Collecting Client Feedback

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While highly effective, psychotherapy outcome studies suggest 5–14% of clients worsen while in treatment and that therapists are unable to identify a substantial portion of such cases. Methods to systematically collect feedback from psychotherapy clients are discussed and two systems for monitoring treatment response, feeding back this information, and assisting in problem-solving with such cases are described. Within these systems, obtaining client ratings of their relationship appear to be highly important. We summarize meta-analyses of the effects of these feedback systems (The combined weighted random effect size for the Partners for Change Outcome Management System was $r = .23$, 95% CI [.15, .31], $p < .001$, $k = 3$, $n = 558$; the effect size for the Feedback condition of the Outcome Questionnaire (OQ) system among not-on-track patients was $r = .25$, 95% CI [.15, .34], $p < .001$, $k = 4$, $n = 454$; the effect size for the Patient/Therapist Feedback condition of the OQ system among not-on-track patients was $r = .25$, 95% CI [.15, .34], $p < .001$, $k = 3$, $n = 495$; the effect size for the Clinical Support Tools feedback condition among not-on-track patients was $r = .33$, 95% CI [.25, .40], $p < .001$, $k = 3$, $n = 535$). The number of psychotherapy patients who deteriorate can be cut in half by use of these systems. We conclude with a series of practice implications, including that clinicians seriously consider making formal methods of collecting client feedback a routine part of their daily practice.

Keywords: client feedback, Outcome Questionnaire-45, Partners for Change Outcome Management System, therapy relationship, meta-analysis

Reviews of the psychotherapy research, both qualitative and quantitative, have shown that about 75% of those who enter treatment show benefit (Lambert & Ogles, 2004). An often ignored but critical consideration in psychotherapy is the degree to which they have negative rather than positive consequences for clients. An estimated 5%–10% of adult clients participating in clinical trials leave treatment worse off than they began treatment (Lambert & Ogles, 2004). In routine care the situation is more problematic. Outcomes for more than 6,000 patients treated in routine practice settings suggest that the clients did not fare as well as those in clinical trials, with only about one third showing improvement or recovery (Hansen, Lambert, & Forman, 2002). The situation for child psychotherapy in routine care is even more sobering. The small body of outcome studies in community-based, usual care settings has yielded a mean effect size near zero (e.g., Weisz, 2004), yet millions of youth are served each year in these systems of care. In a comparison of children being treated in community mental health ($N = 936$) or through managed care ($N = 3075$) estimates of deterioration were 24% and 14%, respectively (Warren, Nelson, Mondragon, Baldwin, & Burlingame, 2010).

There is no doubt that all of the deterioration that occurs during the time a patient is in treatment cannot be causally linked to therapist activities. Certainly, a portion of patients are on a negative trajectory at the time they enter treatment and the deteriorating course cannot be stopped. A portion of patients are prevented from taking their own lives as a result of effective practices, even if they do not show overall progress. Just as positive psychotherapy outcomes depend largely on patient characteristics, so do the negative changes that occur in patients who are undergoing psychological treatments.

Even so, positive as well as negative patient change can be affected by therapist actions and inactions. Research reviews find that the major contribution of the therapist to negative change is usually found in the nature of the therapeutic relationship, with rejections of either a subtle or manifest nature being the root cause (e.g., Lambert, Bergin, & Collins, 1977; Safran, Muran, Samstang, & Winston, 2005).

A recent trend in clinical practice involves regularly monitoring and tracking client treatment response with standardized scales throughout the course of treatment and then providing clinicians with this information. The basic rationale behind collecting client feedback is based on common sense. If we get information about what seems to be working, and more importantly what is not working, our responsiveness to clients will improve. In many situations, performance and feedback are intertwined and obvious; in others, a certain degree of blinding occurs, such that the association is not so temporally connected and the effects of performance are harder to discern (such as in psychotherapy), making it

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much more difficult for the therapist to learn and improve. In obvious as well as more subtle situations, providing feedback to improve performance has been studied quite extensively in a variety of areas and confirms our common sense expectations that it is helpful.

