

# The merits of implementing routine outcome monitoring in clinical practice

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## Abstract

The advantages of formally monitoring client treatment response are described in the context of implementation issues related to evidence-based practice. Despite clear evidence that routine outcome monitoring (ROM) can be effective at reducing treatment failure and enhancing the positive effects of psychotherapy, these practices are not attractive to clinicians and are not widely taught in graduate school or internship sites. Some reasons for this are suggested, and solutions are recommended.

## 1 | INTRODUCTION

A growing body of research (e.g., Shimokawa, Lambert, & Smart, 2010) provides evidence for a set of practices that have come to be known as routine outcome monitoring (ROM). ROM consists of using (mainly) self-report measures of mental health functioning at the inception of treatment and frequently thereafter over the course of treatment. The purpose of such monitoring is to provide feedback to therapists (and clients) about client progress and, more importantly, possible impending treatment failure (i.e., worsening, nonresponse, premature dropout, and/or discontinuation due to perceived lack of benefit from treatment). The use of measured mental health status feedback appears to work by enhancing therapist responsiveness and collaboration with the client, just as monitoring blood sugar helps a physician and patient to manage diabetes.

In this article, we wish to further define ROM and differentiate between practices associated with ROM approaches. We compare and contrast the two most widely disseminated and intensively studied systems—the Outcome Questionnaire (OQ)-System (Lambert, 2010; Lambert et al., 2013; [www.oqmeasures.com](http://www.oqmeasures.com)) and the Partners for Change Outcome Management System (PCOMS; Duncan & Reese, 2015; [www.centerforclinicalexcellence.com](http://www.centerforclinicalexcellence.com), [www.heartandsoulofchange.com](http://www.heartandsoulofchange.com); [pcoms.com](http://pcoms.com)). These two systems have been applied with thousands of client samples and treatment settings and modalities. We also highlight barriers to their use and

potential solutions to some of the substantial implementation issues that arise when they are instigated.

## 2 | ROM DEFINED AND DIFFERENTIATED COMMONALITIES

Before discussing the impact of adopting ROM methods, it is important to note that ROM is not a single practice. In contrast to developing, testing, and disseminating an evidence-based treatment for a specific disorder, ROM systems as discussed in this paper are applied as an add-on practice to existing interventions as they are delivered. ROM can be implemented across a wide variety of disorders, treatments, treatment modalities (individual, group, couples, family therapies), and age groups. ROM is a practice that is undertaken to provide information about the degree to which treatments are having their intended effects. ROM is used to systematically identify a patient (as early as possible) who may be failing to respond to treatment. Once therapists become aware of problematic barriers to progress, then treatment can be better tailored and response to treatment improved before clients leave our care. ROM requires therapists to understand what is being measured, introduce clients to reporting their weekly mental health functioning, interpret feedback reports based on the measure of mental health status, embrace formal methods of monitoring, and to discuss—when necessary—client

progress in an effective manner (i.e., reflect and problem-solve when informed that the client is not progressing as expected). Unlike implementing a new treatment protocol where the demands are many and training extensive, implementing a ROM practice is comparatively simple and therefore relatively easy for an individual clinician to integrate into practice. Nevertheless, as will be discussed, adopting ROM practices in large systems of care is much more difficult and complex with numerous challenges to effective implementation.

## 2.1 | Not all ROMs are created equal

Since the first clinical trial of an effective ROM was published in 2001 (Lambert et al., 2001), many competing alternative methods have been developed. Drapeau (2012) published a summary of 10 separate systems and their characteristics (but not their effects on client outcomes). Since that publication, many more ROM methods have come into being. Studies of the effects of ROM on patient well-being have been summarized in a growing number of meta-analysis and narrative reviews (e.g., Bickman, Kelley, Breda, de Andrade, & Riemer, 2011; Boyce & Browne, 2013; Carlier et al., 2016; Davidson, Perry, & Bell, 2015; Fortney et al., 2017; Gondek et al., 2016; Knaup, Koesters, Schoefer, Becker, & Puschner, 2009). The actual number of distinct ROM practices is unknown, and it is likely that the effects of most have not yet been studied.

For those ROM methods that have been published, reviews have suggested that the empirical evidence is supportive of ROM and professional bodies have been quick to recommend their use. For example, The American Psychological Association (APA Presidential Task Force on Evidence-Based Practice, 2006) has recommended ROM, along with clinical support tools (White, Lambert, Bailey, McLaughlin, & Ogles, 2015), to be a part of effective psychological services, as some have been shown to enhance client outcome. The Association of State and Provincial Psychology Boards (2015), in their practice guidelines for competency-based supervision, has recommended ROM be routinely used in supervision. Neither of these organizations have specified a preferred ROM method, leaving clinicians and agencies on their own to adopt a ROM practice. Unfortunately, not all reviews of the effects of ROM are positive. Kendrick et al. (2016), looking across a variety of practices and applying strict inclusion (design) criteria in their meta-analysis, concluded that existing ROM evidence was of such low quality that there is insufficient existing evidence to support the use of ROM. This latter meta-analysis suggested that the jury may still be out with regard to the strength of evidence favoring the use of ROM (See also Krageloh et al., 2015).

