Beyond Measures and Monitoring: Realizing the Potential of Feedback-Informed Treatment

Scott D. Miller, Mark A. Hubble, Daryl Chow, and Jason Seidel
International Center for Clinical Excellence, Chicago, Illinois

More than a dozen randomized controlled trials and several meta-analyses have provided strong empirical support for routine outcome monitoring (ROM) in clinical practice. Despite current enthusiasm, advances in implementation, and the growing belief among some proponents and policymakers that ROM represents a major revolution in the practice of psychotherapy, other research has suggested that the focus on measurement and monitoring is in danger of missing the point. Any clinical tool or technology is only as good as the therapist who uses it. Failing to attend to the therapist's contribution, the long neglected variable in psychotherapy outcome, ensures that efforts to create, research, and refine new outcome measurement systems will inevitably fall short. Research from the field of expertise and expert performance provides guidance for realizing the full potential of ROM.

Keywords: routine outcome measurement, therapist factors, expertise, professional, development

"When finger points at moon, don't look at the finger."

—Buddha

In 1996, Howard, Moras, Brill, Martinovich, and Lutz (1996) first suggested using session-by-session measures of client progress to evaluate, inform, and potentially improve the outcome of psychotherapy. Since that pioneering research, several systems have been developed, tested, and implemented. At present, measures exist for adults, children, families, and couples presenting with a wide range of problems and concerns. Recently, Drapeau (2012) identified 10 of the most popular measures, reviewing their psychometric properties, empirical support, and appropriate applications.

More than a dozen randomized controlled trials (RCTs) and several meta-analyses have provided strong empirical support for routine outcome monitoring (ROM) in clinical practice. Evidence (Goodman, McKay, & DePhilippis, 2013; Miller & Schuckard, 2014) has shown the process may (a) double the effect size of treatment and increase the proportion of clients with reliable and clinically significant change; (b) cut dropout rates in half; (c) reduce the risk of deterioration by one third; (d) shorten the length of treatment by two thirds; and (e) drive down the cost of care. Two systems—the Partners for Change Outcome Management System (PCOMS)[1] and the Outcome Questionnaire Psychotherapy Quality Management System (OQ-Analyst)—have been independently reviewed and listed on the Substance Abuse and Mental Health Services Administration's National Registry of Evidence-based Programs and Practices (Substance Abuse and Mental Health Services Administration, 2012). The registry identifies

mental health and substance abuse interventions that have met national criteria for evidence of positive outcomes and readiness for implementation.

Available empirical support, coupled with the increasing demand for accountability from funders and regulatory agencies, means that ROM is here to stay, a permanent fixture in the delivery of behavioral health services (Carlier et al., 2012; Lambert, 2010). Two meetings sponsored by the International Center of Mental Health Policy and Economics have focused exclusively on using patient feedback to inform and improve treatment decision making (*The Journal of Mental Health Policy and Economics*, 2014). In several countries, ROM is now obligatory. Since 2011, for example, clinicians in the Netherlands have been mandated to submit outcomes data to a national registry (van der Wees, 2013). In the United Kingdom, national health care policy has placed ROM at the heart of clinical decision making in child and adolescent mental health services (Devlin & Appleby, 2010).

Given these developments, it should come as no surprise that the number of books, scholarly articles, and outcome measurement systems is on the rise. Measures exist, or are under development, specific to different treatment settings and populations (e.g., treatment site: Brown, 2015; children and adolescents: Bickman, Kelley, Breda, de Andrade, & Riemer, 2011; couples and families: Pinsof et al., 2009; specific diagnoses: Young et al., 2011), intervention types (e.g., support, social, educational, pharmaceutical),

Scott D. Miller, Mark A. Hubble, Daryl Chow, and Jason Seidel, International Center for Clinical Excellence, Chicago, Illinois.

Correspondence concerning this article should be addressed to Scott D. Miller, International Center for Clinical Excellence, 2541 West Pensacola, Chicago, IL 60618. E-mail: scottdmiller@talkingcure.com

[1] The Partners for Change Outcome Management System (PCOMS) is comprised of two measures: the Outcome Rating Scale (ORS) and the Session Rating Scale (SRS; Miller, Duncan, et al., 2005). The ORS measures progress. The SRS assesses the quality of the therapeutic relationship. Both scales were developed following the corresponding author's use of two longer measures: the Outcome Questionnaire−45 (Lambert, 2012), developed by his professor, Michael J. Lambert, and the Session Rating Scale, constructed and introduced by clinical supervisor, Lynn D. Johnson. The tools are available at: http://www.whatispcoms.com. See also Substance Abuse and Mental Health Services Administration (2012).

and broader targets pertaining to general health and quality of life (*The Journal of Mental Health Policy and Economics*, 2014).

With so many measures available, and the legitimacy of ROM firmly established, interest has naturally shifted to implementation. As scientific discoveries move out of academic and research settings and into real-world clinical environments, significant barriers emerge impeding rapid adoption. Even under the most favorable circumstances, findings from the field have demonstrated that as much as two decades can pass before new treatments are integrated into routine care (Brownson, Kreuter, Arrington, & True, 2006).

Aside from the energy and effort required for disseminating information about the features and benefits of ROM to practitioners (Wolpert, 2014), Boswell, Kraus, Miller, and Lambert (2015) have identified several practical and philosophical obstacles. On the practical side, a first concern is cost. In many instances, payment is required to access the measures, data aggregation services, and interpretive algorithms. At present, the financial cost of ROM is not offset by increased reimbursement. Time is also a factor. Measures must be administered, scored, and interpreted. Results must then be tracked and integrated into care. Despite the brevity of many of the tools, all place an additional burden on clinicians' already busy schedules. Moreover, conflicting needs and priorities among various stakeholders—clients, regulatory bodies, and payers—make consensus on the choice of system, and when and how to use it, difficult to achieve. Finally, staff turnover in agency settings represents significant challenge. As staff come and go, organizations may lose those who lead, train, and support ROM, and organizations must continually train new clinicians who are new to the methods, hindering implementation.

On the philosophical side, Boswell et al. (2015) has noted the skepticism many practitioners have regarding the applicability of outcome measures. The tools are seen as too superficial to assess clinical change accurately in the people they treat. Not surprisingly, questions arise about how the data will be used by agency administrators, regulatory bodies, and third-party payers. In addition to concerns about the security and confidentiality of the information collected, many worry that results will be used to hire, fire, bonus, or punish. Such sentiments are echoed, for example, in a recent article by Wolpert (2014) on the use of ROM in the United Kingdom. The author warns of potential "iatrogenic" consequences coming from conflicting perspectives on how data are to be employed. Whereas clinicians favor the use of outcome information for improving clinical decision making, administrators emphasize its utility for conducting audits and performance reviews.