In this article, we define feedback in psychotherapy and summarize the two widely used feedback systems used specifically in psychotherapy. We then present an original meta-analysis and a summary of recently published meta- and mega-analyses on the effects of these feedback systems on treatment outcomes. We then turn our attention to implications for clinical practice.

Previous Reviews of Feedback

In a meta-analysis of the effects of feedback on human performance published since 1930s, Kluger and DeNisi (1996) found a small to medium effect size ($d = .41$) for interventions utilizing feedback, suggesting about two thirds of individuals receiving feedback performed better than those who received no feedback. Unfortunately most of the studies examined in this meta-analysis were analogue situations involving motor performance, puzzle solutions, memory tasks, and the like, rather than clinical practice. A more recent meta-analysis that focused more directly on mental health status feedback in psychotherapy (Knaup, Koesters, Becker, & Puschner, 2009) based on 12 studies also found a statistically significant, albeit small effect ($d = .10$), for feedback but did not limit studies to those that provided progress feedback.

In a more comprehensive meta-analysis, Sapyta (quoted in Sapyta, Riemer, & Bickman, 2005) examined 30 randomized clinical trials conducted in community settings that assessed the effectiveness of client *health status* feedback to health professionals. The nature of feedback interventions and methods of their delivery varied from giving general practice physicians depression or anxiety screening information about their patients to repeatedly and routinely providing clinicians with their patients' mental health status feedback. The typical client in the feedback group was better off than 58% of the control group ($d = .21$, a small effect).

The Sapyta et al. (2005) review indicated that the effectiveness of feedback is likely to vary as a function of the *degree of discrepancy* between therapists' views of progress and measured progress, and that the greater the discrepancy the more likely feedback will be helpful. A key element of effective feedback is bringing into the recipient's awareness the discrepancy between what is thought and what is reality, thereby prompting corrective action. In general, this research supports the conclusion that feedback in clinical practice improves patient outcome.

This finding is consistent with feedback theories that suggest feedback will only change behavior when the information provided indicates the *individual is not meeting up to an established standard* (e.g., Riemer, & Bickman, 2004). Riemer and Bickman (Riemer & Bickman, 2004; Riemer, Rosof-Williams, & Bickman, 2005) have developed a Contextual Feedback Intervention Theory to explain how feedback is interpreted and made useful. 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, cog-*

nitively simple (such as graphic in nature), *unambiguous,* and provides clinicians with *concrete suggestions of how to improve*.

If clinicians do not consider feedback as credible, valid, informative, or useful, they are more likely to dismiss it whenever it does not fit their own preferences. As we know from research on cognitive dissonance, people can change attitudes rather than persevering toward goals, thus regarding the goal as less important, or see a client as too resistant or injured to benefit from treatment (e.g., disown personal responsibility for meeting the goal of positive functioning; Riemer et al., 2005). As feedback research suggests, the value of monitoring and systematic feedback through psychological assessments hinges on the degree to which the information provided goes beyond what a clinician can observe and understand about patient progress without such information. It is important for the information to add something to the psychotherapist's view of patient well being and future actions.

Unfortunately, clinicians may have an overly optimistic view of their patients' progress (Walfish, McAlister, O'Donnell, & Lambert, 2010). Clinicians overlook negative changes and 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. One study, for example, 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 regards to the likelihood of treatment failure and if the patient was worse off at the current session in relation to their intake level of functioning), they rated only 3 of 550 clients as predicted failures and seriously underestimated worse functioning for a significant portion of clients (Hannan et al., 2005). A retrospective review of case notes of clients who had deteriorated during treatment found infrequent mention of worsening even when its degree was dramatic (Hatfield, McCullough, Plucinski, & Krieger, 2010).

