

Monitoring Patient Improvement and Treatment Outcomes in Managed Behavioral Health

Francisca Azocar, Brian Cuffel, Joyce McCulloch, John F. McCabe, Shanna Tani, Benjamin B. Brodey

Abstract: This study examined the use of outcome reports sent to clinicians by a managed behavioral healthcare organization to monitor patient progress and its relation to treatment outcome. Results showed that clinicians who reported using outcome information had patients who also reported greater improvement at 6 months from baseline. Improvement per session was greatest among patients whose clinicians reported reading the outcome report and using outcome measures in their clinical practice. Using baseline and ongoing measures to assess patient improvement can provide clinicians with feedback during treatment, which may lead to better clinical outcomes and enable quality management systems in managed care to flag high-risk cases and identify failure of adequate improvement.

for monitoring the progress of their patients in treatment, yet as accountability demanded by healthcare purchasers and accreditation agencies has increased, MBHOs have begun looking for ways to manage and improve the quality of care provided by their panels of clinicians by objectively monitoring patient improvement using self-report measures.

Patient-focused research has been hailed as a new paradigm for evaluating mental health treatment. Patient-focused research (also called consumer-focused research) focuses on the effects of treatment on the individual rather than on groups of patients. Using sophisticated analytic techniques, researchers in general have begun evaluating patient improvement throughout the course of treatment. Compared to normative samples, patient-focused research has enabled feedback to be provided to the treating clinician with the ultimate goal of enhancing treatment outcome (Howard, Moras, Brill, Martinovich, & Lutz, 1996; Lambert, 2001). Central to patient-focused research is the concept of clinically significant change, which, according to Jacobson and Truax (1991), can be defined by two criteria: (1) the patient's clinical movement from a dysfunctional range into a functional range compared to a normative sample, and (2) how much change occurred in the course of treatment that is statistically reliable change and not due to measurement error—as measured by the Reliable Change Index (RCI) (Jacobson & Truax, 1991). Using the RCI, researchers can determine the number of points a score must move from either above or below the cutoff score to, say, a point beyond any uncertainty (measurement error), and they can determine whether the score change is statistically reliable, meaning that the patient's score truly crossed the cutoff score. On the basis of these criteria, patients can be classified as achieving change that has clinical significance and is statistically reliable (Lambert, Hansen, & Finch, 2001). Although for many years clinicians and researchers have used standardized

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Is this treatment working for this patient? Is this patient getting better? These are the primary concerns all stakeholders in mental health treatment have about the mental health services a patient is receiving. Patients, their families, clinicians, third-party payers, and researchers have a vested interest in ensuring the best quality of affordable care.

Self-reported treatment outcome measures that have been used by clinicians and managed behavioral healthcare organizations (MBHOs) include the SF-36 Health Survey (Ware, Snow, Kosinski, & Gandek, 1993), the Brief Symptom Inventory (BSI) (Derogatis, 1983), and the Basis-32 (Eisen, Wilcox, Leff, Schaefer, & Culhane, 1999). Other more disorder-specific measures used to assess patient outcomes include the Beck Depression Inventory (BDI) (Beck, Ward, Mendelson, Mock, & Erbaugh, 1961) and the Self-Report Anxiety Scale (SRAS) (Zung, 1971). However, the extent to which clinicians use standardized self-reports or outcome measures to benchmark their patients' progress as part of their routine practice is unknown. In the past, clinicians have been solely responsible

measures for ongoing patient assessments and statistical techniques to evaluate the significance of group differences, patient-focused research combines the use of clinically significant change with the RCI to verify the meaningfulness of individual therapeutic change benchmarked to a normative population, rather than relying on a single threshold score or on the statistical difference between or within samples.