Two ROM systems have been listed in the Substance Abuse and Mental Health Administration's (SAMHSA) National Registry of Evidence-based Programs and Practices (NREPP,

recently discontinued). These two ROMs have been the most widely studied regarding their impact on an individual client's psychotherapy outcome and are regarded as evidence-based practices by SAMHSA: The Outcome Questionnaire (OQ-System; Lambert et al., 2013) and the Partners for Change Outcome Management System (PCOMS; Miller & Duncan, 2004; Prescott, Maeschalck, & Miller, 2017). Both systems (with adult and related child outcome measures) can be demonstrated online or installed on a clinician's desktop ([www.heartandsoulofchange.com](http://www.heartandsoulofchange.com); [pcoms.com](http://pcoms.com); [www.oqmeasures.com](http://www.oqmeasures.com)). For a review and critique of the system and their costs, the interested provider can visit The National Registry of Evidence-Based Programs and Practices ([www.nrepp.samhsa.gov/](http://www.nrepp.samhsa.gov/)). Search for empirically supported interventions under either "PCOMS" or "OQ-Analyst."

Given that it is not feasible for the current article to provide an extensive discussion of all ROM practices, we will focus much of our attention in this article on the OQ-System and the PCOMS as illustrative practices. Lambert, Whipple, and Kleinstäuber (in press) conducted a systematic and meta-analytic review of just these two ROM approaches. Even just considering these two methods, they reported a wide range of treatment effects across studies of ROM compared to treatment-as-usual ( $d = 0.00-0.70$ ) and also wide variation in methods (e.g., session-to-session vs. periodic assessment, 4-item scale vs. more specific 45-item scale for tracking mental health vital signs, successful implementation vs. flawed implementation). They found 24 studies suitable for meta-analytic review, 15 on the OQ-System, and nine examining the PCOMS.

## 2.2 | The OQ and PCOMS

Both the OQ and PCOMS systems are considered standardized, trans-theoretical, trans-diagnostic ROM practices which have multiple randomized clinical trials with diverse clinical populations in a variety of service settings. Both practices are aimed at improving patient outcomes, preventing treatment dropout, inhibiting deterioration, and possibly decreasing the cost of behavioral healthcare services. There are important differences between them. PCOMS uses an ultra-brief 4-item measure of mental health and a 4-item measure of the quality of the therapeutic relationship. PCOMS aims to enhance collaboration between therapist and client by administering and discussing the 4-item Outcome Rating Scale at the start of each session of therapy, and the 4-item Session Rating Scale at the end of each session to enhance and inform delivery of treatment. PCOMS, due to its brevity and in-session administration, attempts to maximize the probability that clients and therapists review treatment progress as well as the therapeutic alliance at every session of care.

In contrast, the OQ relies on the use of the OQ-Analyst software using a 45-item self-report measure of mental health functioning which measures the client's functioning prior

to each session and leaves it up to therapists whether/when to discuss progress. Only if clients are at risk of treatment failure is an additional 40-item scale administered (that assesses alliance, motivation, social support, and negative life events). The OQ-System is based on Riemer and Bickman's (2004) contextualized feedback theory that suggests feedback will change behavior when the information provided indicates the individual (i.e., client) is not meeting up to an established standard of progress (e.g., Riemer & Bickman, 2004; Riemer, Rosof-Williams, & Bickman, 2005). Basic tenets of this theory are that clinicians (and professionals, generally) will benefit from feedback if they are committed to the goal of improving their performance, aware of a discrepancy between the goal and reality (particularly if the goal is attractive and the clinician believes it can be accomplished), the feedback source is credible, and if feedback is immediate, frequent, systematic, cognitively simple (such as graphic in nature), unambiguous, and provides clinicians with concrete suggestions of how to improve. Feedback on progress is expected to help when therapists believe the therapy is working for a client while measured progress suggests it is not. Thus, the OQ-System emphasizes the importance of predicting treatment failure while PCOMS emphasizes increased collaboration across all clients and therapists rather than just clients who are not progressing as expected.

### 2.3 | Typical ROM research design, setting, method, and considerations

The typical research design used to test the effects of ROM like the OQ and PCOMS calls for applications in routine care settings in which administrators support random assignment of clients to either treatment-as-usual (TAU—wherein mental health functioning is monitored but reports are not generated or shared with therapists or clients) or TAU + ROM. In almost all of these studies, practitioners are persuaded to participate but could not be described as enthusiastic, nor as having an allegiance to ROM. They are the recipients of graphs regarding their patients' progress and indicators of progress in relation to expected progress. Psychotherapists typically receive a minimum of 2–4 hr of training which includes the rationale of the study, how to access reports of client progress on their computers, how to introduce and motivate clients to accurately self-report their weekly functioning, and how to discuss client progress if they choose to do so. In some instances, direct client feedback (narrative and graphic) of client progress is generated in a hardcopy and discussion of the client feedback report is modeled in the training session. In addition, some studies include supervision sessions following training in which therapists discuss cases whose progress is problematic with peers and supervisors.