Such results are not surprising, given psychotherapist optimism, the complexity of persons, and a treatment context that calls for considerable commitment and determination on the part of the therapist, who actually 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 outside feedback might have the greatest chance of impact. 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. Such feedback helps the client communicate and helps the therapist to become aware of the possible need to adjust treatment, alter or addresses problematic aspects of the treatment as appropriate (e.g., problems in the therapeutic relationship or in the implementation of the goals of the treatment).

Definitions and Feedback Measures

Clients can complete a brief measure of their psychological function by using standardized rating scales and then this information can be delivered to psychotherapists in real time. In addition to alerting therapists to deviations from expected treatment response, the information gathered from patients provides novel information to therapists. Collecting this information from the client on a session-by-session basis provides the clinician with a systematic way of monitoring life functioning from the client's

point of view. A brief formal assessment can provide a summary of life functioning that is not otherwise available to the therapist, unless the therapist spends time within the treatment hour to systematically inquire about all the areas of functioning covered by the self-report scale, an activity that detracts from service delivery.

Two systems have gone beyond measuring progress and outcome, investing considerable energy in collecting and feeding back client ratings of their therapist in the hopes of maximizing final treatment outcome.

Partners for Change Outcome Management System

The Partners for Change Outcome Management System (PCOMS; Miller, Duncan, Sorrell, & Brown, 2005) is a psychotherapy assurance system that employs two brief scales (four items each). The Outcome Rating Scale (ORS; Miller, Duncan, Brown, Sparks, & Claud, 2003) focuses on mental health functioning, modeled after the domains of outcome measured by subscales of the Outcome Questionnaire-45 (OQ-45, Lambert, Morton, et al., 2004). The Session Rating Scale (SRS; Duncan & Miller, 2008) is aimed at assessing the therapeutic alliance.

Because of its brevity, this system is clinician friendly and insures discussion of assessment results by the client and therapist in session because rating of mental health status and therapeutic alliance are normally collected in the presence of the therapist. A typical feedback can be viewed in our book chapter (Lambert & Shimokawa, 2011) or on the PCOMS website.

OQ Psychotherapy Quality Management System

Lambert and colleagues developed the OQ system, which emphasizes the measurement of mental health functioning and, like the PCOMS, includes a measure of the therapist-client relationship. In distinction to the PCOMS, the OQ system goes beyond feedback on the therapeutic alliance and includes additional assessments to aid problem solving. In addition, the relationship and problem-solving approach is only employed with specific patients who are experiencing a negative response to psychotherapy rather than with all persons who enter treatment.

The Outcome Questionnaire-45 (Lambert et al., 2004) is a 45-item, self-report measure designed for repeated administration throughout the course of treatment and at termination with adult patients. The OQ was conceptualized and designed to assess three domains of client functioning: symptoms of psychological disturbance (particularly anxiety and depression), interpersonal problems, and social role functioning. Consistent with this conceptualization of outcome, the OQ-45 provides a Total Score, based on all 45 items, as well as Symptom Distress, Interpersonal Relations, and Social Role subscale scores. Each of these subscales contains some items related to the positive quality of life of the individual. Higher scores on the OQ-45 are indicative of greater levels of psychological disturbance.

Research has indicated that the OQ-45 is a psychometrically sound instrument, with strong internal consistency, adequate test–retest reliability and strong concurrent validity (Lambert et al., 2004). Furthermore, the items that make up the OQ-45 have been shown to be sensitive to changes in multiple client populations over short periods of time while remaining relatively stable in untreated individuals (Vermeersch et al., 2004). Evidence from

factor analytic studies suggests it measures an overall psychological distress factor as well as factors consistent with the three subscales (e.g., de Jong et al., 2007). It provides clinicians with a *mental health vital sign*. Similar measures have been developed for use with children (www.oqmeasures.com).