Given its emphasis on effectiveness, patient-focused research is a paradigm that shows promise for improving the quality of care in mental health services. However, integrating patient-focused research into quality management systems that can monitor patients' progress is in the development stage and needs further evaluation (Lambert, 2001). Within the United States, at least two quality management systems have been studied empirically, the Systematic Treatment Selection (STS) and the Outcome Questionnaire-45 (OQ-45). The STS, developed by Beutler and colleagues, emphasizes the need to match patient characteristics to specific treatment modalities before assessing outcome; however, the system has been tested using only small groups of clinicians ($n = 284$) (Beutler, Clarkin, & Bongar, 2000; Beutler & Harwood, 2000). However, the OQ-45 has been tested extensively using data from more than 10,000 community mental health, university counseling center, and health maintenance organization (HMO) patients to develop recovery curves and identify patients with a less than adequate response to treatment. A meta-analysis of three large-scale studies of 2,500 patients conducted by Lambert and colleagues (2003) examined whether monitoring patient progress and providing feedback to clinicians is associated with improvement in treatment outcome. Results showed reliable and clinically significant rates of improvement of 21% in the no-feedback group and 35% in the feedback group, with a moderate effect size of .39. Specifically, among patients whose progress was poor, feedback in the form of graphs and progress markers led to an increase in the number of sessions and improved outcomes as compared to a control group. Among patients predicted to have a positive response, feedback to therapists led to a decrease in number of sessions without decreasing expected outcomes (Lambert et al., 2003; Lambert, Whipple, et al., 2001). Similarly, in a nonrandomized naturalistic study, an MBHO

tested the use of feedback letters using a shorter version of the OQ-45 and found improvement in the concordance rates of substance abuse items and substance abuse diagnosis in claims, showing that the clinicians were willing to use the information on the outcome questionnaires (Brown, Hermann, Jones, & Wu, 2004). Although initial results are promising, further research is needed to examine the feasibility and acceptance of integrating patient-focused research into quality management within open systems of care made up of networks of independent practice clinicians.

Managed behavioral healthcare organizations administer the mental healthcare of approximately 75% of the 180 million insured Americans (American Federation of State, County and Municipal Employees Public Policy Department, 1998). With their large networks of independent clinicians, MBHOs are in a unique position to examine whether a quality management system that monitors patient progress and provides feedback to the treating clinician is accepted and used in real-world settings, and whether the use of a quality management system relates to improvement in treatment outcomes. This study examined two questions: (1) whether independent-practice clinicians would read outcome reports of their patients' responses to a self-report measure sent to them by an MBHO, and (2) whether use of outcome information was related to patient improvement.

Methods

The Member Wellness Survey

This study used data from a study funded by the National Institute of Mental Health (NIMH) on the effects of administering patient assessments and delivering feedback reports to clinicians of an MBHO, United Behavioral Health (UBH). Results from the parent study have been reported elsewhere (Brodey et al., 2005). Patients were recruited while seeking telephonic authorization for outpatient behavioral health services. Informed consent and baseline measures were obtained using an interactive voice response (IVR) system or by mail. Patient assessments were repeated at 6 weeks and 6 months after baseline assessment, by either IVR or mail.

Outcome reports were sent to clinicians at the outset of treatment and 6 weeks and 6 months later. Patient progress was measured using the Member Wellness Survey (MWS), a brief

self-report instrument that was developed for the study. The MWS comprises 32 items from commonly used and validated instruments (SCL-90, SF-36, and CAGE-AID) designed to assess and monitor mental health and substance abuse patients in seven domains: total symptoms, functioning, wellness, global outcome, absenteeism, substance abuse risk, and alcohol consumption. Total symptoms, functioning, wellness, and global outcome were rated using a 5-point scale ranging from 0 to 4. The total symptoms score was computed using the mean of 11 items assessing depression and anxiety ($\alpha = .91$). The functioning score was computed using the mean of 3 items assessing interference with family, work, and social activities ($\alpha = .67$). Wellness was computed as the mean of 3 items pertaining to feeling good about oneself, ability to cope, and ability to maintain control ($\alpha = .83$). A global outcome score was computed across 17 items comprising the total symptoms, functioning, and wellness scores ($\alpha = .93$). Absenteeism was computed as the sum of the number of full workdays missed (6-week retest intraclass correlation coefficient [ICC] = .58). Substance abuse risk for drugs or alcohol was computed as the sum of 5 dichotomous (yes, no) questions from the CAGE (6-week retest kappa = .47). Alcohol consumption was computed as the product of the number of days the patient self-reported having a drink in the previous week and the number of drinks in a typical day (baseline to 6-week $r = .73$ and baseline to 6-month $r = .42$).