In 2012, the International Center for Clinical Excellence published a set of manuals designed to help circumvent the barriers to ROM implementation identified in the literature (Bertolino & Miller, 2012). Included in the series is a gap assessment tool, the Feedback Readiness Index and Fidelity Measure (FRIFM; Miller, Mee-Lee, & Plum, 2012). Agencies and clinicians can use the FRIFM at no cost to detect obstacles unique to their particular practice setting. Once identified, the manuals provide step-by-step instructions, based on the latest findings from implementation science, for developing an individualized plan of action. Reports from the field have indicated that when this process is followed, successful implementation can take between three and seven years (Fixsen, Blasé, Naoom, Friedman, & Wallace, 2009; Fixsen, Blasé, Naoom, & Wallace, 2009).

Despite current enthusiasm, advances in implementation, and the growing belief among some proponents and policymakers that ROM represents a major revolution in the practice of psychotherapy, other research has suggested the focus on measurement and monitoring is in danger of missing the point.

The More Things Change . . .

The American author and humorist, Mark Twain, once observed, "History doesn't repeat itself, but it does rhyme." In the 1990s, attention turned to the development of a psychological formulary. With the general efficacy of psychotherapy firmly established (Hubble, Duncan, & Miller, 1999), the Task Force on Promotion and Dissemination of Psychological Procedures, a committee within Division 12 (Clinical Psychology) of the American Psychological Association, launched a campaign to create a "list of empirically supported psychological treatments for specific target populations" (i.e., diagnoses; Chambless, Baker, Baucom, Beutler, et al., 1998, p. 3; Chambless & Hollon, 1998).

At that time, evidence was accumulating proving the effectiveness of a growing number of treatment approaches for a wide variety of psychological problems. Managed care was on the rise, as was the call for more accountability (Cummings, 1986). The American Psychiatric Association had already developed its own list. Proponents of prescriptive psychotherapy argued that psychologists must follow suit lest they be put at a competitive disadvantage, allowing psychiatry to dominate the future of mental health policy and practice (Hubble & Miller, 2001; Nathan, 1997; Sanderson, 2003).

The movement to identify specific treatments for specific disorders has had a significant and likely long-lasting impact on the field. Regulatory agencies and funders in the United States and abroad use the lists for controlling practice and payment. In the United Kingdom, for instance, guidelines developed by the National Institute for Health and Care Excellence (NICE) are reshaping clinical practice, becoming a key driver of how therapists work and are paid (Chalkidou, 2009; Department of Health, 2007). Sweden has already limited government funding of professional training to treatments deemed evidence-based (Miller, 2012). And, in the United States, observers and advocates alike foresee a time when only officially sanctioned therapies "will be reimbursed and covered by liability insurance" (Thomason, 2010, p. 29; see also Barlow, 2004; Cummings & O'Donahue, 2008).

However popular and well-intentioned such efforts may be, considerable doubt exists whether following such guidelines actually improves the quality and outcome of care. Although a matter of sometimes acrimonious debate, a large and compelling body of literature has called the whole premise of diagnostic-specific treatments into question. Over the years, meta-analytic research examining studies in which bona fide treatments are directly compared have revealed few differences in efficacy among approaches (Wampold & Imel, 2015; Duncan, Miller, Wampold, & Hubble, 2010; Hubble et al., 1999). In the United Kingdom, where NICE guidelines are a major force, studies comparing treatment approaches, as practiced in routine clinical settings, have shown them to be equivalent (Stiles, Barkham, Twigg, Mellor-Clark, & Cooper, 2006). Finally, a comprehensive review of five areas of

research, including component studies, pseudo placebos, interactions of patient characteristics and treatment, adherence and competence, and mediators of change, led Wampold and Imel (2015) to conclude, "there is no compelling evidence that the specific ingredients of any particular psychotherapy or specific ingredients in general are critical to producing the benefits of psychotherapy" (p. 253).

Regardless of the side one takes in the debate, or its eventual outcome, it is hard to miss the parallel between the history of the prescriptive psychotherapy movement and ROM. As therapy proved effective, so too has ROM. As the number of treatment approaches proliferated, so too have the number of systems for tracking outcomes. As lists of specialized treatments grew, so too have measures targeted to particular treatment populations and work sites.

If history continues to "rhyme," as Twain suggested, the most likely next phase in the development of ROM is a growing rivalry or competition among proponents of the various outcome measurement systems. Similar to what happened among the competing schools of psychotherapy, each will attempt to make a case for its particular product. Differences will be emphasized in applicability, user friendliness, ease of implementation, empirical support, and, of course, cost. Entrenchment naturally occurs as the attention of developers shifts from the overall purpose of ROM, to improving, expanding, or refining their particular tool. At this time, one can expect an explosion of system-specific research studies, books, and presentations—even the formation of professional societies.

Provided ROM continues to follow the same trajectory as psychotherapy, decades may follow before any direct comparisons by independent researchers are made between the different approaches. To date, no such studies have been conducted. Moreover, the evidence that does exist, though quite limited, suggests ROM is following a similar arc. Lambert and Shimokawa (2011) summarized meta-analyses of *the effects* of two measurement and feedback systems—OQ (Lambert, 2012) and PCOMS (Miller, Duncan, Sorrell, & Brown, 2005). The developers of the two have gone to some lengths to highlight differences between their respective products in prior publications. PCOMS is touted for its brevity and simplicity, qualities said to facilitate rapid adoption and utilization. The OQ is described as being more comprehensive, providing users with additional assessment and intervention options (Lambert & Shimokawa, 2011). Although the individual studies in the meta-analyses were conducted by researchers with a strong allegiance to the measure being tested, and no investigations were included directly comparing the two systems, the effect sizes of each proved equivalent. Put another way, despite their reported differences, OQ and PCOMS show similar degrees of impact on outcome.

Should the results of these early meta-analyses hold up in later, direct, and independent comparisons, ROM will not only have "rhymed" with the history of psychotherapy, it will, in fact, have repeated it. Already, researchers are finding it hard to replicate the medium-to-large effects sizes enthusiastically reported in early studies (see Lambert et al., 2003; Knaup, Koesters, Schoefer, Becker, & Puschner, 2009), a well-known phenomenon called the "decline effect," observed across a wide range of scientific disciplines. In pharmacology, medicine, zoology, ecology, physics, and psychology, promising findings from initial studies often "lose their luster," with many fading away completely (Lehrer, 2010; Yong, 2012).

In a naturalistic multisite RCT in Norway, for example, Amble, Gude, Stubdal, Andersen, and Wampold (2015) found the main effect of feedback to be much smaller ($d = 0.32$) than the meta-analytic estimate ($d = 0.69$) reported by Lambert and Shimokawa (2011). An even more recent study conducted in an emergency outpatient psychiatric setting in Amsterdam, The Netherlands, compared the outcomes of 370 patients randomized into either a feedback (PCOMS) or treatment-as-usual condition (van Oenen et al., in press). No differences were found between the two groups on the primary measure or two independent outcome tools (Brief Symptom Inventory and OQ-45).