A core element of these feedback systems is the prediction of treatment failure. In order to improve outcomes of clients who are responding poorly to treatment, such clients must be identified before termination, and ideally, as early as possible in the course of treatment. The OQ system plots a statistically generated expected recovery curve for differing levels of pretreatment distress and uses this as a basis for identifying clients who are not making expected treatment gains and are at risk of having a poor outcome (not-on-track cases). The accuracy of this signal-alarm system has been evaluated in a number of empirical investigations (e.g., Ellsworth, Lambert, & Johnson, 2006; Lambert, Whipple, Bishop et al., 2002). A sample feedback report for the OQ-45 is available in Lambert and Shimokawa (2011).

In conjunction with identifying *Alarm* status, an instrument *Assessment for Signal Cases* (ASC; Lambert, Bailey, Kimball, Shimokawa, Harmon, & Slade, 2007) was developed to assist clinicians to problem-solve with the clients who backslide during treatment (i.e., when a therapist receives a warning message predicting deterioration). This 40-item measure does not produce a total score, but rather provides subscale score feedback and *item* feedback for therapists to consider in problem-solving. The first 11-items of the ASC require the client to reflect on the therapeutic relationship and report his or her perceptions. The ASC is central to the Clinical Support Tool (CST; Lambert et al., 2007; Lambert, Whipple et al., 2004) which is composed of a problem-solving decision tree designed to systematically direct therapists' attention to subscales and items: the therapeutic alliance, social support, readiness to change, diagnostic formulation, life events and need for medication referral.

Meta-Analytic Review

Inclusion Criteria and Search Strategy

In the following sections, we present a meta-analysis of the outcomes of the two real-time feedback-based psychotherapy systems that have had their effects evaluated. Although studies utilizing the PCOMS provided some client-reported feedback to clinicians, several critical differences also existed. The OQ system was designed to enhance the outcome of clients predicted to experience treatment failure at termination. Accordingly, the studies examining the effects of the OQ systems conducted separate analyses for at-risk clients and on track clients. In contrast, while the PCOMS incorporates a method of identifying non progressing cases as at risk clients, the studies employing the PCOMS, except for the study by Anker, Duncan, & Sparks (2009), did not investigate or report differential effects of the PCOMS feedback system on client outcome based on "on-track" versus "not-on-track" classification of client progress. Due to this difference in methodology, we present separate summaries of these two quality assurance systems. Only three well-designed studies based on the PCOMS have been reported in two articles to date. To obtain overall estimates of the effects of the PCOMS, we meta-analytically aggregated the published results of those studies. Because a recent

meta-analysis of the OQ system has already been published (Shimokawa, Lambert, & Smart, 2010), we present a summary of the published meta-analysis and effect sizes transformed into correlation *r* unit to be consistent with other articles in this special edition of *Psychotherapy*. Addition of a meta-analysis of the PCOMS system contributes significantly to the literature on feedback-based quality assurance systems in psychotherapy.

Dependent Measures and Computation of Effect Sizes

Because different effect size units were employed in original studies, we applied uniform units of effect size. For each comparison of mean posttreatment outcome scores between an experimental condition and a treatment-as-usual (TAU) control, we first calculated standardized difference in means *d*, using pooled standard deviations (notated as *g* in Hedges, 1981) and transformed *d* effect sizes into correlation *r*, utilizing a commonly used formula of $r = d/\text{sqr}\,[d^2 + 4]$ (e.g., Wolf, 1986). When comparing results from controlled trials, the results were aggregated meta-analytically to obtain weighted effect sizes, employing random effects model (Hedges & Vevea, 1998). When comparing the feedback treatments in relation to an archival control group, effect sizes were obtained from a combined dataset pooled across studies, employing a mega-analytic approach to obtain *d* statistic (Shimokawa et al., 2010), which we then converted to *r*.