To determine whether the degree of patient improvement was clinically significant and indicated reliable change for each domain, the two criteria offered by Jacobson and Truax (1991) were used. Baseline community nonpatient and patient sample means (M1 and M2, respectively) and standard deviations (SD1 and SD2, respectively) were used in the formula $[(SD1 \times M2) + (SD2 \times M1)] / (SD1 + SD2)$ to estimate clinically significant change for each domain. For the global outcome score of the MWS, the cutoff score was determined as needing to be equal to or below $1.02 = \{[(.56 \times 1.58) + (.80 \times .63)] / (.56 + .80)\}$. This cutoff score determined whether a patient's global outcome score had moved from a dysfunctional to a functional level. To determine the RCI using a 1-tailed test, the formula $(1.65 \times \sqrt{1 - \text{reliability}}) \times SD2$ was used. The RCI for the global outcome score was determined as needing to exceed

.35. = $[1.65 \times \sqrt{1 - .93}] \times .80 = .35$, meaning that patients with a score change exceeding .35 in either the positive or negative direction were considered to have made reliable change beyond that of measurement error, whereas those whose mean score change did not exceed .35 were considered unchanged. Finally, UBH administrative claims data were used to compute demographic information and the total number of outpatient sessions in the 6 months following the baseline administration.

Patient Sample

Of 681 adult patients, 467 (79%) completed the MWS at 6 weeks, and 361 (53%) completed the 6-month MWS. Patients who did not complete the 6-week or 6-month follow-up survey were more likely to have not followed through with treatment after their referral from UBH, more likely to be male, and less likely to have adjustment disorder. No other symptom or demographic characteristic predicted completion of either the 6-week or the 6-month MWS. There were no differences by gender, age, or ethnicity or in symptoms at baseline between these two groups. The majority of participants were the insured members (68%), white (89%), female (67%), and those between 30 and 55 years old (75%) and primarily from the Midwest (40%) or East Coast (36%).

Sample of Clinicians

Clinicians received outcome reports following each patient's completion of the MWS. A cover letter stated that their patients had consented to participate in the study and share their outcomes, and that the outcomes data would not be used to evaluate any clinician's performance or to make any medical necessity decisions. The reports presented three kinds of information to clinicians: (1) summary scores benchmarked against age- and gender-adjusted normative data, (2) narrative comments on extreme scores, and (3) a bar chart of the 32 MWS items at the three time intervals. (Samples of the report are available from Benjamin Brodey at bbbroydey@telesage.com.)

After clinicians were sent the baseline and 6-week reports, they were surveyed regarding the report's utility (results are presented in Brodey et al., 2005) and asked whether they had read and used the feedback report. In addition, a subsample of 244 clinicians was asked whether they "routinely," "occasionally," or

"never" used outcome measures, independent of those sent by an MBHO, in their clinical practice. The responses were dichotomized into "Yes" if clinicians reported "routine" or "occasional" use of outcome measures, and "No" otherwise.

Because some patients had seen more than one clinician, a total of 691 clinicians received outcome reports and were surveyed to assess whether they had read the report and used it in their treatment. A total of 488 (71%) clinicians responded; most were female (64%) psychologists (38%) with 15–24 years of clinical experience postlicensure. Psychologists (77%) and master's-level therapists (75%) were significantly more likely to respond to the survey than psychiatrists (39%), $\chi^2(1, N = 691) = 50.2, p < .001$, as were female clinicians (75%) compared to male clinicians (65%), $\chi^2(1, N = 691) = 7.6, p < .005$. No other demographic or practice characteristic differentiated responding clinicians from nonresponding clinicians.

This study compares the 6-week and 6-month improvement of four groups of patients whose clinicians reported that they (1) did not read the outcome report, (2) read the outcome report, (3) used an outcome measure in their clinical practice, or (4) used both the outcome report and an outcome measure in their practice. Groups were compared on number of outpatient visits in addition to treatment outcomes.