Unlike clinical trials of evidence-based treatments where termination is based on a preset number of sessions, therapy

length in routine care settings is generally not fixed, but negotiated as it moves forward and termination is client-initiated (i.e., the dosage is determined by the client and therapist rather than research design and/or arbitrary maximum limitations set by insurance companies). Thus, the number of sessions clients attended in studies of ROM is highly variable. This is an important methodological consideration because researchers do not know beforehand just when a client will leave therapy and researchers typically use the last collected measure of progress as the final end-of-treatment outcome. Therefore, as most ROM studies do not use a battery of measures pre- and post-treatment to evaluate the effects of treatment, the resultant research has not provided the rich and complex outcomes seen in clinical trials of empirically supported treatments where five or more measures are typically collected.

To characterize the clinical impact of ROM on patients, most studies have reported findings by calculating clinically significant change (CS) using Jacobson and Truax (1991) formulas for estimating reliable change and return to normal functioning. Studies also report the usual statistically significant differences and effect size statistics to estimate the size of the treatment effect. All three statistical approaches are important in reporting group-level differences between the effects of ROM and treatment-as-usual. However, clinically significant change statistics play a central role in ROM. As applied, the Jacobson/Truax formulas allow clinicians to classify each case as “recovered” (changed reliably and moved into the ranks of normal functioning), “reliably improved” (changed reliably but still have dysfunction), “unchanged” (may have improved slightly or worsened slightly, but the change could simply be measurement error), or “deteriorated” (a worsening in functioning that is reliable) using universal cutoff scores based on amount of change and final status in terms of normative (healthy) populations. Classification of an individual's current progress is important for understanding the practical impact of an intervention.

Using these methods, Shimokawa et al. (2010) found the OQ-System using Clinical Support Tools reduced deterioration rates in *at-risk* cases from the base rate in TAU of 21% to about 6%, while the rate of reliable improvement more than doubled from 21% to 50%. In the more recent review (Lambert et al., In Press) of nine clinical trials of PCOMS-based ROM, it was found that PCOMS use nearly doubled the number of clients having a positive outcome. In all, the PCOMS studies examined the outcome of 2,279 clients and six of nine studies (67%) found a statistically significant difference favoring feedback over TAU. The mean standardized effect size was 0.40. The OQ-based method studied a total of 8,649 clients assigned to various feedback and control conditions in 15 studies wherein 73% of these studies found a statistically significant difference between TAU and feedback.

The mean standardized effect for at-risk cases ranged between 0.33 and 0.49 depending on feedback condition.

Such findings are impressive, especially considering the factors involved: The comparison is between an active treatment and a ROM practice delivered by the same therapists (rather than an active treatment and no-treatment control), the low cost of the systems (e.g., \$200 per clinician/per year), the simplicity of the practice (reading standardized reports), brevity of training and implementation (approximately 4 hr), and the frequent initial ambivalence, apathy (or antipathy!) on the part of the clinician toward integrating ROM.

### 3 | WHY AND HOW DO SOME ROM PRACTICES AFFECT CLIENT OUTCOMES?

#### 3.1 | Raising therapist awareness and focus

Persons (2008) postulated specific ways that routine monitoring of outcomes enhances therapist responsiveness and collaboration with clients. For the therapist, this information can assist in identifying failing or stalled treatment (which can prompt reformulation of the case and/or altering of the treatment plan) as well as supporting the therapist in determining when a treatment is helping or failing to help. For clients, monitoring outcomes may help build awareness of the causes of symptoms as well as symptom improvement and worsening, and increasing client motivation to change an ineffective treatment plan. Lastly, outcome data may be instrumental in the collaboration of therapist and patient to discuss progress or lack of progress. Persons speculate that the process can also serve the larger purpose of building therapist expertise over time as feedback informs the clinician about what works and what does not work in treatment (in a general sense), as well as specifically with each client (Ericsson, 2006). Despite these observations about why ROM, and specifically the PCOMS and the OQ-System might be helpful, Lambert et al. (In Press) could not find any studies that investigated specific mechanisms of change within the 24 studies they examined. Thus, it is important for future research to explore the extent to which ROM works through the mechanisms that have been proposed.

#### 3.2 | Blind spot #1: Therapist perception of their effectiveness

Routine outcome monitoring is hypothesized to be effective because it addresses three interrelated problems in the delivery of psychotherapy (Lambert, 2010). The first documented shortcoming a ROM practice can help to remedy is therapist overconfidence in their effectiveness. This overconfidence may hinder efficacy as a therapist (and willingness to adopt ROM and evidence-based treatments, generally). Walfish,

McAlister, O'Donnell, and Lambert (2012) in a survey of providers across mental health professions found the psychotherapist's average estimate of the proportion of clients who are helped by their treatment is around 85%. This surpasses the measured positive outcome in routine care of about 30% and the approximately 60%–70% improvement rate coming from controlled clinical trials (Hansen, Lambert, & Forman, 2002). If therapists believe that their clients are improving at rates near 80% or 90% without using an evidence-based practice why would they want to consider adoption of ROM or a new evidence-based practice?

