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A randomized controlled study of a web-based performance improvement system for substance abuse treatment providers

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Abstract

We report here the results of a randomized, controlled trial evaluating the efficacy of a semiautomated performance improvement system ("patient feedback") that enables real-time monitoring of patient outcomes in outpatient substance abuse treatment clinics. The study involved 118 clinicians working at 20 community-based outpatient substance abuse treatment clinics in the northeast United States. Ten clinics received 12 weeks of the patient feedback performance improvement intervention, and 10 clinics received no intervention during the 12 weeks. More than 1,500 patients provided anonymous ratings of therapeutic alliance, treatment satisfaction, and drug/alcohol use. There was no evidence of an intervention effect on the primary drug and alcohol use scales. There was also no evidence of an intervention effect on secondary measures of therapeutic alliance. Clinician-rated measures of organizational functioning and job satisfaction also showed no intervention effect. Possible insights from these findings and alternative methods of utilizing feedback reports to enhance clinical outcomes are proposed.

Keywords: Performance improvement; Substance abuse; Feedback; Alliance; Treatment satisfaction

1. Introduction

Quality improvement (QI) methods to improve the performance of clinicians working in substance abuse treatment facilities have received increasing attention in recent years (McCarty et al., in press). One method of implementing quality improvement in the mental health field has been the provision of feedback to clinicians. The value of such feedback-based performance improvement systems in the mental health field has been demonstrated in a series of randomized clinical trials conducted by Lambert et al.. These studies have shown that providing feedback to mental health clinicians about the progress of individual patients can improve outcomes compared to not providing feedback (Harmon et al., 2007; Hawkins, Lambert, Vermeesch, Slade, & Tuttle, 2004; Lambert, Hansen, & Fitch, 2001; Lambert et al., 2003; Lambert, Whipple, et al., 2001; Whipple et al., 2003).

In the addiction field, performance improvement methods of various kinds have been implemented on a clinical basis. These include a Methadone Treatment Quality Assurance System that provided performance improvement reports on a quarterly basis to supervisors in 70 Veterans Affairs (VA) clinics (Ducharme & Luckey, 2000; Phillips et al., 1995) and the Quality

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Enhancement Research Initiative, which provided performance monitoring, feedback, and dissemination of best practice guidelines to administrators and clinicians in VA settings (Finney, Willenbring, & Moos, 2000). Another outcomes assessment system for use in VA substance abuse clinics that has been described has the potential to provide feedback at the program level by collecting baseline and 6-month follow-up data (Tiet, Byrnes, Barnett, & Finney, 2006). One study has been published evaluating performance improvement systems for substance abuse counselors. In this study, providing feedback reports on patient attendance data to clinicians in a substance abuse treatment clinic resulted in improvements in attendance (McCaul & Svikis, 1991).

We have previously reported on the feasibility of implementing a comprehensive performance improvement system in outpatient substance abuse treatment clinics (Forman et al., 2007). This system, called patient feedback (PF), employs near real-time monitoring of therapeutic alliance and treatment satisfaction by clinicians and supervisors working in outpatient substance abuse treatment clinics. Therapeutic alliance was chosen because it consistently predicts the outcome of psychotherapy and counseling (Martin, Garske, & Davis, 2000) and has also been found to be associated with outcome in substance abuse settings (Gillaspy, Wright, Campbell, Stokes, & Adinoff, 2002). Treatment satisfaction was chosen because it is commonly an element of quality monitoring systems in addiction treatment programs (National Treatment Center Study, 2005). By monitoring therapeutic alliance and treatment satisfaction, the PF system is designed to assess the interim effectiveness of clinicians' average outcomes for their full caseload of patients so that they can then make modifications if needed. We also hypothesized that regular assessment of alliance and treatment satisfaction might influence clinician behavior by signaling that alliance and satisfaction are priorities of the organization (Alvero, Bucklin, & Austin, 2001; Berwick, Godfrey, & Roessner, 1990; Nicol & Hantula, 2001).

The purpose of this article is to report on the results of a randomized controlled trial evaluating the efficacy of the PF system on both patient and clinician outcomes. We hypothesized that utilization of PF system would result in more positive outcomes with regard to greater improvements in average patient drug and alcohol use, attendance at group counseling sessions, and alliance. It was also hypothesized that use of the PF system would be associated with more favorable clinician views of their organization as reflected in perceived increases in the organization's motivation for change, adequacy of institutional resources, staff attributes (e.g., potential for professional growth, confidence in counseling skills, adaptability), organizational climate, quality of supervisor–employee relations, and clinician job satisfaction.

2. Materials and methods

2.1. Study design

The study was a randomized, 12-week, controlled trial conducted in community-based substance abuse treatment clinics. Data collection began in January 2007 and ended in October 2008. Participating clinics were randomly assigned to use the PF performance improvement system either immediately (PF group) or after a delay (control group). Clinics randomized to the delayed group had subsequent access to the PF system after the 12-week study period.

2.2. Participants

2.2.1. Clinics

The study took place in 20 community-based nonmethadone maintenance outpatient substance abuse treatment clinics in the Philadelphia and New York areas. To be eligible to participate in the study, the clinics had to have at least four clinicians who were currently conducting group counseling sessions (at least once a week) and were able to attend a monthly staff team meeting. Clinics also needed to have Internet access for their clinicians and supervisors. All study materials, procedures, and consent forms were approved by all relevant institutional review boards for each participating clinic.

Group counseling was the primary clinical modality at all participating clinics, with all patients expected to participate in the groups. All participating clinics had clinical policies for the regular implementation of biological testing and typically also specifically tested patients who were suspected of using drugs or alcohol.

2.2.2. Clinicians

To be eligible for participation in the study, clinicians had to be conducting group counseling sessions on a weekly basis in 1 of the 20 enrolled clinics. Clinicians were considered the human subjects in this study; thus, they provided written informed consent.

2.2.3. Patients

To be eligible to participate in the study, patients had to be receiving group counseling for substance abuse problems at 1 of the 20 clinics enrolled in the study. Informed consent by patients was not required by the participating institutional review boards because the patient survey was anonymous and there was minimal perceived risk. However, patients were oriented to the study, and their participation was voluntary. During a given study week, all patients who were attending participating clinicians' eligible group counseling sessions during that week were recruited to complete the PF survey regardless of the how long they had been in treatment. The Week 1 (baseline) study assessment was therefore not necessarily at the beginning of the course of treatment for each patient. In addition, at each subsequent assessment