Statistical Analysis

Chi-square tests of association were used to examine the relationship between clinician-reported use of outcomes information and nominal variables such as clinician gender, professional degree, region of the country, and dichotomous patient outcome measures such as presence or absence of substance abuse risk. Similarly, Student's *t* tests were used to examine the relationship of clinician-reported use of outcome information and continuous measures such as change in total symptoms between baseline and 6 weeks and 6 months, and total number of outpatient sessions. Chi-square tests of association were used to examine the relationship between clinician-reported use of outcomes information and the reliable change index for the global outcome score. The statistical cutoff point for significance was established at $p < .05$, although actual *p* values were reported.

Furthermore, a general linear model (GLM) using SAS (version 8.02, SAS Institute, Inc., Cary, NC) tested whether reading reports and using outcome measures in clinical practice predicted global outcome scores. Another GLM tested whether gender or years of clinical experience predicted global outcome scores.

Results

Use of Outcome Reports and Outcome Measures

The first question examined in this study was whether clinicians would read outcome reports sent by UBH. Among clinicians who responded to the survey ($n = 488$), more than three quarters ($n = 338, 77%$) reported reading at least one of the outcome reports sent to them by UBH. Next, we examined the use of the outcome report among the subsample of clinicians whom we asked about use of outcome measures in their routine clinical practice ($n = 244$). Seventy-nine percent of clinicians in the subsample reported reading the outcome report, indicating congruence between the subsample and the whole sample. The percentage of clinicians reading the outcome report was higher than the percentage who reported using outcome measures in their clinical practice (56%) or who reported both reading the outcome report and using outcome measures in their practice (44%). Clinicians who reported reading the outcome report were just as likely to use an outcome measure in their practice, unlike clinicians who did not read the outcome report.

Results also showed significant differences by professional degree and gender among clinicians who read and those who did not read the outcome reports. Psychologists ($n = 134, 82%$) and master's-level therapists ($n = 191, 79%$) were significantly more likely to report reading the outcome reports than psychiatrists ($n = 13, 41%$) $\chi^2(2, n = 338) = 26.3, p < .001$, and female clinicians ($n = 222, 81%$) were more likely to report reading outcome reports than male clinicians ($n = 107, 70%$) $\chi^2(1, n = 338) = 6.8, p = .009$. Neither years of experience in clinical practice nor geographic location significantly differed among clinician users or nonusers of the outcome reports. But clinicians in practice between 5 to 14 years (66%) and those in practice 15 to 24 years (61%) were significantly more likely to report using outcome measures alone or in combination with the outcome reports (53% and 50%, respectively); however,

clinicians who had been in practice for more than 25 years reported lower use of outcome measures alone (36%, $\chi^2(2, n = 244) = 14.3, p = .006$) or in combination 19%, $\chi^2(2, n = 244) = 14.5, p < .001$).

Use of Outcome Information and Patient Improvement

The second question examined in this study involved whether reading outcome reports or using outcome measures in clinical practice was associated with patient improvement at 6 weeks and 6 months. Three comparisons were made to address this question: (1) the first involved the entire sample of clinicians ($n = 488$) and compared clinicians who reported reading the outcome reports to clinicians who reported not reading the reports, (2) the second involved a subsample of clinicians ($n = 244$) and compared clinicians who reported using outcome measures in their practices at least occasionally to clinicians who reported never doing so, and (3) the final comparison was made between clinicians who reported both reading the outcome reports and using outcome measures in their practice and those clinicians who reported using neither or only one of these. To ensure between-group comparability, preliminary analyses of the baseline measure were conducted to make sure that clinicians who read the outcome reports and/or used outcome measures in their practice were treating similar patients. No significant differences in patients' baseline MWS scores were observed across any of the clinician groups, suggesting that the groups were similar and therefore comparable.