In addition, evidence across professions and trades suggests that individuals regard themselves as providing services that far surpass their peers whether they are engineers, carpenters, policemen, or psychologists. In the Walfish et al. (2012) survey of mental health professionals, 90% of psychotherapists regarded themselves as being at or above the 75th percentile of providers and none rated themselves as being below average compared to their peers (although 50%, of necessity, are below average when performance is normally distributed). In short, therapists believe they are having outstanding outcomes and that they are near the top of all providers when research indicates this is not always true. ROM provides them with another point of view on outcomes.

#### 3.3 | Blind spot #2: Therapist inability to predict negative outcome

A second and related self-assessment bias that can be corrected by ROM—and is specific to adopting a ROM practice—is the confidence that clinicians have in their ability to predict negative treatment outcome. We believe that a second reason ROM improves patient outcome is that it replaces overly optimistic clinical judgments about positive treatment response with more accurate ones. In fact, one rationale for adopting ROM is that it will reduce the likelihood of treatment failure because it includes predictive algorithms and alarm signals that alert therapists to potential failure (i.e., reliable negative change). Unfortunately, clinicians appear satisfied with the accuracy of their intuitive ability to detect final measured-negative outcome. They appear to be overconfident in their ability to predict treatment failure while they inadvertently and consistently overlook or minimize negative changes during ongoing treatment. They also have a limited capacity to make accurate predictions of the final benefit clients will receive during treatment—particularly with clients who are failing to improve.

For example, Hannan et al. (2005) found that even when therapists were provided with the base rate of deterioration in the clinic where they worked (8%), and were asked to rate each client that they saw at the end of each session with regard to the likelihood of final treatment failure (as well as if the client was worse off at the current session in relation to their



intake level of functioning), they were unable to do so when compared with formal ROM methods. Therapists rated only 3 of 550 (0.01%) clients as predicted failures and accurately identified just a single case who, in fact, deteriorated while they missed 39 clients whose measured outcome indicated they did deteriorate. The correct prediction was made by a trainee therapist, indicating that the 22 experienced therapists examined in this study (who had an average of 10 years' post-doctoral experience) did not identify a single case who deteriorated. In addition, they also seriously underestimated the number of clients whose measured progress indicated they experienced worse functioning at the current session compared to their intake level of functioning. This was not a predictive task but a matter of recognition. In this same study, the OQ-System identified 85% of the clients who went on to deteriorate. Additional studies from a variety of settings indicated the same high rates of identifying deteriorated cases for the OQ-System algorithms (Lambert et al., 2002; Lutz et al., 2006; Spielmans, Masters, & Lambert, 2006).

Therapists' tendency to overlook the signs of treatment failure in their clients was also reported by Hatfield, McCullough, Plucinski, and Krieger (2010) who retrospectively examined case notes of therapists to see if therapists noted negative changes in client functioning compared to measured functioning. They found infrequent mentioning of worsening in therapist case notes compared with measured functioning even when its degree was dramatic (Hatfield et al., 2010).

Such results are not surprising, given psychotherapist optimism about how many of their clients have a positive outcome and their belief that clients often worsen before they improve when, in fact, the road to recovery is characterized by marked early improvement or gradual improvement without any pronounced negative change (Haas, Hill, Lambert, & Morrell, 2002). Apparently, once therapy is underway, the complexity of helping persons—especially those who have an unfavorable social environment and a treatment context that calls for considerable commitment and determination on the part of the therapist—is a difficult task. After all, the therapist has very little control over the patient's life circumstances and personal characteristics. Patients' response to treatment is, especially in the case of a worsening state, a likely place where ROM feedback might have the greatest chance of impact.

We speculate that helping the therapist become aware of negative change and discussing such progress in the therapeutic encounter are much more likely when formal feedback is provided to therapists that makes them aware of a risk in a particular case. We also speculate that such feedback helps the client communicate their pain and helps the therapist to become aware of the possible need to adjust treatment, alter it, or address problematic aspects of the treatment as appropriate (e.g., problems in the therapeutic relationship,

difficulties in the implementation of the goals of the treatment, disruptions in social supports). By contrast, for clients who are progressing well in treatment, progress feedback delivered to therapists is not expected to help therapists be even more responsive.

### 3.4 | Blind spot #3: Therapist overestimation of therapeutic alliance

A third reason ROM methods may enhance patient outcome is because these practices often identify alliance problems and make therapists aware of these. Recall that an abundance of correlational data suggests that client perceptions of the alliance predict outcome, with correlations hovering around  $r = 0.30$ , while therapists' perceptions of alliance do not (Horvath, Del Re, Fluckiger, & Symonds, 2011). Thus, another limitation in therapist judgment during psychotherapy is overly positive perceptions of the strength of the therapeutic alliance compared with measured alliance ratings based on client perceptions. Though both ROM systems reviewed here collect and provide feedback to therapists about the alliance, they do so with differing frequency, circumstance, and strategy. The PCOMS measures alliance at each session and recommends discussion of measured alliance with the client at the end of every meeting. This provides therapists with information on the quality of the bond, satisfaction with in-session process, agreement with goals, and helps ensure a more collaborative relationship. Should barriers be identified they can be discussed within the dyad and hopefully be resolved.