A key element in psychotherapy research is operationalizing the concepts of positive and negative outcome for the individual client. Jacobson and Truax (1991) offered a methodology by which client changes on an outcome measure can be classified in the following categories: recovered, reliably improved, no change, deteriorated. There are two necessary pieces of information to make these client outcome classifications: A Reliable Change Index (RCI) and a normal functioning cutoff score. Clinical and normative data were analyzed by Lambert and colleagues (2004) to establish a RCI and a cutoff score for the OQ-45. Based on the same methods developed by Jacobson and Truax (1991); Miller and Duncan (2004) reported the RCI and clinical cutoff scores for the ORS. Clinical significance classification of the ORS has not been cross validated with that of OQ-45 or socially validated with other measures, thus empirical evidence on the meaning of clinical significance classification of the ORS is limited at this time.

To contrast the rates and odds of client deterioration and significant improvement between feedback groups and TAU, we calculated combined odds ratios (OR) as a measure of effect size. Specifically, when examining the odds of deterioration, we dichotomized clients into either the deterioration group or nondeterioration group and calculated the odds ratio of deterioration for a given comparison. Similarly, when comparing the odds of improvement in two groups, the odds ratio was calculated based on the odds of improvement versus those of nonimprovement.

Results Based on PCOMS

Three methodologically sound psychotherapy outcome studies investigating the effects of the PCOMS have been published in English to date (Reese, Norsworthy, & Rowlands, 2009; Anker et al., 2009). Reese and colleagues (2009) conducted two studies comparing the treatment outcome of clients receiving the PCOMS feedback intervention and those receiving no feedback. We sum-

marize here a narrative of the studies in order for the reader to have a concrete idea how such studies proceed. Reese et al.'s first study, conducted at a university counseling center, was initially comprised of 131 clients of which 74 (56%) were included in the final analyses. Clients were randomly assigned to either a PCOMS-based feedback condition or no-feedback condition (TAU) to investigate the effects of the feedback intervention on client outcome. The authors reported the effect size of *d* = .54 when the feedback group and TAU were compared on the basis of pretreatment to posttreatment changes on the ORS total scale scores (using typical methods as applied to differences in means at posttest the effect size was reduced to Hedges's *g* of .25). They further reported that 80% of clients in the feedback group experienced reliable change, while 54% of clients in TAU achieved the same criteria. Only 4% of those in the feedback group met the criteria for deterioration, while 13% of their TAU counterparts met the same.

Their second study, conducted at a graduate training clinic, was initially comprised of 96 clients of which 74 (77%) were included in the final analyses. In this study, 17 trainee therapists in graduate practicum, rather than clients, were randomly assigned to either a PCOMS-based feedback condition or TAU. The authors (Reese et al., 2009) reported an effect size of *d* = .49 when comparing the feedback group and TAU on the basis of the pre-post change in the ORS scores (the standard mean difference posttest comparison produced a Hedges *g* of .58). They further reported that 16 clients (36%) in the feedback group and 11 clients (38%) in TAU were identified as "not progressing," therefore at risk of poor outcome. In terms of clinical significance, 67% of those in the feedback condition achieved reliable change status, while 4% deteriorated. This was contrasted to 41% of clients in TAU achieving reliable change, with 3% (*n* = 1) deteriorating.

Anker et al. (2009) conducted a randomized controlled trial investigating the effects of PCOMS-based feedback intervention on clients in couple therapy at a community family counseling clinic. Of the 906 Norwegian individuals who initially sought couple therapy, 410 individuals (2005 couples) met the inclusion criteria (*n* = 2006 in experimental and *n* = 204 in TAU). The authors of the study reported an effect size of *d* = .50 when comparing the posttreatment ORS scores. The authors reported posttreatment outcome classification (based on the notion of clinical significance) of couples at posttreatment. The reported *n* and percentage of outcome classification were based on couples where *both* individuals in the couple met the same outcome classification. Based on these inclusion criteria, 66% of couples in the feedback group and 50% of couples in the TAU were included in the analyses. The outcome classifications at the individual level were not reported. Of those included in the analysis, the authors reported 51% of couples in the feedback condition achieving either clinically significant change or reliable change, while 2% deteriorated. In contrast, 23% of couples in the TAU group reached either clinically significant change or reliable change and 4% experienced deterioration. Anker and colleagues (2009) reported the percentages of couples identified as being at risk at the third session. Among those in the feedback condition, 54% of couples were identified as being at risk, while 75% of couples in TAU were classified as the same. These results indicate that 54% of couples in the feedback group and 75% of couples in TAU were below the 50th percentile mark of expected progress for client progress based on individual response. With regards to marital adjustment, feed-