Results show that clinicians' reading of outcome reports was not correlated with patient improvement at 6 weeks, but that reading outcome reports was correlated with patient improvement at 6 months. In particular, patients treated by clinicians who reported reading the outcome reports showed significantly greater improvement at 6 months on total symptoms ($t [214] = 2.96, p = .003$), wellness ($t [214] = 2.20, p = .03$), and the global outcome score ($t [214] = 2.96, p = .003$) than patients whose clinicians reported not reading the outcome reports. In addition, a greater proportion of patients treated by clinicians who reported reading the outcome reports ($n = 108, 63\%$) had global outcome scores that exceeded the reliable change index, indicating that their improvement was clinically significant $\chi^2(2, n = 214) = 10.8,$

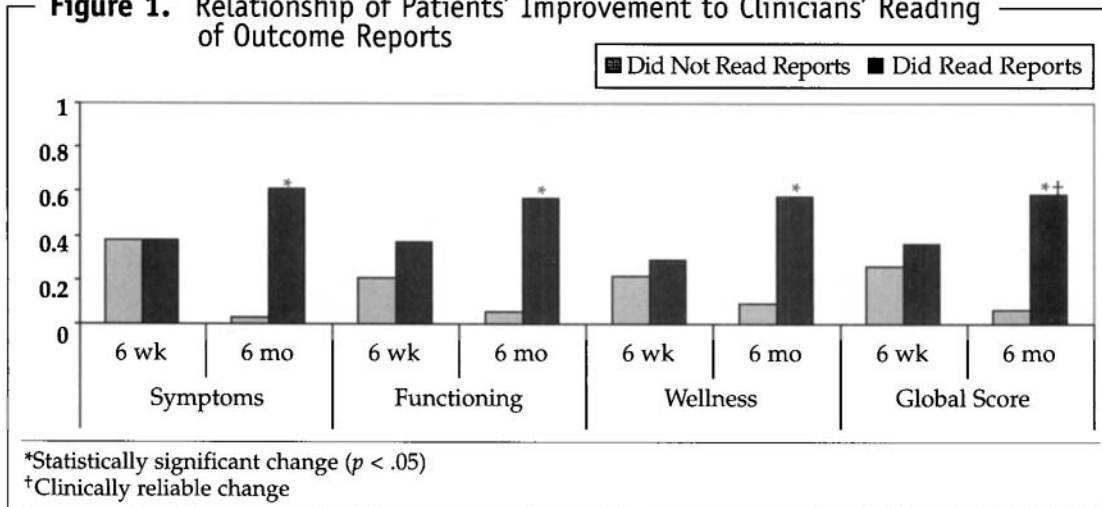
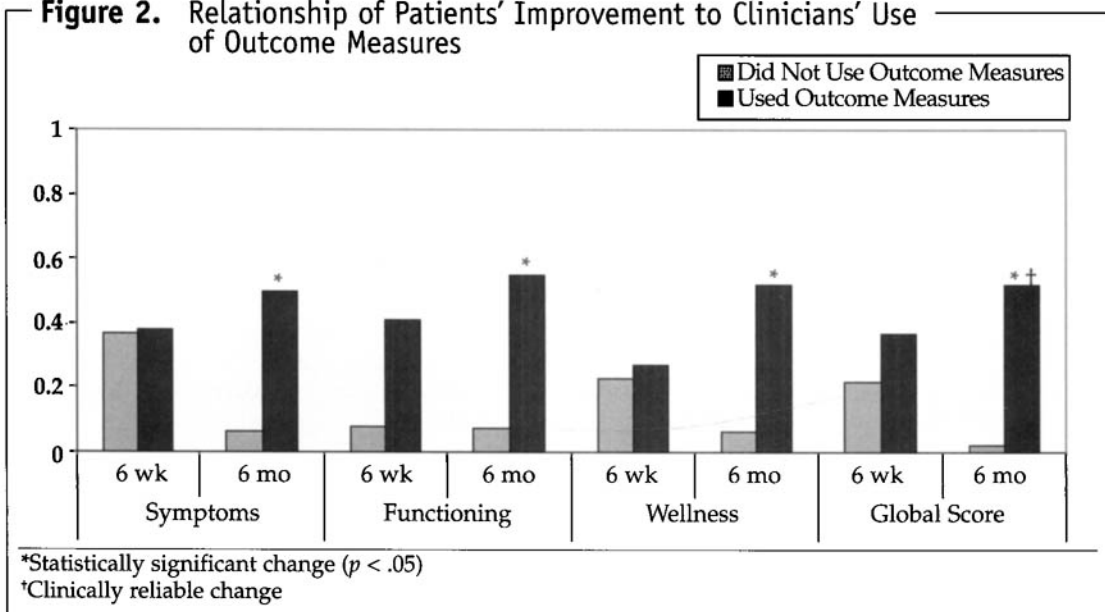
$p = .005$. However, there was no significant difference in the proportion of patients who moved from a dysfunctional range to a functional range ($n = 57, 30\%$) on the global outcome score. **Figure 1** shows the mean improvement scores on all MWS scores at 6 weeks and 6 months for clinicians who read and did not read the outcome reports.