On the other hand, the OQ-System measures alliance only if and when a client is predicted to be a treatment failure. If scores indicate a case is at risk of premature dropout or poor outcome, the OQ-Analyst provides similar alliance information as the PCOMS and, in addition, delivers specific item-level feedback regarding aspects of the alliance that were rated as problematic by the client (e.g., "My therapist seems glad to see me"). Client motivation problems, as well as extratherapeutic factors that include data on the client's social supports and negative life events, can be identified. In addition, suggested interventions for the problem areas indicated are included to help address negative change.

## 4 | BARRIERS TO ROM

With evidence from numerous research studies on ROM supporting the conclusion that it is in the best interest of the client (and, hence, therapist) to routinely monitor progress and help maximize psychotherapy benefit and prevent treatment failure, one might wonder why the practice of ROM has not yet become widely adopted. Numerous research studies have provided insight on this very question from multiple levels (national, local, and clinician) through identifying

implementation barriers encountered in adoption as well as exploring therapist and client attitudes toward a variety of ROM practices (e.g., Garland, Kruse, & Gregory, 2003; Gleacher et al., 2016; Ross, Ionita, & Stirman, 2016; Smits, Claes, Stinckens, & Smits, 2015). In short, these contributions to the literature have made it clear that the adoption and implementation of ROM involve much more than getting people to fill in a form.

On the most macrolevel, Trauer, Gill, Pedwell, and Slattery (2006) reported on implementation issues found in a country-wide roll out of ROM in Australia in 2006 and categorized barriers to implementation in five categories: information technology (e.g., access to computers, computer literacy); instruments (e.g., relevance, psychometrics, superficiality); competence and confidence in using ROM; time burden (too many competing demands for clinician—e.g., administering, scoring, interpreting, providing feedback to client); and suspicion of management or government motives (e.g., external control, information used to evaluate clinician and/or compared with colleagues).

At a more local level in U.S. clinical settings, in addition to the latter two overlapping obstacles of time burden and suspicion/fear/mistrust, Boswell, Kraus, Miller, and Lambert (2015) also identified several other inhibiting logistical forces that complicate successful implementation of ROM. These included financial burden (no reimbursement for use of ROM), differing needs of multiple stakeholders, turnover in clinical staff, training costs, and sustainability. In addition, they also noted philosophical reservations (e.g., perception that self-report scales are superficial and untrustworthy, privacy issues, and ethical concerns).

The semi-structured interviews conducted by Gleacher et al. (2016) with staff from a pair of clinics who worked to learn, implement, and use ROM successfully have also provided some unique insights (for it is staff who are most liable for and face most directly the associated challenges and obstacles of implementation). Given ROM is never implemented in a vacuum, Gleacher et al. highlighted essential considerations and organizational factors—particularly the prominent role of leadership. In short, management's comprehension of the ratio of facilitators to barriers for implementation of ROM by mental health staff was paramount. It determined whether or not sufficient appreciation for and support of staff was offered. For instance, if leaders failed to recognize the increased effort required of mental health staff in integrating ROM (e.g., demonstrating a disregard for pre-existing organizational demands such as agency-mandated paperwork and productivity requirements which resulted in clinicians needing to utilize outside-session time or complete ROM on their own time), this was a death knell to implementation. Likewise was a lack of initial implementation effort (i.e., insufficient structure, resources, and/or training). Even if future corrections were made later to technology or protocol, the

initial perceived/actual interference of ROM with the process and content of sessions was difficult to alter. Ultimately, they concluded that the role of leadership and organizational factors was key and seemed more important than the presence of other barriers in ROM adoption success.

At the most micro level—that of mental health providers, perhaps one of the unintentionally intimidating aspects of ROM discussed previously is that it highlights clinician vulnerabilities (overconfidence, inability to recognize/predict negative treatment outcome, and an overoptimism regarding the therapeutic alliance). Although ROM has the potential to aid providers in ultimately achieving improved therapeutic outcome with their clients, the potential discomfort—especially initially—presents new challenges. Accompanying newfound information on measured treatment progress is anxieties regarding self-efficacy and worries that information gathered will be used for punitive rather than facilitative purposes. Our experience suggests that feedback carries with it uncertainty that can impact clinician morale and overshadow the intended benefits to clients. This is especially likely when combined with the implementation impediments identified above and can result in a very understandable reluctance on the psychotherapist's part for adoption of ROM. Perhaps then, it is not surprising that research has demonstrated that, even when a clinic environment supports a ROM and a majority of clinicians report high utilization, objective data suggest lower actual use of the practice (Ross et al., 2016). Garland et al. (2003) found that 92% of clinicians in a large children's public mental health system reported not referencing ROM at all when the information was provided to them.