back was found to be somewhat helpful. The posttreatment effect size between groups was $d = .29$ ($r = .14$).

Findings from the three studies were aggregated to provide estimated weighted mean effect sizes based on a random effect model. The results from the Q test of homogeneity did not indicate heterogeneity of effect sizes among studies, $Q(2) = 1.23$, $p = .54$. As shown in Table 1, when mean posttreatment ORS scores of the feedback group was compared to those of TAU, the combined effect size was $r = .23$ ($g = 0.48$), 95% CI [.15, .31], $p < .001$. These results suggest that the average client in the feedback group was better off than approximately 68% of those in TAU. It should be noted that the type of effect size we report here is different from the effect sizes reported in the original article by Reese and colleagues (2009), in which the effect sizes were based on the group differences in pretreatment to posttreatment change.

When the odds of reliable improvement over the odds of not achieving reliable improvement were compared across groups, the results indicated that those in the feedback group had 3.5 times higher odds of experiencing reliable change, while having less than half the odds of experiencing deterioration. The summary of these effect sizes in comparison to those found in the OQ system are presented in Table 1. A couple of aspects of the above studies based on the PCOMS system are worth noting in terms of comparative conclusions and implications for clinical practice. First, the rates of "at risk" cases reported in the three PCOMS studies are considerably higher (36% to 75%) than studies based on the OQ system (11% to 33%; Shimokawa et al., 2010). Although Anker et al. (2009) reported a higher percentage of at risk couples responding favorably to treatment than those in TAU (29% vs. 9%), the meaning and clinical implication of this classification seems unclear because the majority of cases were identified as being at risk. Second, the authors reported that, among those who responded to 6-month follow-up (149 couples out of 205 couples), the feedback group had a lower rate of separation or divorce (18.4%) than TAU (34.2%), which indicates the couples in TAU had approximately 1.9 times higher probability of separation or divorce (relative risk = 1.86) than those in the feedback condition. These same

outcomes, however, indicate that, despite the low deterioration rate at posttreatment (2% in feedback and 4% in TAU), a substantial number of couples experienced separation or divorce relatively shortly after terminating treatment. The occurrence of separation or divorce alone should not be used to assume the quality of treatment outcome (some couples sought treatment to "[end] their relationship in the best possible way" or to "seek clarification regarding whether the relationship should continue"; Anker et al., 2009, p. 695).

Results Based on the OQ System

In the most recent meta-analytic review of the OQ system, Shimokawa and colleagues (2010) reanalyzed the combined data-set ($N = 6,151$) from all six OQ feedback studies published to date (Harmon et al., 2007; Hawkins, Lambert, Vermeersch, Slade, & Tuttle, 2004; Lambert et al., 2001; Lambert et al., 2002; Slade, Lambert, Harmon, Smart, & Bailey, 2008; Whipple et al., 2003). Each of the studies evaluated the effects of providing feedback about each client's improvement through the use of progress graphs and warnings about clients who were not demonstrating expected treatment responses (not-on-track cases). The six studies shared many design and methodological features: (a) consecutive cases seen in routine care regardless of client diagnosis or comorbid conditions (rather than being disorder specific); (b) random assignment of clients to experimental conditions (various feedback interventions) and TAU conditions (no feedback) was made in four of the six studies, while reasonable measures were taken in two studies to ensure equivalence in experimental and control conditions at pretreatment; (c) psychotherapists provided a variety of theoretically guided treatments, with most adhering to cognitive–behavioral and eclectic orientations and fewer representing psychodynamic and experiential orientations; (d) a variety of therapist experience — postgraduate therapists and graduate students each accounted for about 50% of clients seen; (e) therapists saw both experimental (feedback) and no feedback cases, thus limiting the likelihood that outcome differences between conditions could be