Among the subcohort of clinicians asked about their use of outcome measures in clinical practice, **Figure 2** shows that use was associated with significantly better outcomes at 6 months in total symptoms ($t [94] = 2.16, p = .03$), functioning ($t [94] = 2.50, p = .01$), wellness ($t [94] = 2.50, p = .01$), and global outcome scores ($t [94] = 3.20, p = .002$). Again, this improvement was not apparent at the 6-week measure.

Similarly, **Figure 3** shows that clinicians using both outcome reports and outcome measures had patients who reported the greatest improvement at 6 months in total symptoms ($t [94] = 3.03, p = .003$), functioning ($t [94] = 2.46, p = .02$), wellness ($t [94] = 2.79, p = .006$), and global outcome scores ($t [94] = 3.50, p > .001$). Notably, a greater proportion of patients treated by clinicians who reported using outcome measures ($n = 30, 60\%$) or using both outcome reports and outcome measures ($n = 30, 60\%$) had global outcome scores indicating clinically significant improvement $\chi^2(2, n = 75) = 7.17, p = .03$ and $\chi^2 = 7.3, p = .03$, respectively.

Results of a generalized linear model showed that reading reports ($F = 3.34, p = .07$) and using outcome measures ($F = 7.88, p = .006$) did not interact in predicting global outcome scores, and that each independently contributed variance to the model, suggesting that using outcome measures predicted global outcome scores over and above reading the outcome reports. Yet again, there was no significant difference in the proportion of patients who moved from a dysfunctional range to a functional range on the global outcome score.

Because female therapists were more likely to report reading the outcome report, and therapists with fewer years in clinical practice were more likely to report using outcome measures alone or in combination with outcome reports, the role of these variables was also tested. However, the results showed that neither gender nor years of clinical experience added additional explained variance over the use of outcome reports, use of outcome measures, or use of both in predicting global outcome scores.