## 5 | PROPOSED SOLUTIONS

With the potential for ROM to prevent treatment failure and maximize psychotherapy outcomes on the one hand, and the numerous barriers for adoption of ROM on the other, how does one approach the dilemma of how to overcome these obstacles and increase dissemination? We believe increasing the appeal of ROM through addressing implementation risk, identifying strategies to effectively navigate organizational/leadership factors, applied instruction with integration into routine practice—especially in strategic settings, and continued research all play important roles.

### 5.1 | Mitigating perceived ROM implementation risk

Panzano and Roth (2006) highlight that, despite substantial funding for an endeavor, most evidenced-based mental health practices often take more than a decade to adopt. They suggest one can expect implementation of any innovative change in a system of care—regardless of the strength of

documented benefits—to be costly, complex, and potentially politically charged rather than straightforward and simple. They propose that the decision to implement is more risky and strategic than is initially appreciated by organizations. Hence, in a study of how organizations weigh benefits and costs of implementation (i.e., estimate risk), they identified two factors that loomed large: (a) perceived risk—the estimated probability and magnitude of benefit based on utility, scientific evidence, data from the field, perceived relative advantage, etc., and (b) capacity to manage risk which is comprised of factors such as compatibility with existing practices, ease of use, and knowledge set (e.g., availability of in-house expertise, complexity, and reversibility). Of note, organizational risk propensity—the characteristic tendency of organizations/individuals to be innovative or take risks—was also studied yet was found to be a more static factor less amenable to influence and, consequently, of less interest (though it might emerge as a variable related to persistence in the face of implementation barriers).

Panzano and Roth's (2006) discovery that perceived risk is malleable, and that the effects of risk management capacity operate through perceived risk seems particularly advantageous to ROM practices. There are many ways that ROM practices can help to increase their appeal to potential adopters through working to educate, influence, persuade, and otherwise mitigate risk factors for would-be users. For example, concrete actions such as disseminating evidenced-based findings to primary decision makers in organizations and putting them in contact with earlier adopters of ROM who are seeing favorable results can reduce perceived risk. Furthermore, the capacity for management of risk can be readily modified through things like availability of implementation assistance (manuals, technology/education training, dedicated resources, and compatibility with current practice). Panzano and Roth found adopters of evidence-based practices (like ROM) differ from non-adopters in that they perceive the implementation risk as lower and also as more manageable. They hypothesized that those practices that are most congruent with an organization's (or individual's) philosophy of treatment, strategic plan, and mission are easiest to implement and most likely to result in positive and lasting impact as goodness of fit increases chances of staff receptivity and, subsequently, successful ROM implementation.

## 5.2 | Organizational/leadership factors

Once primary decision makers have made the choice to adopt ROM practice (ideally one that is well-researched and selected for anticipated goodness of fit for the organization), then the task is to create, maintain, and maximize a receptive climate. Successful implementation efforts can be supported by leadership's mindfulness of the ratio of facilitators and barriers in ROM implementation for staff through

minimizing anticipated implementation hurdles and alleviating provider perception of barriers. Specifically, Gleacher et al. (2016) recommended explicit, active engagement of senior leadership through immediate oversight, general support, setting expectations, and not utilizing any ROM measures as part of any performance evaluations until a substantial time into the implementation phase. They also noted that lower-level administrator prioritization of support in the adoption of ROM through appointing local champions (in-house staff who provided scheduled/open-door consultation, clinical supervision, technical support, concomitant implementation) was also invaluable. Lastly, given their ability to influence clinician behavior, the buy-in of internal staff also demonstrated benefit.

Boswell et al. (2015) also recommended strategies to employ in the implementation of ROM that included transparency and clarity regarding ROM and its use, establishing benchmarks, providing formal training and guidance, employing local champions, and incentivizing routine outcome data collection (e.g., client referrals and CEUs) to improve integration by individual therapists and/or institutions. Implementation might also be a priority for organizations interested in compensation or demonstration and promotion of data-driven, first-rate care as there are methods other than ROM, such as the use of quality assessment and reimbursement for quality of care, that can use data from ROM practices as their quality indicator, not only to help individual patients but to provide evidence of quality of services (Barkham et al., 2001; Stricker & Rodriguez, 1988).

## 5.3 | Training considerations—applied instruction, integration into routine practice, and strategic settings

A wide range of studies of ROM training have been conducted, and some important common threads for positive impact on clinician attitudes and utilization of ROM have emerged. Willis, Deane, and Coombs (2009) studied clinician attitudes ( $N = 96$ ) toward ROM using pre- and post-training scores. They found increases in predominantly positive perceptions, to a brief training program. Persons, Koeman, Eidelman, and Thomas (2016) developed a training program aimed at helping clinicians successfully integrate ROM into their usual way of working with clients. Edbrooke-Childs, Wolpert, and Deighton (2016) examined brief training options/methods (1 or 3 days in length) in the use of an online ROM tool in a child treatment system wherein therapist attitudes became more positive regardless of training length. The benefit of applied instruction emerged as an important training component. All of these researchers cited that gains are maximized in ROM training when clinicians—in addition to education about ROM—are able to directly apply ROM specifically to patients (especially their own clients). This helped

clinicians learn how to gather information, interpret the data, and use this for discussion on how best to utilize ROM to improve psychotherapy outcome with individual cases.

