

Codman Awards

Improving Treatment Engagement in Opioid-Dependent Outpatients with a Motivated Stepped-Care Adaptive Treatment Model

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Addiction Treatment Services (ATS) at the Johns Hopkins Bayview Medical Center, Baltimore, is a comprehensive substance abuse treatment program that uses methadone (and other medications) as one component of care.* The vast majority of its admissions suffer from opioid and other drug use disorders, often complicated by co-occurring psychiatric and other medical problems.

In the early 1990s, we noticed compelling evidence of poor attendance to the then-standard (once per week) individual counseling sessions in combination with growing rates of urine specimens testing positive for heroin, cocaine, and other drugs. A comprehensive literature review revealed similar problems in other programs treating patients with comparable clinical profiles. This led us to reexamine our overall treatment program, which included our methods for delivering prescribed services to patients.

One of our first observations was that the scope and intensity of clinical problems in many of our patients was often overwhelming for primary counseling staff without additional support and guidance from more senior clinical staff. It soon became clear that we had to develop a practical and sustainable way to improve the amount and level of professional services available to patients, and we had to accomplish this goal with limited access to additional financial resources. It was also clear that offering addition-

* Dr. Robert Brooner has directed the program for the past 21 years and is the principal architect of the MSC model.

Article-at-a-Glance

Background: Substance abuse treatment programs that provide long term care that includes methadone routinely treat patients with both the chronic and severe form of opioid dependence disorder. In the early 1990s the Addiction Treatment Services clinic at Johns Hopkins Bayview Medical Center began experiencing a growing problem with poor counseling attendance and high rates of continuing opioid and other drug use, primarily cocaine.

Methods: A comprehensive and adaptive treatment model was developed that adjusts the amount of individual counseling and group therapy, medication dose, and overall monitoring, and integrates them with clinic-based behavioral reinforcement procedures to increase patients' attendance. This model of care (Motivated Stepped Care [MSC]), an adaptive stepped-care treatment approach, was implemented in 1995.

Results: The MSC model has demonstrated large improvements in counseling attendance and rates of urine specimens testing negative for drug use. Additional work has extended the model's evaluation to other common problems—continuing unemployment and limited access to and participation in drug-free social support.

Conclusion: The MSC adaptive treatment model is a viable and effective alternative to standard treatment approaches. It is integrated with performance improvement monitoring to inform and adjust the amount of services necessary to achieve and sustain good clinical response to treatment during months and years of care.

al services, including specialized interventions, would be of little to no value unless patients attended them. Poor patient adherence is widely recognized as one of the greatest obstacles to improving the quality and effectiveness of substance abuse treatment.¹

To address these problems, we developed a comprehensive and combination treatment model that fully integrated several evidence-based treatment interventions (for example, medications, counseling services, principles of behavioral reinforcement). We then arranged these services following a basic stepped-care approach, which had been used in a limited way in patients with alcohol-use problems, that routinely adjusts the amount of care patients receive to sustain good clinical response. Although stepped-care approaches had been used in limited ways for some patients, they had never been systematically employed in programs treating patients receiving methadone for chronic and severe opioid dependence. The stepped-care approach provided a structured and reliable patient-treatment matching strategy that could rapidly adjust the amount of services necessary to sustain good clinical functioning on the basis of continuous performance-based measures of treatment response, with the goal of using the least intensive and costly services for those who failed to improve with less frequent and intensive care.² The new model systematically increases exposure of the most severely impaired patients to the most experienced and highly trained staff, who run the majority of the group therapies used at the higher steps of care.

Use of the basic stepped-care approach still left us with the problem of poor patient attendance to scheduled services, a problem that early work with this approach had not resolved. Because increased counseling sessions are often associated with more clinical improvement, we concluded from the early work of Stitzer and Bigelow³⁻⁵ that behavioral reinforcement procedures used to motivate patient changes in drug use patterns could be modified to improve the rate of counseling attendance in these patients. Several studies provided strong support for this view.^{6,7}

In 1995 three clinic-based behavioral contingencies that specifically relate to the delivery of methadone were incorporated into the Motivated Stepped Care (MSC) adaptive intervention to increase patient attendance at weekly counseling sessions across all steps of care:

1. Patient access to more convenient methadone dosing times, including early morning and later evening hours

2. Methadone taper and possible discharge for continued non-adherence to the treatment plan once in the highest step of care (medication tapers were reversed when a patient attended all scheduled counseling sessions and produced a drug-negative urine specimen for one week)

3. Routine offer of rapid readmission (often within 24 hours) to the program with the patient's agreement to attend all scheduled treatment sessions

The contingent use of these routine aspects of treatment in MSC reflects the fact that methadone and other opioid agonists have strong reinforcing properties that can be therapeutically directed toward improving participation in and response to substance abuse treatment.

This approach to treatment planning and service delivery, as represented in Figure 1 (page 211), is further described in this article, along with more work showing the approach's efficacy and flexibility in extending and strengthening patient rehabilitation beyond good attendance and reduced drug use (as summarized in Table 1, page 212).

MSC: An Adaptive Treatment Approach

Newly admitted opioid-dependent patients satisfying federal and state guidelines for long-term use of methadone and other opioid agonist medications participate in a four-week initial methadone stabilization and evaluation period. The early MSC approach was a three-step system that began in Week 5 of treatment, with patients starting at Step 1 (Figure 1).⁸

The individual counseling sessions employed in all three steps of care averaged about 30 minutes in duration and focused on the clinical problem list in the master treatment plan. Reduction of drug and alcohol use, attendance at all scheduled counseling and therapy sessions, and achievement of at least brief periods (that is, two to four weeks) of abstinence reflected standard primary goals, along with clinically significant medical, psychiatric, housing, and employment problems. A number of different therapy groups (60 minutes' duration) were available in the program, most of which were manual guided, including substance abuse education group, relapse control group, stress management group, coping skills group,