Notwithstanding these sobering developments, a large and continually growing body of literature points in a more productive direction. It is one likely to help the field better realize the potential of feedback for improving the quality and outcome of psychotherapy.

Looking Behind the Curtain

In 1997, the journal *Clinical Psychology: Science and Practice* published a series of articles from a symposium held at the annual meeting of the Society for Psychotherapy Research in Vancouver, Canada. The authors represented a "Who's Who" of outcome researchers: Sol Garfield, Allen Bergin, Michael Lambert, Larry Beutler, Lester Luborsky, and Hans Strupp, among others. All forcefully directed attention to the dominance of treatment methods in professional discourse and practice, and the near-complete neglect of other significant contributors to outcome. "The most recent example," Sol Garfield (1997) asserted in his commentary "is the recent report of the American Psychological Association (Division 12, Clinical Psychology) *Task Force on Promotion and Dissemination of Psychological Procedures* (1995). Again, the emphasis in this report is placed on the type of therapy . . ." (p. 41). Conspicuously absent, Garfield and his colleagues observed, was any investigation of the key role individual therapists played in the process and outcome of therapy—a variable Luborsky et al. (1986) found, almost a full decade earlier, "overshadowed *any* differences between different forms of treatment" (p. 509, emphasis added).

Far from exhibiting the decline effect characteristic of much scientific research, the findings presented by this panel of distinguished scholars has stood the test of time. Evidence has consistently shown that therapist effects dwarf the contribution made by the perennially popular treatment models and techniques, accounting for 5–9 times more variance in outcome (Wampold & Imel, 2015). Given the strength of such results, it should come as no surprise that therapist effects have now been reported in the literature on ROM.

Consider the recent study by de Jong, van Sluis, Nugter, Heiser, and Spinhoven (2012), which found that a variety of therapist factors moderated the effect ROM had on outcome. To begin, one cannot count on therapists to use feedback when it is given to them by their clients. Half in the study indicated they did not use the feedback whatsoever. Of those who did, only half showed any benefit from doing so. Not surprisingly, commitment to ROM predicted who would use the data to inform treatment. Moreover, higher levels of commitment led to faster rates of client progress. The authors concluded: "it is important to pay attention to the role of the therapists . . . when aiming to use outcome monitoring as a tool to improve clinical outcomes" (p. 472).

Openness to feedback has been shown to affect outcome in a number of previous investigations. In the Vanderbilt psychotherapy studies (Najavits & Strupp, 1994), effective psychotherapists were found to be more self-critical and report making more mistakes. Later, Nissen-Lie, Monsen, and Rønnestad (2010) found that higher levels of "professional self-doubt" positively impacted client ratings of the working alliance. Finally, and most recently, Chow (2014) showed that highly effective psychotherapists reported being "surprised by client feedback" more times in a typical work week than their less effective counterparts, an experience indicative of both an awareness of and receptivity to feedback.

To date, perhaps the most persuasive evidence bearing on therapist effects in ROM comes from research demonstrating clinicians do not get better at what they do as a result of monitoring and measuring. Over a decade ago, Lambert observed practitioners do not improve in their ability to detect when cases are off track, or at risk for dropout or deterioration, despite being exposed to such feedback for multiple years on half of their cases (Miller, Duncan, & Hubble, 2004). In an article appearing this year in the *Journal of Clinical and Consulting Psychology*, Goldberg et al. (in press) confirms Lambert's report in a study tracking the performance of 170 therapists and more than 6,500 clients. Over a 5-year period, despite the routine and systematic use of outcome measures, clinicians not only did not become more effective, they got worse. This erosion in performance could not be explained by clients' initial severity, length of treatment, rates of early termination, size of caseload size, or various other therapist factors (e.g., therapists' age, years of experience [excluding trainees who had less than 1 year of experience]).

From its earliest days, and continuing into the present, the field has searched for a method or methods that if carefully constructed, taught, and correctly applied, will reliably produce clinically significant change. The problem is, as Donald Kiesler (1966) pointed out, not all therapists are created equal. As such, any tool, no matter its evidence base, will only be as good as the therapist who uses it. In the end, all technologies, including ROM, have no inherent power to produce change.

Moving forward, it is time to "look behind the curtain," to attend to the therapist's contribution. Failing to do so ensures that efforts to create, research, and refine new treatment models or outcome measurement systems will inevitably fall short. A future of better therapy firmly rests on making better therapists.

Realizing Our Potential

Therapists want to develop professionally. It is both a deeply held value and a career long aspiration. This is a fact confirmed by a large, 20-year, multinational investigation of 11,000 clinicians, conducted by researchers Orlinsky and Rønnestad, together with members of the Society for Psychotherapy Research (Orlinksy & Rønnestad, 2005; Rønnestad & Orlinsky, 2005). This same research has shown that improving their skills, deepening their understanding of therapeutic process, and overcoming past limitations are key to sustaining morale and enthusiasm for clinical work (Rønnestad & Orlinsky, 2005). Clearly, when it comes to therapists' professional development, it is not a matter of will. Rather, it is a matter of way.

Clinicians show this commitment to growth by seeking and receiving their own personal therapy, attending ongoing postgraduate supervision, and completing continuing education (CE) events and activities (Rønnestad & Orlinsky, 2005). Unfortunately, for all the time, effort, and money invested in these pursuits, little evidence exists that they help therapists accomplish their chief objective—professional development. On this score, after reviewing a century of the literature and research on supervision, Watkins (2011) concluded: "We do not seem any more able to say now (as opposed to 30 years ago) that psychotherapy supervision contributes to patient outcome" (p. 235). With regard to CE, most clinicians report a high degree of satisfaction and belief such training translates into more effective and ethical practice. They do this even though no evidence documents actual knowledge acquisition or growing clinical competency. In reality, any link between CE and the quality and outcome of professional services has yet to be established (Neimeyer, Taylor, & Wear, 2009). And, finally, while nearly 80% of practitioners cite their own personal therapy as crucial to their growth—second only in influence to formal supervision (Orlinksy & Rønnestad, 2005)—data on its impact on therapeutic process and client outcomes are at best "mixed and inconclusive" (Malikiosi-Loizos, 2013, p. 43; Geller, Norcross, & Orlinksy, 2005).

If the challenge is "How do we make better therapists?" then 50 years of research and practice have provided the profession with little reason to be sanguine. On the subject of improving the outcome of individual therapists, guidance may be found in the scientific literature on what expertise and expert performance provide (Colvin, 2008; Ericsson, 2009a; Ericsson, Charness, Feltovich, & Hoffman, 2006). Here, the entire focus has been on understanding why some consistently outperform others.