Table 1

Effect Sizes of Client Feedback in Comparison to TAU

			r[95% CI]		
Feedback system	*k*	Exp *n*/TAU *n*	Post-treatment score	Reliable improvement	Deterioration[a]
OQ System[b]					
NOT Fb	4	136/318	0.25*** [.15, .34]	0.23*** [.13, .32]	−0.21* [−.35, −.05]
NOT P/T Fb	3	177/318	0.25*** [.17, .33]	0.27*** [.17, .36]	−0.10 [−.23, .03]
CST Fb	3	217/318	0.33*** [.25, .40]	0.34*** [.26, .42]	−0.37*** [−.50, .22]
PCOMS[c]					
Feedback	3	299/259	0.23*** [.15, .31]	0.32*** [.20, .44]	−0.22 [−.47, .07]

Note. k = number of studies; Exp = experimental group; TAU = treatment as usual group; r = effect size expressed in correlation r; CI = confidence interval; NOT Fb = not-on-track clients whose therapists received client progress feedback; NOT P/T Fb = not-on-track clients where both clients and therapists received client progress feedback. CST Fb = not-on-track clients whose therapists received client progress feedback and clinical support tools feedback.
[a] Negative correlations indicate greater effect in reducing treatment failure at termination. [b] Effect sizes (Hedges's g and OR) of the OQ system-based feedback interventions were meta- and mega-analytically calculated and reported in Shimokawa, et al (2010). Effect sizes from the NOT Fb group represents weighted effect sizes based on a random effects model. NOT P/T Fb and CST Fb effect sizes were mega-analytically obtained from an aggregated data set pooled across studies. [c] Effect sizes of the PCOMS feedback effects represents weighted effect sizes based on a random effects model.
* $p < .05$. ** $p < .01$. *** $p < .001$.

due to therapist effects; (f) the outcome measure as well as the methodology rules/standards for identifying signal-alarm clients (failing cases) remained constant; (g) the length of therapy (dosage) was determined by client and therapist rather than by research design or arbitrary insurance limits.

The meta-analysis (Shimokawa et al., 2010) involved both intent-to-treat (ITT) and efficacy analyses on the effects of various feedback interventions in relation to TAU. Because the PCOMS studies resembled the efficacy analyses, we transformed the effect sizes into the r unit and summarize here the results of the efficacy analyses. In these analyses, only those clients who received and completed the treatments were compared to treatment-as-usual (TAU). The summary of effect sizes are presented in Table 1.

Effects of OQ Progress Feedback (Fb) on Not-on-Track Clients

Given the small number of studies included in the analysis, and considering the advantage of having access to the original data, Shimokawa et al. (2010), instead of employing the Q statistic and I^2 index, conducted analyses of covariance (ANCOVAs) to test for heterogeneity of effects across studies, using study as the factor, posttreatment OQ score as the dependent variable, and pretreatment OQ total score as a covariate. The results did not reach statistical significance at .05 level for the group of NOT clients whose therapists received feedback (Fb), $F(3, 131) = 1.94$, $p = .126$, but reached statistical significance for the group of at risk clients whose therapist did not receive feedback (TAU), $F(3, 313) = 0.41$, $p = .041$. When the not-on-track Fb group was compared to the not-on-track TAU group, the effect size for posttreatment OQ score difference averaged $r = .25$ ($g = .53$), 95% CI [.15, .34], $p < .001$. These results suggest that the average at-risk client whose therapist received feedback was better off than approximately 70% of at-risk clients in the no-feedback condition (routine care). In terms of the clinical significance at termination, 9% of those receiving feedback deteriorated while 38% achieved clinically significant improvement. In contrast, among at-risk clients whose therapists did not receive feedback, 20% deteriorated and 22% clinically significantly improved. When the odds of deterioration and clinically significant improvement were compared, results indicated those in the feedback group had less than half the odds of experiencing deterioration while having approximately 2.6 times higher odds of experiencing reliable improvement. To be consistent in effect size unit, the odds ratios were converted to correlation r and presented in Table 1.