The benefit from this functional type of training can enable ROM to transform from mere hypothetical data on a screen or page to a personalized appreciation of its use. It can provide information that aids clinical judgment and decision-making over the course of treatment to help maximize success. Depending on feedback provided by the ROM system utilized, important data regarding improvement or worsening of symptomatology, the strength of the therapeutic alliance, treatment course and targets, the possible role of significant extratherapeutic factors, and/or highlighting motivational issues that arise when the patient becomes discouraged in the midst of a challenging treatment can be identified. Such information helps both provider and patient to build awareness, consensus, and collaboratively reformulate treatment if needed. Guidance (cutoff scores, recommendations regarding frequency of discussion, etc.) may also be provided and/or clarified in training.

However, it is not only initial successful training that is necessary for ultimate ROM adoption; continued utilization in routine practice is crucial for improved psychotherapy outcomes using ROM. Willis et al. (2009) concluded that generating positive clinician attitudes is the first step toward improving the processes and effectiveness of ROM, but that controlled trials with a follow-up of clinicians' behavior are needed to determine whether the changes found are maintained and reflected in routine practice. Similarly, Persons et al. concluded in their 2016 study (where therapists were found to be using ROM measures 12 months later—though not necessarily the specific measure the authors had developed) that successful implementation depended not just on training but organizational factors and that it was the consistent use of ROM measures in practice with discussion of client progress with others that sustained ROM use over time.

In our experience of undertaking research on ROM, it appears that therapist attitudes about the value of ROM are most affected when therapists treat half their clients with treatment-as-usual and half with TAU plus feedback. After accumulating a sufficient number of cases, they can provide themselves with feedback on their own clients' outcomes (i.e., see if those who they used ROM with had better outcomes). We find therapists in our research studies are often quite surprised to learn that the use of ROM resulted in superior outcomes. They had not detected the superior outcomes as treatment proceeded, but it is apparent when the contrasting data were provided to them by the research team. Personal experience that a subset of your clients had superior outcomes is likely be more persuasive for sustained adoption than guidance from governing bodies such as APA, or articles providing mean group differences summarizing many therapists' results, pressure from clinic management, managed care, and the like.

When clinicians appreciate the benefit of ROM, efforts to integrate it into routine practice follow. Given the centrality of making ROM a habitual part of one's practice to enhance outcomes, we believe the largest opportunity in broadening the implementation and sustained use of ROM practices (particularly those that provide accurate methods of predicting treatment failure) may hinge on their adoption and use in clinical settings that employ students, such as internships, graduate training clinics, and clinical supervision. It is important for graduate training programs to include ROM methods in training and supervision as an ordinary and expected part of treatment. Our experience is also that trainees are especially eager to get feedback reports with alerts and graphs of client progress and they are open to incorporation of computer-based IT in their lives including their professional practice. They are also inexperienced enough to be looking for all the help they can get to deliver excellent treatment. Having supervisors and trainers that are experienced in and utilize ROM themselves is a boon to their professional training in evidence-based practices.

#### 5.4 | Future directions for ROM research

As proposed prior, a valuable future research avenue would be to investigate the extent to which ROM works through proposed mechanisms (enhancing therapist responsiveness, correcting for therapist overconfidence in effectiveness, clinician inability to predict treatment failure, overestimation of alliance). Our hope is that the field continues to test the effects of the growing body of ROM practices and continues to implement those that are found to work in training programs and routine practice. There is some evidence that training in ROM can be effective both in helping clinicians to effectively use these methods and also in developing positive attitudes with regard to their effects on clients. It is recommended that research be conducted on implementation strategies that leave clinicians feeling that use of these practices can inform and enhance, rather than undermine and restrict, their clinical decision-making. Further research is needed to see if ROM practice also enhances clinician job satisfaction and well-being by increasing their effectiveness as practitioners.

### 6 | IMPLICATIONS FOR ROM—GOOD, BETTER, AND BEST PRACTICES

Clarity regarding the purpose for which ROM is to be adopted by an organization or individual provider (e.g., to prevent treatment failure, monitor therapeutic alliance, track symptomatology) is a fundamental and foundational step given the myriad of ROM approaches, each with differing aims, type/breadth of data collected, ease of access, and presentation of



such to the clinician and/or client. Each of these factors impacts the content areas and extent to which clients can report on their experience as well as the data that can be brought to the clinician's attention for consideration. Different ROM approaches also have differing philosophies regarding the frequency of discussing feedback with clients with some being more prescriptive and others being more suggestive about when to address feedback in-session.