Across a variety of endeavors (including sports, chess, music, medicine, mathematics, teaching, and computer programming) studies have revealed a single, underlying trait shared by top performers: deep domain-specific knowledge. In sum, the best know more, see more, and, accordingly, do more. The same research has identified a universal set of processes that both accounts for how domain-specific knowledge is acquired and furnish step-by-step directions anyone can follow to improve performance within a particular discipline (Ericsson, 2006). Miller, Hubble, Chow, and Seidel (2013) identified and provided detailed descriptions of three essential activities giving rise to superior performance. They include: (a) determining a baseline level of effectiveness; (b) obtaining systematic, ongoing feedback; and (c) engaging in deliberate practice.

When the steps leading to improved performance are considered, the reason for ROM's failure to facilitate the development of more effective therapists becomes obvious. At present, routinely measuring outcomes provides clinicians with an estimate of their effectiveness (Step 1). Systematic, ongoing feedback is available in several systems employing a norm reference against which progress of individual clients is assessed (Step 2).

Bearing these first two steps in mind, ROM, in its current form, can be said to function much like a GPS device. It provides alerts when the therapy is off track and guidance for resuming progress. On balance, a GPS, just like ROM, improves the chances of arriving to the desired destination—that is, as long as the advice is followed. Ultimately, however, no matter how successful the device is at providing directions, it does not improve the user's overall navigation skills or knowledge of the territory. To realize the full potential of the feedback, the third step—deliberate practice—is required (Ericsson, 2006, 2009a, 2009b; Ericsson, Krampe, & Tesch-Romer, 1993).

In brief, deliberate practice means setting aside time for reflecting on one's performance, receiving guidance on how to improve specific aspects of therapeutic practice, considering any feedback received, identifying errors, and developing, rehearsing, executing, and evaluating a plan for improvement. Ericsson (2009a) noted that the key attribute is to "seek out challenges that go beyond their current level of reliable achievement—ideally in a safe and optimal learning context that allows immediate feedback and gradual refinement by repetition" (p. 425). Engaging in prolonged periods of reflection, planning, and practice not only helps refine and extend specific skills, but also engenders the development of deep domain-specific knowledge—a complex mental map enabling top performers to use their knowledge and skills in more efficient, nuanced, and novel ways (Ericsson & Staszewski, 1989).

Elite performers across various professions and endeavors have been shown to devote significantly more time to this process than their more average counterparts (Ericsson, 2006). For example, in their seminal study of violinists, Ericsson et al. (1993) found those rated "best" and "good" spent 3 times longer than the other performers in solitary deliberate practice, averaging 3.5 hours per day for each day of the week, including weekends, compared with 1.3 hours per day for the less highly rated.

In 2015, Chow et al. (2015) published the first study on the role of deliberate practice in the development of highly effective therapists. The research examined the relation between outcome and a number of practitioner variables, including demographics, work practices, participation in professional development activities, beliefs about learning and development, and personal appraisals of therapeutic effectiveness. Among these, gender, qualifications, professional discipline, years of experience, time spent conducting therapy, and clinician self-assessment of effectiveness were unre-

lated to effectiveness (Anderson, Ogles, Patterson, Lambert, & Vermeersch, 2009; Wampold & Brown, 2005; Walfish, McAlister, O'Donnell, & Lambert, 2012; Malouf, 2012).

Consistent with studies of deliberate practice, the amount of time therapists reported being engaged in solitary activities intended to improve their skills was a significant predictor of outcome (Chow et al., 2015). The cumulative impact deliberate practice exerts on clinician effectiveness can be seen in Figure 1. In the first 8 years of professional work, the top quartile of performers spent, on average, nearly 2.8 times more time deliberately working at improving their skills than the bottom three quartiles.

Returning to ROM, measuring and monitoring clinical practice is most likely to increase a therapist's effectiveness when it identifies opportunities for deliberate practice. In their study, Chow et al. (2015) used the Retrospective Analysis of Psychotherapists' Involvement in Deliberate Practice (RAPIDPractice) to assess the amount of time clinicians devoted to a variety of activities designed to improve their effectiveness. Informed by previous research, the measure asks therapists to rate: (a) how often they engage in particular activities; (b) the confidence they have in their frequency estimate; (c) the relevance of each activity to skill improvement; and (d) the cognitive effort required when engaging in the activity (Chow & Miller, 2012).

Despite the comprehensive nature of the survey, no one activity produced better outcomes reliably. Such findings match those obtained by Ericsson et al. (1993) in their investigation of violinists reported above. Simply put, while the overall amount of time devoted to deliberate practice matters, the utility of any one, specific activity will vary from one performer to the next, depending on where the individual "starts" (i.e., his or her baseline performance) and whatever feedback identifies as instrumental in either impeding or improving
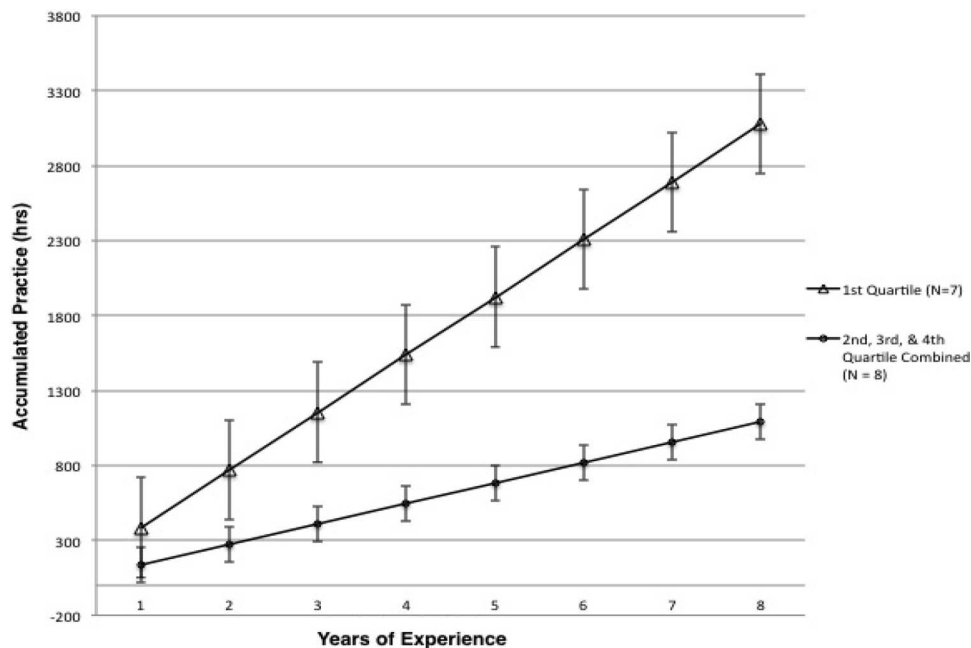

Figure 1. Comparison of therapists from the top quartile with the others in the lower quartiles based on their adjusted client outcomes, as a function of their accumulative time spent on "deliberate practice alone" in the first 8 years of clinical practice. Error bars are *SEM*.

their outcome (e.g., errors, skill deficits, knowledge acquisition). At length, to get better, each performer must use the feedback he or she receives to construct and implement a highly individualized, professional development plan.