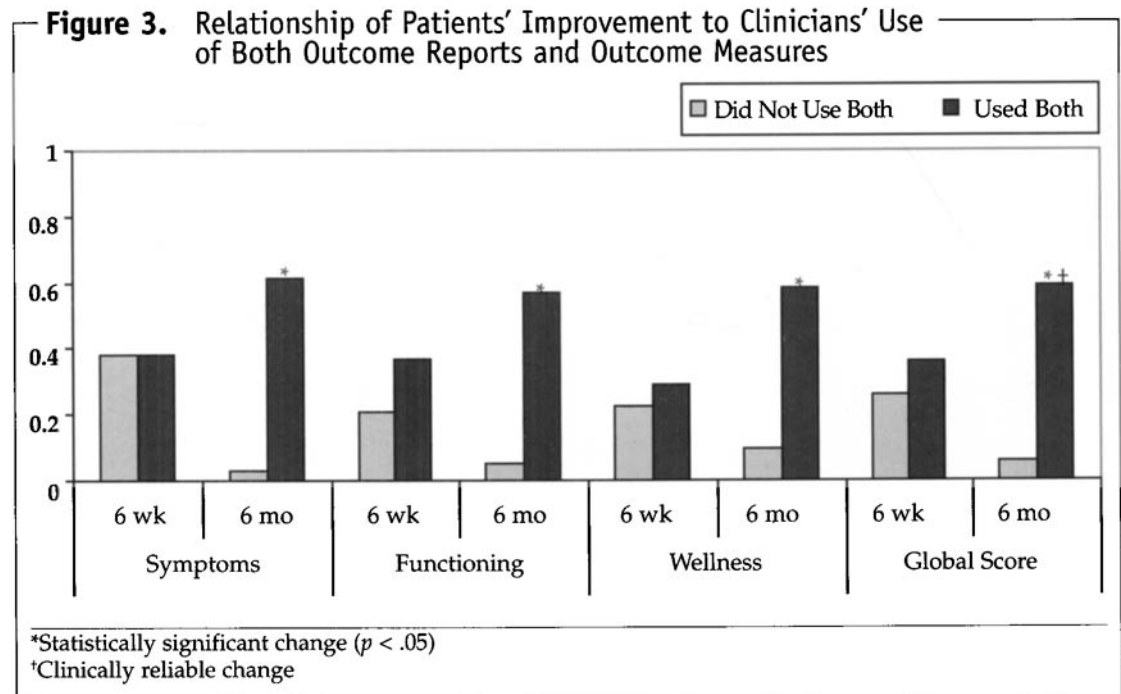
Figure 1. Relationship of Patients' Improvement to Clinicians' Reading of Outcome Reports**Figure 2.** Relationship of Patients' Improvement to Clinicians' Use of Outcome Measures

Although in all three comparisons, using outcome information was not associated with patient improvement at either 6 weeks or 6 months in the absenteeism domain, CAGE risk score, or amount of alcohol consumed, outcome information was associated with greater improvement in total symptoms, wellness, and functioning at 6 months from baseline.

Service Use Associated with the Use of Outcome Information

Improvement per patient per session was calculated based on each patient's individual improvement score divided by the number of sessions each patient attended. Despite similar amounts of treatment at 6 months

after baseline ($M = 8.9$, $SD = 6.0$ outpatient sessions) and average total costs per patient ($M = \$617.89$, $SD = \$599.96$), greater improvement per patient per session on the global outcome score was observed among patients whose clinicians reported reading the outcome reports and/or using outcome measures than patients whose clinicians did not use this information. These results provide additional evidence for the potential usefulness of reading outcome reports and using outcome measures to improve care. In fact, patient improvement per session was greatest among patients of clinicians who reported using both the outcome reports and outcome measures (see Table 1).



Discussion

This study showed evidence that monitoring patient progress and giving clinicians feedback during treatment may be related to improved clinical outcomes, an important finding for healthcare quality professionals, healthcare administrators, and clinicians in general. Results suggest that clinicians who report reading outcome reports or using outcome measures to monitor their patients' progress during treatment may be more effective in their treatment than clinicians who report that they do not monitor their patients' progress. However, given the correlational nature of this study, it is also possible that clinicians who report that they

monitor their patient's outcomes are simply better clinicians or more meticulous clinicians regardless of whether they report reading the outcome reports or using outcome measures.

This study replicates prior research on the usefulness of monitoring patient improvement during treatment, and as such, it carries several implications for both clinicians and MBHOs (Lambert, Hansen, et al., 2001; Lambert, Whipple, et al., 2001). The findings of this study also carry several implications for clinical quality administrators who are looking for scientific methodology to improve the quality of care. Providing clinicians with feedback about their patients' progress during treatment can allow clinicians to make changes or adjustments in the treatment plan if needed to improve clinical outcomes. First, collecting information on a patient's progress may allow a clinician to identify potential treatment failures. A lack of adequate clinical improvement thus may prompt a change in the course of treatment, thereby avoiding treatment dropout or premature termination of treatment. Clinicians who do not collect monitoring or outcome information run a greater risk of misperceiving their patient's clinical improvement as either better or worse than actual (Lambert, Whipple, et al., 2001). Second, early detection of nonresponse to treatment may be a sign of problems in the therapeutic alliance that could be resolved by seeking consultation or supervision. Third, decisions made by clinicians