For example, in terms of the OQ-System with its primary objective of alerting clinicians to when a client is not making expected progress (i.e., is off-track and possibly at risk for treatment failure), we believe that respecting clinician autonomy, time, and clinical judgment in making decisions regarding if, when, and/or how to discuss ROM feedback with their patients to be most constructive. The decision of whether or not to discuss feedback with the patient is determined by any number of contextual factors (theoretical orientation, diagnoses, etc.). In circumstances when off-track trajectory feedback is clear—especially in concurrence with endorsement of critical items (e.g., about suicide, substance use)—then a discussion is most likely warranted to help prevent treatment failure (through identifying barriers, reformulation, changes to treatment plan, additional referrals, etc.). In turn, giving clinicians access to feedback data with a wide berth of how to utilize it can also aid other therapeutic endeavors. For instance, should a client be making expected progress, there may be no need to address feedback at all as data suggest the client is on track and the treatment plan is having its intended effect. In such circumstances, time may be better allocated for more advantageous ends. On the other hand, should the clinician conclude that a review of improvement attained thus far could meaningfully promote and sustain motivation for continued engagement in treatment, then taking the occasion to review feedback may be merited.

In light of the discussion above and that the majority of ROM practices have not yet been studied, we would like to suggest factors that we believe will contribute most to positive outcomes, both in the utilization of ROM and in incorporation of features that can ease previously mentioned implementation impediments for the client, clinician, and organization.

## 6.1 | Good

At minimum, any good ROM practice should include a measure of patient functioning that has established validity, reliability, and appropriate norms. The measure needs a practical mode of administration (e.g., paper and pencil) that can be clearly scored (by hand or otherwise), and be brief (i.e., require no more than 5–10 min of time) so that high frequency of repeated administration is feasible. The measure needs to demonstrate sufficient sensitivity to change over a short period of time and criteria/indicators to alert clinician to

potential poor outcome. The ROM system needs to be affordable and provide practical training opportunities.

## 6.2 | Better

Additional features to improve the ROM practice could include published evidence of the ROM system being able to accurately predict treatment failure, cutoff points, or other mechanisms that alert the provider to potential deterioration, as well as utilization of software for ease of entry, scoring, and generation of reports that can be delivered to therapists in real time. It should also provide resources for problem-solving when a client is off-track (e.g., availability of group treatment, medication consultation). It should provide adequate resources for training and increasing the knowledge set of the user (e.g., manuals and Web site).

## 6.3 | Best

The most high-quality ROM practices will have sufficient research to be recognized as an evidence-based practice, have developed population-specific measures (e.g., adults, children, group, and military) that employ software applications with statistically derived benchmarks and algorithms that are highly sensitive to change in real-time. It should provide an immediate, clear, simple, easy-to-read summary ROM report (which may include progress graphs, color graphics, and any alerts) as well as clinical support tools to aid therapists in successfully intervening with clients who are at risk by providing concrete suggestions that cover both intra- and extra-therapeutic problems. Other best aspects include flexibility in administration (e.g., paper and pencil, computer, handheld PDA, and online) and availability in different languages to serve the greatest number of clients. Lastly, continuous training or access to peer support through developer sites (such as those provided earlier in this article for the PCOMS and OQ-system) can aid in ensuring successful integration into routine practice.

## 7 | SUMMARY

The empirically supported practice of formally tracking client treatment response (ROM) has a positive effect on client outcome, especially for clients who are not having a positive treatment response. This practice has been found to substantially reduce client deterioration and to possibly double reliable change/clinically significant change in such cases. The empirical base for this conclusion is now well-documented across a wide range of disorders and psychotherapies including individual, group, and couples' treatment (Lambert et al., In Press). The ROM practices reported here probably work by bringing therapist attention to poorly responding clients

and to factors that may be causing the problematic treatment response, such as a poor therapeutic alliance, or issues external to the client/therapist relationship, so that these barriers can be addressed early and adjustments made. Even though therapists often do not perceive the discrepancy between their judgment of client progress and measured progress (and its implications), once they are made aware of treatment response problems through ROM feedback, they are able to effectively problem-solve with such cases.

At the same time, not all studies have found an effect, and more problematic, many ROM methods have not yet been evaluated. There is an obvious need for more clinical trials on those ROM methods that lack empirical support. It is also recommended that further research be undertaken to improve prediction of treatment failure in routine care, since a primary value of ROM practices appears to rely on our ability to supply clinicians with this information.

Despite the considerable promise of ROMs, as well as progress in implementing them, serious problems remain when it comes to widespread adoption of ROM in routine practice and clinical training. Identifying the most successful ways to disseminate these evidenced-based practices to primary decision makers in organizations as well as assessing the potential impact of connecting potential/new adopters of ROM with earlier successful adopters is a work in progress. It is posited that the willingness of individuals/organizations to adopt ROM is directly related to improved perceptions of risk management capacity. Additional research on organizational factors, such as those referenced by Gleacher et al. (2016; e.g., ROM compatibility with current practice), could help tip the balance toward successful implementation when inevitable barriers are encountered. Our hope is to continue to educate clinicians and administrators about how implementation of ROM can inform and enhance, rather than undermine and restrict their clinical decision-making and thereby improve patient outcomes.

## CONFLICT OF INTEREST

Michael J. Lambert is part owner of OQMeasures a company that owns and distributes the AQ-Analyst software discussed in this article.

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