Illustrating the Role of ROM in Individual Therapist Development

As reviewed in this special issue of *Psychotherapy*, several systems are available for measuring and monitoring the outcome of behavioral health services. Each can be used to identify aspects of clinical performance that can be improved through deliberate practice. One, PCOMS, aside from measuring outcome, also includes a scale for assessing the quality of the therapeutic relationship (Miller et al., 2005). Studies have long shown a moderate, yet robust, correlation between the therapeutic relationship and treatment outcome (Wampold & Imel, 2015). In the largest and most methodologically sophisticated meta-analysis to date, involving 190 studies and more than 14,000 cases, Horvath, Del Re, Flückiger, and Symonds (2011) determined the alliance accounted for 8% of variance in outcome.

At the same time, significant differences have been found in therapists' ability to form and sustain helpful relationships with clients. In a study of 81 clinicians, Baldwin, Wampold, and Imel (2007) established that 97% of the difference in outcome between therapists was attributable to clinician variability in the working alliance. Later, Anderson et al. (2009) provided evidence this variability could be explained by differences among therapists in the depth of their domain-specific knowledge. In that study, the more effective the clinician, the more they interacted empathically and collaboratively with a more diverse group of clients. Additionally, their comments were much less likely to create distance or cause offense.

The foregoing research suggests a potential use for ROM in improving and strengthening the individual clinician's ability to build effective alliances. In PCOMS, therapists administer the Session Rating Scale (SRS; Miller & Duncan, 2000) at the conclusion of each session. The measure is designed to capture the client's experience of the therapeutic alliance as defined by Bordin (1979), including the quality of the relational bond, and agreement between the client and therapist on the goals, methods, and overall approach of therapy. In short order, administration of the scale reveals when the alliance is at risk in any one case, as well as any consistent errors or deficits in the clinician's ability to form relationships across their caseload. Once a problematic pattern is identified, a remedial plan can be developed, tested, and successively refined.

In a study currently under review, Chow, Lu, Owen, and Miller (2015) document the impact of deliberate practice on therapist relationship skills. A group of practicing clinicians watched videos depicting challenging moments that may arise in psychotherapy (Strupp & Wallach, 1965). They were given a brief description of the client and told to respond to the best of their ability, as though the person were seated across from them. One vignette, for example, featured a client described as having a borderline personality disorder, expressing anger and resentment toward the practitioner.

Therapists' responses to the videos were reviewed and scored by two independent raters using subscales of the Facilitative Interpersonal Skills Performance Task (FIS; Anderson, Patterson, & Weis, 2007). The FIS is a rating system of relational abilities as would typically be applied in psychotherapy. In the first of five trials, no feedback was provided. Across the next three trials, participants watched the same video and were given specific feedback for improvement based on their FIS scores. A period of self-reflection followed each trial. In the fifth and final, a new video was introduced. Once more, participants responded and were rated, this time to determine whether any learning had generalized to the new scenario.

As illustrated in Figure 2, immediate feedback and self-reflection led to improvements in clinicians' ability to respond warmly, empathically, and collaboratively, and helped facilitate the application of these enhanced abilities in novel situations.
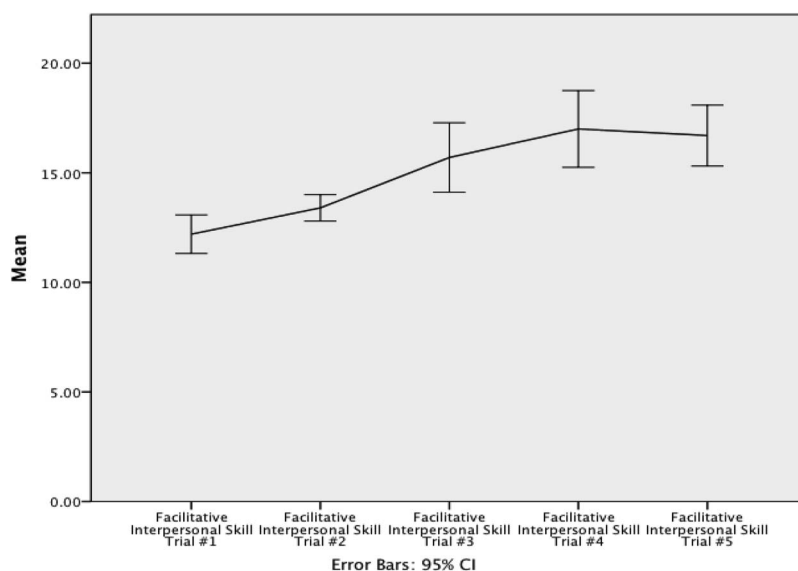

Figure 2.   Mean scores based on subscales of the Facilitative Interpersonal Skill ratings across the five trials in the difficult conversations in therapy. CI = confidence interval.

Additional studies employing the SRS have found that therapy dyads in which the initial score is low (indicating a poor alliance) but improves have better outcomes at the conclusion of therapy (Miller, Hubble, & Duncan, 2007). Similar to the results of Anderson et al. (2009), and indicative of deep domain-specific knowledge, some clinicians are consistently better than others at facilitating improvement in the alliance over the course of treatment. "In what amounts to a quantum difference between themselves and average therapists," wrote Miller et al. (2007), "they're much more likely to ask for and receive negative feedback about the quality of the work and their contribution to the alliance" (p. 33).

In the more recent of the two studies, Owen, Miller, Seidel, and Chow (in press) examined the relation between alliance and outcome in 2,990 youth who were treated by 98 therapists and attended at least eight sessions. The research is the largest to date on the role of the alliance in the treatment of adolescents, the sample being larger in number than all of the samples combined in the latest meta-analysis on the subject (McLeod, 2011). Clients completed the PCOMS measures at each visit: the Outcome Rating Scale at the beginning and the SRS at the end. Large changes in scores (from low to high) on the SRS across sessions accounted for 10% of the variance in outcomes compared with 1% for alliance scores that started either high or low but remained stable.

In addition to this research, evidence supporting the need for therapists to deliberately practice soliciting and using negative feedback comes from diverse clinical settings around the world where PCOMS is being implemented. For example, it is not uncommon for clinicians, following their initial exposure to the SRS, to report receiving only high scores. Experience has shown that providing individual coaching on how the scale is introduced, and the types of questions used to explore the resulting score, increases the quantity and quality of feedback received from clients (Bertolino & Miller, 2012). Several long-term studies are underway examining the relation between such coaching and deliberate practice and how it may lead to growth in individual therapist effectiveness (Miller et al., 2013).