Table 1. Patient Improvement per Session Related to Clinician's Use of Outcome Information

Use of Outcome Information	n	Mean Change in Global Score per Session
Read outcome reports		
Yes	172	.26
No	42	.21
Used outcome measures		
Yes	60	.32
No	34	.14
Used both		
Yes	50	.37
No	44	.13

who are informed about patients' clinical and functional status are more likely to be tailored to the specific needs of individual patients and more likely to ultimately enhance treatment outcomes. Finally, in our study, clinicians using outcome information had patients who reported greater improvement per session than patients whose clinicians did not use this information, suggesting that detection of early treatment response may lead to more cost-effective treatment.

Using patient-focused research to inform treatment progress is based on documenting a patient's subjective experience and comparing it to adjusted population-based norms, thus allowing the consistent monitoring of patients against a benchmark for similar patient populations. In turn, feedback about the patient's progress can be sent to the treating clinician and MBHO care managers so that treatment adjustments, if needed, can be made (Lambert & Brown, 1996). This approach has several implications for MBHOs and clinical quality improvement administrators. Administrative databases or patient registries can be enhanced with baseline data, and outcome clinical data can be used to develop a feedback loop to report ongoing clinical status and progress in patient improvement. First, the patient information provided at baseline allows for the detection of patients who are at high risk because of the degree of symptomatology or comorbidity of psychiatric symptoms with alcohol or drug use, which can in turn be used to alert the clinician. Second, high-risk clinical information among patients who fail to follow through with treatment can prompt an outreach protocol for MBHO care managers who can work collaboratively with a clinician to get the patient back in treatment. Third, data on patients who are not improving at expected rates can prompt a care manager or medical supervisor to consult with a clinician on intensifying the number of sessions or augmenting or switching treatment modalities.

This study carries limitations by virtue of being based, in part, on self-report measures. First, results from the study may be confounded by selection bias because clinicians who responded to the survey may have been those who were also more likely to use outcome information. Furthermore, how clinicians who self-reported reading the outcome reports actually used the information is unknown. Second, the outcome analysis of

patients whose clinicians reported using or not using outcome measures was based on a small subsample. Third, the MWS assessed several clinical domains, potentially making the scales too nonspecific to assess actual improvement in clinical symptomatology, and may have produced reports not clinically relevant to the treating clinician.

Although most evidence-based practice guidelines recommend the continual assessment of patient progress during treatment, results from this study show that use of objective measures of patient outcomes is not the norm among independent private-practice clinicians. Yet, taken together, the results of this study suggest that clinicians who monitor treatment progress may have patients who report greater improvement than those who do not. MBHOs are in a position in which they have the clinical and fiduciary responsibility to monitor the quality of care provided to their members, and they have the organizational infrastructure to provide clinical outcome data to a large number of geographically dispersed clinicians. However, a number of attitudinal and organizational factors appear to limit collaboration between MBHOs and their provider panels in the quality improvement process. Attitudinal barriers are multiple; many clinicians are concerned about the burden of paperwork, and clinicians complain of MBHOs intruding on their clinical work yet not providing sufficient financial incentives, thus contributing to job dissatisfaction and turnover rates of provider panels. On the other hand, MBHOs are accountable to members and customers for quality of care despite great variations in clinician practice and lack of clinical monitoring. Future research on the use of patient-focused research needs to examine ways of improving outcome reports to provide feedback that is useful to clinicians and leads to improved quality of care. Most important, research needs to focus on dissemination methods that promote clinicians' use of outcome information. Currently, the MWS has been used to assess patient improvement in more than 48,000 UBH members seeking mental health services. Effective dissemination and diffusion methods, such as requiring clinicians to administer the MWS in lieu of an authorization request, are being tested.

In the interest of maximizing the quality of care for their patients, clinicians and MBHOs should work together to achieve better outcomes. Using patient-focused

research to give clinicians feedback on their patients' progress in treatment bridges the gap between research and practice and may lead to a common language for monitoring and improving quality of care and ultimately improving treatment outcomes.

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