



Three Year Outcomes from the Early Re-Intervention Experiment with Recovery Management Checkups

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Introduction

Historically, addiction treatment systems and research have been organized around an acute care model of treatment that assumes an addicted person seeks treatment, completes an assessment, receives treatment, is discharged, and ergo expected to be cured - all in a period of weeks or months (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). While the risk of relapse decrease as the duration of abstinence increases (66% of those with less than a year, 33% with 1-3 years, 14% for those with 4-7 years), it never completely goes away (Dennis, Foss & Scott, 2007). The mismatch between the traditional treatment models/expectations and the chronic relapsing nature of substance use disorders (SUDs) has often limited our ability to help addicted individuals along the pathway to recovery.

Ongoing monitoring and early re-intervention have become standard practice when managing numerous other chronic conditions. This experiment is the second clinical trial that tests the impact of Recovery Management Checkups (see prior report by 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 Recovery Management Checkups (RMC) to reduce the time to re-admission and improve participants' outcomes. It is hypothesized that relative to participants assigned to the control group, RMC participants will

- H1: return to treatment sooner
- H2: receive more total treatment
- H3: have better treatment outcomes

Methods

Participants Recruited from sequential admissions to a treatment program (93% participation), the 446 participants were 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 substance abuse treatment. In addition, 82% reported a lifetime history of involvement with the justice system, 71% reported histories of victimization, 56% reported one or more mental health disorders, 58% reported having unprotected sex, 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. Participation was voluntary.

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.

Recovery Management Checkups

The components of RMC include:

- Step 1: Research interviewer completes a screener to determine need for early re-intervention.
- Step 2: 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 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

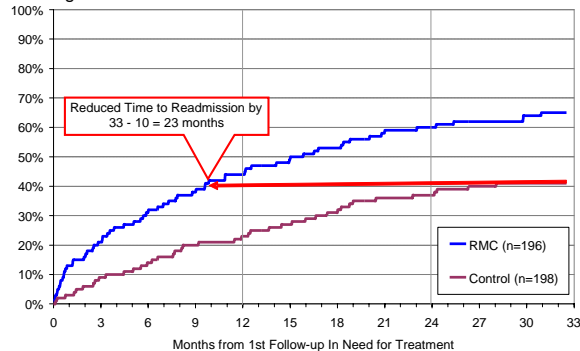
H1: Return to treatment sooner. Over 88% of participants relapsed one or more times in the 3 years following intake. Figure 1 shows the time from the first quarter where they relapsed to the first subsequent treatment readmission using a life table approach to survival analysis. Participants assigned to RMC returned to treatment an average of 23 months sooner than those in the control group (Wilcoxon-Gehan statistic (df=1) =25.73, p=.000). Cox Regression showed that the unadjusted odds of returning to treatment increased by 2.02 (95% CI 1.52 to 2.68). This increased further to 2.33 (95% CI 1.70 to 3.19) if we included covariates for gender, substance use severity (frequency of use, symptom count, age of first use, age of first treatment, prior treatment), the index episode of substance abuse treatment (level of care, length of stay, satisfaction), crime/violence, justice system involvement and, mental health severity. Moreover, while a third of those other covariates were significant on their own, none remained significant once assignment to RMC was added to the model.

Table 1. Outcomes by Condition and Time

Outcome Variable	Year	RMC	OM	Effect Size
Any Treatment Re-Entry	1	37%	23%	OR=1.96 *
	2	55%	40%	OR=1.86 *
	3	63%	45%	OR=2.04 *
Times Re-entered Treatment	1	0.5	0.3	d=.48 *
	2	1.1	0.6	d=.53 *
	3	1.4	0.7	d=.66 *
Total Days of Treatment	1	29	17	d=.31 *
	2	55	37	d=.26 *
	3	80	58	d=.21 *
Total Days of Abstinence	1	201	184	d=.19 *
	2	481	431	d=.26 *
	3	751	681	d=.24 *
# Successive Quarters Needing Tx	1	1.1	1.5	d=.29 *
	2	2.7	3.5	d=.32 *
	3	4.4	5.5	d=.29 *
In Need of Treatment	1	51%	63%	OR=.61 *
	2	46%	57%	OR=.65 *
	3	50%	57%	OR=.75 *

*p<.05 that OM-RMC

Figure 1. Time to Re-admission to Substance Abuse Treatment



H2: Receive more treatment. The first three panels of Table 1 show that during each year participants assigned to RMC were more likely than those assigned to the control group to cumulatively have any treatment re-entry, re-enter treatment more times on average, and receive more total days of treatment. Across years, there were moderately large odds ratios (OR 1.86 to 2.04) on any treatment and moderate Cohen's effects size (d .48 to .66). The effect of the total days of treatment, however, shrank a bit over the years (d .31 to .21) because both groups continued to go up but the control group was catching up over time.

H3: Better treatment outcomes. The second three panels of Table 1 show that participants assigned to RMC were more likely than those assigned to the control group to have more total days of abstinence, to go fewer successive quarters in the community with an unmet need for treatment, and were less likely to be in need of treatment at the end of each wave. For the first two, the effect sizes were small to moderate (.19 to 0.24 and -.29 to -.32 respectively). For being in need at the end of the wave, the difference between conditions was smaller in the final year as the control group caught up and the experimental group backslid a small amount.

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 Recovery Management Checkups are an effective method for managing this chronic condition. Participants assigned to RMC returned to treatment sooner, received more treatment and had better treatment outcomes than the control group.

The findings are more mixed in terms of whether the impact of RMC grows over time. Rates of entering treatment and the total number of treatment episodes increases over time. But the effect on the total amount of treatment and many of the treatment outcomes gets smaller as the control group eventually starts to catch up. It will be interesting to see whether these trends continue during the fourth year of the experiment.

An important nuance that can be lost in the averages shown here is that half of all the readmissions associated with RMC were by 14 people. This small subgroup consumed much of the study's resources, but actually were among those who were doing the worst in the RMC condition. This suggests that much of the benefit from RMC may be the first few relapses and readmissions, and that it can become a revolving door if we are not careful. We are currently working to determine how to identify this subgroup in advance or identify a threshold beyond which RMC is not likely to be effective.

Our next steps include expanding the intervention to also focus on reducing high risk behaviors, to test the model with a different population, and to determine whether RMC works on different frequencies of monitoring.

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