Conclusion

Interest in and empirical support for ROM in clinical practice has grown significantly over the last two decades. The number of systems for tracking outcomes is increasing, as are measures targeted to particular populations and work sites. Few studies have compared the different ROM systems. The evidence that does exist shows no difference in effectiveness. Additionally, despite promising results early on, gains in outcomes associated with ROM have proven difficult to replicate in more recent studies.

Without attending to the individual therapist's crucial contribution to outcome, efforts to create, research, and refine new outcome measurement systems will prove insufficient. Instead of using ROM to merely monitor and measure, the true potential rests in using the feedback such systems provide to foster the professional development of each and every clinician. Here, ROM intersects with research from the field of expertise. When therapists are provided with a reliable measure of their baseline ability, access to ongoing, critical feedback, and opportunities to engage in a program deliberate practice, increased effectiveness is the likely result.

References

Amble, I., Gude, T., Stubdal, S., Andersen, B. J., & Wampold, B. E. (2015). The effect of implementing the Outcome Questionnaire−45.2 feedback system in Norway: A multisite randomized clinical trial in a naturalistic setting. *Psychotherapy Research, 6,* 669–677. http://dx.doi.org/10.1080/10503307.2014.928756

Anderson, T., Ogles, B. M., Patterson, C. L., Lambert, M. J., & Vermeersch, D. A. (2009). Therapist effects: Facilitative interpersonal skills as a predictor of therapist success. *Journal of Clinical Psychology, 65,* 755–768. http://dx.doi.org/10.1002/jclp.20583

Anderson, T., Patterson, C. L., & Weis, A. (2007). *Facilitative interpersonal skills performance analysis rating method. Unpublished coding manual.* Department of Psychology, Ohio University, Athens, Ohio.

Baldwin, S. A., Wampold, B. E., & Imel, Z. E. (2007). Untangling the alliance−outcome correlation: Exploring the relative importance of therapist and patient variability in the alliance. *Journal of Consulting and Clinical Psychology, 75,* 842–852. http://dx.doi.org/10.1037/0022-006X.75.6.842

Barlow, D. H. (2004). Psychological treatments. *American Psychologist, 59,* 869–878.

Bertolino, B., & Miller, S. D. (Eds.). (2012). *ICCE manuals on feedback-informed treatment* (Vols. 1–6). Chicago, IL: ICCE Press.

Bickman, L., Kelley, S. D., Breda, C., de Andrade, A. R., & Riemer, M. (2011). Effects of routine feedback to clinicians on mental health outcomes of youths: Results of a randomized trial. *Psychiatric Services, 62,* 1423–1429. http://dx.doi.org/10.1176/appi.ps.002052011

Bordin, E. S. (1979). The generalizability of the psychoanalytic concept of the working alliance. *Psychotherapy: Theory, Research & Practice, 16,* 252–260. http://dx.doi.org/10.1037/h0085885

Boswell, J. F., Kraus, D. R., Miller, S. D., & Lambert, M. J. (2015). Implementing routine outcome monitoring in clinical practice: Benefits, challenges, and solutions. *Psychotherapy Research, 25,* 6–19. http://dx.doi.org/10.1080/10503307.2013.817696

Brown, J. (2015). *Measurement feedback good outcomes.* http://www.psychoutcomes.org/DecisionSupportToolkit/ToolkitUsageAndOutcomes. Retrieved October 15, 2015.

Brownson, R. C., Kreuter, M. W., Arrington, B. A., & True, W. R. (2006). Translating scientific discoveries into public health action: How can schools of public health move us forward? *Public Health Reports, 121,* 97–103.

Carlier, I. V., Meuldijk, D., Van Vliet, I. M., Van Fenema, E., Van der Wee, N. J., & Zitman, F. G. (2012). Routine outcome monitoring and feedback on physical or mental health status: Evidence and theory. *Journal of Evaluation in Clinical Practice, 18,* 104–110. http://dx.doi.org/10.1111/j.1365-2753.2010.01543.x

Chalkidou, K. (July, 2009). *Comparative effectiveness review within the U. K.'s national institute of health and clinical excellence* (Issue Brief No. 1296). New York, NY: The Commonwealth Fund. Retrieved from http://www.commonwealthfund.org/~/media/Files/Publications/Issue%20Brief/2009/Jul/Chalkidou/1296_Chalkidou_UK_CER_issue_brief_717.pdf

Chambless, D. L., Baker, M. J., Baucom, D. H., Beutler, L. E., Calhoun, K. S., Crits-Christoph, P., . . . Woody, S. R. (1998). Update on empirically validated therapies II. *The Clinical Psychologist, 51,* 3–16.

Chambless, D. L., & Hollon, S. D. (1998). Defining empirically supported therapies. *Journal of Consulting and Clinical Psychology, 66,* 7–18. http://dx.doi.org/10.1037/0022-006X.66.1.7

Chow, D. (2014). *The study of supershrinks: Development and deliberate practices of highly effective psychotherapists* (Doctoral dissertation, Curtin University). Retrieved from http://espace.library.curtin.edu.au/R?func=dbin-jump-full&local_base=gen01-era02&object_id=200923

Chow, D., & Miller, S. D. (2012). *Retrospective analysis of psychotherapists' involvement in deliberate practice (RAPIDPractice).* Unpublished manuscript.

Chow, D. L., Lu, S., Owen, J., & Miller, S. D. (2015). *Difficult conversations in therapy (DCT): Can psychotherapists learn in an environment of immediate feedback with simulated client video vignettes?* Manuscript submitted for publication.

Chow, D. L., Miller, S. D., Seidel, J. A., Kane, R. T., Thornton, J. A., & Andrews, W. P. (2015). The role of deliberate practice in the development of highly effective psychotherapists. *Psychotherapy, 52,* 337–345. http://dx.doi.org/10.1037/pst0000015

Colvin, G. (2008). *Talent is overrated: What really separates world-class performers from everybody else.* New York, NY: Penguin.

Cummings, N. A. (1986). The dismantling of our health system: Strategies for the survival of psychological practice. *American Psychologist, 41,* 426–431. http://dx.doi.org/10.1037/0003-066X.41.4.426

Cummings, N., & O'Donahue, W. (2008). *Eleven blunders that are crippling psychotherapy.* New York, NY: Routledge.

de Jong, K., van Sluis, P., Nugter, M. A., Heiser, W. J., & Spinhoven, P. (2012). Understanding the differential impact of outcome monitoring: Therapist variables that moderate feedback effects in a randomized clinical trial. *Psychotherapy Research, 22,* 464–474. http://dx.doi.org/10.1080/10503307.2012.673023

Department of Health. (2007). *How to change clinical practice: Understand, identify, overcome barriers to change.* London, England: National Institute for Health and Clinical Excellence.

Devlin, N. J., & Appleby, J. (2010). *Getting the most out of PROMS: Putting health outcomes at the heart of NHS decision-making.* London, England: The King's Fund.

Drapeau, M. (2012). The value of tracking in psychotherapy. *Integrating Science and Practice, 2,* 2–6.

