into treatment, 10% were stable in the community, and 4% were incarcerated.

Figure 1: Average quarterly transitions over 3 years

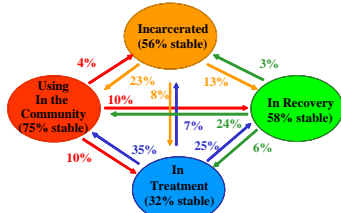


Figure 2 shows that among people using in the community, those assigned to RMC were significantly **less** likely than those assigned to the control group to continue using (68% vs. 75%, $p < .01$), **more** likely to enter treatment (19% vs. 11%, $p < .01$) and **more** likely to transition from using to recovery (14% vs. 11%, $p < .05$).

Figure 2: Follow-up status of people who started the quarter using by condition

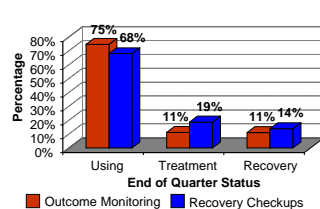


Table 1's middle columns show that the probability of transitioning from using to treatment (vs. continued use) was positively related to frequency of substance use, desire for help, increasing involvement in self-help groups from one quarter to the next and the amount of involvement during the quarter, number of days in substance-abuse treatment during the prior quarter and random assignment to RMC (OR=2.00, $p < .001$). Transitioning from using to treatment was negatively related to treatment resistance.

Table 1's right columns show that the probability of transitioning from treatment to recovery (vs. relapse) was positively related to participating in self-help after addiction treatment programs. This transition was inversely related to substance use frequency, treatment resistance, and reduced self help participation (relative to the amount during treatment). While addiction treatment was positively related to the transition at a univariate level, this effect was mediated by participation in self help.

Table 1: Univariate and Multivariate Odds Ratio

Predictor (Range)	Using to Treatment		Treatment to Recovery	
	Uni.	Multi.	Uni.	Multi.
Severity				
Substance Frequency Scale (0-1)	25.30**	3.74**	0.01**	0.01**
Substance Problems Scale (0-16)	1.17**	--	0.84**	--
Cognitive				
Problem Recognition Index (9-45)	1.12**	--	0.95**	--
Problem Orientation Index (5-25)	1.30**	--	1.01	--
Desire for Help Index (7-35)	1.23**	1.15**	1.00	--
Self-Efficacy Index (5-25)	0.92**	--	1.14**	--
Motivation				
External Pressure Index (6-30)	1.13**	--	0.92*	--
Internal Motivation Index (7-35)	1.18**	--	0.97	--
Treatment Resistance Index (5-25)	0.93**	0.94**	0.79**	0.85**
Environment				
Recovery Environ. Risk Index (0-1)	24.06**	--	0.01*	--
Access Barriers Index (8-40)	1.00	--	0.92*	--
Self-Help				
Weeks of self-help, prior q. (0-13)	0.98	--	1.01**	--
Self-help activity, prior q. (0-16)1a	1.01	0.88**	1.14**	0.90**
Weeks of self-help, during q. (0-13)	1.51**	1.14**	1.39**	1.20**
Self-help activity, during q. (0-16)	1.37**	1.31**	1.31**	1.22**
Treatment/Condition				
RMC Condition (1=RMC, 0=Control)	2.08**	2.00**	1.62	--
Weeks of Addiction Tx, prior q. (0-13)	1.07*	1.13**	1.02**	--
Addiction Tx activity, prior q. (0-19)	1.10**	--	1.00	--
Weeks of Addiction Tx, during q. (0-13)	--	--	1.06	--
Addiction Tx activity, during q. (0-19)	--	--	1.09*	--
Percent Correctly Classified	89%		79%	
Kappa (Predicted vs. Actual)	0.45		0.56	

* $p < .05$, ** $p < .01$

1a Correction effect that is interpreted as a positive impact of increasing (vs. same or reduced) level of self help activity.

Discussion and Implications

This study provides further evidence that it is feasible to conduct Recovery Management Checkups with individuals with chronic substance use disorders. These results also demonstrate that RMC is an effective method for managing this chronic condition. Participants assigned to RMC were more likely than those assigned to the control group to return to treatment within the next 90 days.

These results indicate that transitioning to recovery is more likely for those starting the quarter in treatment (vs. from use or incarceration). While the amount of substance abuse treatment in the prior quarter and range of treatment activities during the quarter predicted who entered recovery (vs. relapse), in the multivariate model this effect appeared to be largely mediated by amount and extent of participation in self help after treatment.

The combination of direct effect of current self help participation and inverse relationship with past participation provides further evidence of a "trajectory" effect; where a downward trajectory (i.e. more self help in the past quarter than the current quarter) is associated with reducing the likelihood of transitioning to recovery (vs. relapse) and an upward trajectory (i.e., less self help in the past than present) is associated with increasing the likelihood of transitioning to recovery.

Our next steps include analytically looking at other transitions over four years and clinically expanding the intervention to also include reducing high risk behaviors, to test the model with a different population, and to determine whether RMC works on different frequencies of monitoring.

References

Dennis, M. L., Foss, M. A., Scott, C. K (2007). An 8-year perspective on the relationship between the duration of abstinence and other aspects of recovery. *Evaluation Review*, 31(6), 585-612.

Dennis & Scott (2007). Managing Addiction as a Chronic Condition. *Addiction Science & Clinical Practice*, 4(1), 45-55.

Dennis, M.L., Scott, C.K., & Funk, R. (2003). An experimental evaluation of Recovery Management Checkups (RMC) with chronic substance users. *Evaluation and Program Planning*, 26 (3), 339-352.

Dennis, M.L., Scott, C.K, Funk, R.R., & Foss, M.A. (2005). The duration and correlates of addiction and treatment. *Journal of Substance Abuse Treatment*, 28, S51-S62.

McLellan, A.T., et al., 2000. Drug dependence, a chronic medical illness: Implications for treatment, insurance, and outcomes evaluation. *Journal of the American Medical Association*, 284(13):1689-1695.

Scott, C. K., Dennis, M. L., & Foss, M. A. (2005). Recovery management checkups to shorten the cycle of relapse, treatment re-entry, and recovery. *Drug and Alcohol Dependence*, 78, 325-338.