Duncan, B. L., Miller, S. D., Wampold, B. E., & Hubble, M. A. (Eds.). (2010). *The heart and soul of change: Delivering what works in therapy* (2nd ed.). Washington, DC: APA Press. http://dx.doi.org/10.1037/12075-000

Ericsson, K. A. (2006). The Influence of experience and deliberate practice on the development of superior expert performance. In K. A. Ericsson, N. Charness, P. J. Feltovich, & R. R. Hoffman (Eds.), *The Cambridge handbook of expertise and expert performance* (pp. 683–704). New York, NY: Cambridge University Press. http://dx.doi.org/10.1017/CBO9780511816796.038

Ericsson, K. A. (2009a). Enhancing the development of professional performance: Implications from the study of deliberate practice. In K. A. Ericsson (Ed.), *Development of professional expertise: Toward measurement of expert performance and design of optimal learning environments* (pp. 405–431). New York, NY: Cambridge University Press.

Ericsson, K. A. (Ed.). (2009b). *Development of professional expertise: Toward measurement of expert performance and design of optimal learning environments.* New York, NY: Cambridge University Press. http://dx.doi.org/10.1017/CBO9780511609817

Ericsson, K. A., Charness, N., Feltovich, P. J., & Hoffman, R. R. (Eds.). (2006). *The Cambridge handbook of expertise and expert performance.* New York, NY: Cambridge University Press. http://dx.doi.org/10.1017/CBO9780511816796

Ericsson, K. A., Krampe, R. T., & Tesch-Romer, C. (1993). The role of deliberate practice in the acquisition of expert performance. *Psychological Review, 100,* 363–406. http://dx.doi.org/10.1037/0033-295X.100.3.363

Ericsson, K. A., & Staszewski, J. (1989). Skilled memory and expertise: Mechanisms of exceptional performance. In D. Klahr & K. Kotovsky (Eds.), *Complex information processing: The impact of Herbert A. Simon* (pp. 265–268). Hillsdale, NJ: Erlbaum.

Fixsen, D., Blasé, K., Naoom, S., & Wallace, F. (2009). Core implementation components. *Research on Social Work Practice, 19,* 531–540. http://dx.doi.org/10.1177/1049731509335549

Garfield, S. (1997). The therapist as a neglected variable in psychotherapy research. *Clinical Psychology: Science and Practice, 4,* 40–43. http://dx.doi.org/10.1111/j.1468-2850.1997.tb00097.x

Geller, J., Norcross, J., & Orlinksy, D. (2005). *The psychotherapists own psychotherapy: Patient and clinician perspectives.* New York, NY: Oxford University Press.

Goldberg, S. B., Rousmaniere, T., Miller, S. D., Whipple, J., Nielsen, S. L., Hoyt, W. T., & Wampold, B. E. (in press). Do psychotherapists improve with time and experience? A longitudinal analysis of real world outcome data. *Journal of Consulting and Clinical Psychology.*

Goodman, J., McKay, J., & DePhilippis, D. (2013). Progress monitoring in mental health and addiction treatment: A means of improving care. *Professional Psychology: Research and Practice, 44,* 231–246. http://dx.doi.org/10.1037/a0032605

Horvath, A. O., Del Re, A. C., Flückiger, C., & Symonds, D. (2011). Alliance in individual psychotherapy. *Psychotherapy, 48,* 9–16. http://dx.doi.org/10.1037/a0022186

Howard, K. I., Moras, K., Brill, P. L., Martinovich, Z., & Lutz, W. (1996). Evaluation of psychotherapy: Efficacy, effectiveness, and patient progress. *American Psychologist, 51,* 1059–1064. http://dx.doi.org/10.1037/0003-066X.51.10.1059

Hubble, M. A., Duncan, B. L., & Miller, S. D. (Eds.). (1999). *The heart and soul of change: What works in therapy.* Washington, DC: American Psychological Association. http://dx.doi.org/10.1037/11132-000

Hubble, M. A., & Miller, S. D. (2001). In pursuit of folly. *Academy of Clinical Psychology Bulletin, 7,* 2–7.

Kiesler, D. (1966). Some myths of psychotherapy research and the search for a paradigm. *Psychological Bulletin, 65,* 110–136. http://dx.doi.org/10.1037/h0022911

Knaup, C., Koesters, M., Schoefer, D., Becker, T., & Puschner, B. (2009). Effect of feedback of treatment outcome in specialist mental healthcare: Meta-analysis. *The British Journal of Psychiatry, 195,* 15–22. http://dx.doi.org/10.1192/bjp.bp.108.053967

Lambert, M. J. (2010). Yes, it is time for clinicians to routinely monitor treatment outcome. In B. Duncan, S. Miller, B. Wampold, & M. Hubble (Eds.), *The heart and soul of change: Delivering what works in treatment* (pp. 239–266). Washington, DC: APA Press. http://dx.doi.org/10.1037/12075-008

Lambert, M. J. (2012). Helping clinicians to use and learn from research-based systems: The OQ-analyst. *Psychotherapy, 49,* 109–114. http://dx.doi.org/10.1037/a0027110

Lambert, M. J., & Shimokawa, K. (2011). Collecting client feedback. *Psychotherapy, 48,* 72–79. http://dx.doi.org/10.1037/a0022238

Lambert, M. J., Whipple, J. L., Hawkins, E. J., Vermeersch, D. A., Nielsen, S. L., & Smart, D. W. (2003). Is it time for clinicians to routinely track patient outcome? A meta-analysis. *Clinical Psychology: Science and Practice, 10,* 288–301. http://dx.doi.org/10.1093/clipsy.bpg025

Lehrer, J. (December 13, 2010). The truth wears off: Is there something wrong with the scientific method? *The New Yorker.* Retrieved from http://www.newyorker.com/magazine/2010/12/13/the-truth-wears-off

Luborsky, L., Crits-Christoph, P., McLellan, A. T., Woody, G., Piper, W., Liberman, B., . . . Pilkonis, P. (1986). Do therapists vary much in their success? Findings from four outcome studies. *American Journal of Orthopsychiatry, 56,* 501–512.

Malikiosi-Loizos, M. (2013). Personal therapy for future therapists: Reflections on a still debated issue. *European Journal of Counseling Psychology, 2,* 33–50. http://dx.doi.org/10.5964/ejcop.v2i1.4

Malouf, J. (2012). The need for empirically supported psychology training standards. *Psychotherapy in Australia, 18,* 28–32.

McLeod, B. D. (2011). Relation of the alliance with outcomes in youth psychotherapy: A meta-analysis. *Clinical Psychology Review, 31,* 603–616. http://dx.doi.org/10.1016/j.cpr.2011.02.001

Miller, S. (2012). Revolution in Swedish mental health practice. http://www.scottdmiller.com/feedback-informed-treatment-fit/revolution-in-

swedish-mental-health-practice-the-cognitive-behavioral-therapy-monopoly-gives-way/. Retrieved October 13, 2015.

Miller, S. D., & Duncan, B. L. (2000). *The Outcome and Session Rating Scales*. Chicago, IL: International Center for Clinical Excellence.

Miller, S. D., Duncan, B. L., & Hubble, M. A. (2004). Beyond integration: The triumph of outcome over process in clinical practice. *Psychotherapy in Australia, 10,* 2–19.

Miller, S. D., Duncan, B. L., Sorrell, R., & Brown, G. S. (2005). The partners for change outcome management system. *Journal of Clinical Psychology, 61,* 199–208. http://dx.doi.org/10.1002/jclp.20111

Miller, S. D., Hubble, M. A., Chow, D. L., & Seidel, J. A. (2013). The outcome of psychotherapy: Yesterday, today, and tomorrow. *Psychotherapy, 50,* 88–97. http://dx.doi.org/10.1037/a0031097

Miller, S. D., Hubble, M. A., & Duncan, B. L. (2007). Supershrinks. *Psychotherapy Networker, 31,* 26–35, 56.

Miller, S. D., Mee-Lee, D., & Plum, W. (2012). *Feedback Readiness Index and Fidelity Measure (FRIFM)*. Chicago: ICCE.

Miller, S., & Schuckard, E. (2014). *Psychometrics of the ORS and SRS. Results from RCT's and meta-analyses of routine outcome monitoring & feedback. The available evidence [Slides]*. Retrieved http://www.slideshare.net/scottdmiller/measures-and-feedback-miller-schuckard-2014

Najavits, L., & Strupp, H. (1994). Differences in the effectiveness of psychodynamic therapists: Process−outcome study. *Psychotherapy: Theory, Research & Practice, 31,* 114–123. http://dx.doi.org/10.1037/0033-3204.31.1.114

Nathan, P. E. (1997). Fiddling while psychology burns? *Register Report, 23,* 1–10.

Neimeyer, G., Taylor, J., & Wear, D. (2009). Continuing education in psychology: Outcomes, evaluation, and mandates. *Professional Psychology: Research and Practice, 40,* 617–624. http://dx.doi.org/10.1037/a0016655

Nissen-Lie, H. A., Monsen, J. T., & Rønnestad, M. H. (2010). Therapist predictors of early patient-rated working alliance: A multilevel approach. *Psychotherapy Research, 20,* 627–646. http://dx.doi.org/10.1080/10503307.2010.497633

Orlinsky, D., & Rønnestad, M. (2005). *How psychotherapists develop: A study of therapeutic work and professional growth*. Washington, DC: American Psychological Press.

Owen, J., Miller, S. D., Seidel, J. A., & Chow, D. L. (in press). The alliance in the treatment of military adolescents. *Journal of Consulting and Clinical Psychology*.

Pinsof, W. M., Zinbarg, R. E., Lebow, J. L., Knobloch-Fedders, L. M., Durbin, E., Chambers, A., . . . Friedman, G. (2009). Laying the foundation for progress research in family, couple, and individual therapy: The development and psychometric features of the initial systemic therapy inventory of change. *Psychotherapy Research, 19,* 143–156. http://dx.doi.org/10.1080/10503300802669973

Rønnestad, M., & Orlinsky, D. (2005). Therapeutic work and professional development: Main findings and practical implications of a long-term international study. *Psychotherapy Bulletin, 40,* 27–32.

Sanderson, W. C. (2003). Why empirically supported psychological treatments are important. *Behavior Modification, 27,* 290–299. http://dx.doi.org/10.1177/0145445503027003002

Stiles, W. B., Barkham, M., Twigg, E., Mellor-Clark, J., & Cooper, M. (2006). Effectiveness of cognitive−behavioural, person-centred and psychodynamic therapies as practised in UK National Health Service settings. *Psychological Medicine, 36,* 555–566. http://dx.doi.org/10.1017/S0033291706007136

Strupp, H. H., & Wallach, M. S. (1965). A further study of psychiatrists' responses in quasitherapy situations. *Behavioral Science, 10,* 113–134. http://dx.doi.org/10.1002/bs.3830100202

Substance Abuse and Mental Health Services Administration. (2012). *Partners for Change Outcome Management System (PCOMS): International Center for Clinical Excellence*. Retrieved from http://www.nrepp.samhsa.gov/ViewIntervention.aspx?id=249

Thomason, T. C. (2010). The trend toward evidence-based practice and the future of psychotherapy. *American Journal of Psychotherapy, 64,* 29–38.

van der Wees, P. (December 3, 2013). *Patient-reported outcomes in the Netherlands: Routine use in clinical practice and performance measurement [Slides]*. Retrieved from http://www.kingsfund.org.uk/sites/files/kf/media/phil-van-der-wees-proms-netherlands-dec13.pdf

van Oenen, F. J., Shipper, S., Van, R., Schoevers, R., Visch, I., Peen, J., & Dekker, J. (in press). Efficacy of immediate patient feedback in emergency psychiatry: A randomized controlled trial in a crisis intervention & brief therapy team. *BMC Psychiatry, 13,* 331.

Walfish, S., McAlister, B., O'Donnell, P., & Lambert, M. J. (2012). An investigation of self-assessment bias in mental health providers. *Psychological Reports, 110,* 639–644. http://dx.doi.org/10.2466/02.07.17.PR0.110.2.639-644

Wampold, B. E., & Brown, G. S. (2005). Estimating variability in outcomes attributable to therapists: A naturalistic study of outcomes in managed care. *Journal of Consulting and Clinical Psychology, 73,* 914–923. http://dx.doi.org/10.1037/0022-006X.73.5.914

Wampold, B. E., & Imel, Z. E. (2015). *The great psychotherapy debate: The evidence for what makes psychotherapy work*. New York, NY: Routledge.

Watkins, D., Jr. (2011). Does psychotherapy supervision contribute to patient outcomes? Considering thirty years of research. *The Clinical Supervisor, 30,* 235–256. http://dx.doi.org/10.1080/07325223.2011.619417

Wolpert, M. (2014). Uses and abuses of patient reported outcome measures (PROMs): Potential iatrogenic impact of PROMs implementation and how it can be mitigated. *Administration and Policy in Mental Health and Mental Health Services Research, 41,* 141–145. http://dx.doi.org/10.1007/s10488-013-0509-1

Yong, E. (2012). Replication studies: Bad copy. *Nature, 485,* 298–300. http://dx.doi.org/10.1038/485298a

Young, A. S., Niv, N., Chinman, M., Dixon, L., Eisen, S. V., Fischer, E. P., . . . Owen, R. R. (2011). Routine outcomes monitoring to support improving care for schizophrenia: Report from the VA Mental Health QUERI. *Community Mental Health Journal, 47,* 123–135. http://dx.doi.org/10.1007/s10597-010-9328-y