Effects of Patient/Therapist Feedback (P/T Fb) on Not-on-Track Clients

The results of the ANCOVA, testing for the heterogeneity of effects among the not-on-track P/T Fb group did not indicate the presence of heterogeneity among individual studies, $F(2, 218) = 1.58$, $p = .208$. The effect size of posttreatment OQ score, based on a mega-analysis on a pooled datasets of the P/T Fb group and the TAU, was $r = .25$ ($g = .55$), [.17, .33], $p < .001$—effects very similar to that of the therapist only feedback group (Fb). The rates of deterioration and clinically significant improvement when both participants received feedback were 15% and 45%, respectively. The results suggest that clients who received feedback along with

their therapist had approximately 0.7 times the odds of deterioration, while having approximately three times higher odds of achieving clinically significant improvement. These results suggest that, although the average client who received feedback along with their therapist was better off than about 71% of clients in TAU, there may have been moderators that facilitated outcome enhancement in some clients while failing to prevent, or possibly contributing to worsening in others.

Effects of Clinical Support Tools Feedback on Not-on-Track Clients

The results of ANCOVA testing for heterogeneity of effects did not support the presence of heterogeneity of effects among at risk clients who received the Clinical Support Tools feedback (CST Fb) intervention, $F(2, 213) = 0.48$, $p = .617$. When the outcome of clients whose therapist received the CST Fb Intervention were compared to the TAU clients, the effect size for the difference in mean posttreatment OQ scores was $r = .33$ ($g = 0.70$), 95% CI [.25, .40], $p < .001$. These results indicate that the average client in the CST Fb group, who stay in treatment to experience the benefit of this intervention, are better off than 76% of clients in treatment-as-usual. The rates of deterioration and clinically significant improvement among those receiving CSTs were 6% and 53%, respectively. The results suggest that clients whose therapists used CSTs have less than a fourth the odds of deterioration, while having approximately 3.9 times higher odds of achieving clinically significant improvement.

Moderators and Mediators

The small number of published outcome studies using the PCOMS ($k = 3$) and the OQ ($k = 6$) included in the meta-analysis precluded formal tests of moderators and mediators. As more studies are published, we anticipate the ability to do so in the future.

Limitations of the Research

Major limitations of feedback research are the small number of studies evaluating effectiveness, the limited number of researchers responsible for the findings reviewed here, and the sole reliance on self-report measures. It is likely that future research will be done across a wider range of treatment settings and patient populations, thus illuminating the limits of these procedures and clarifying the factors that maximize patient gains. The research reviewed here utilized two self-report measures and just two different methods of providing feedback and therefore a limited view of the impact of therapy and the effects of feedback.

Therapeutic Practices

◆ Use real-time client feedback to monitor patients' response to psychotherapy and satisfaction with the therapy relationship. Such feedback probably improves psychotherapy outcomes and certainly does so for clients at risk for deterioration or dropout.

◆ Employ real-time client feedback to compensate for therapist's limited ability to accurately detect client worsening in psychotherapy. Despite considerable evidence that psychotherapists are not alert to treatment failure (e.g., Hannan et al., 2005; Hatfield

et al., 2010), and strong evidence that clinical judgments are usually inferior to actuarial methods, therapists' confidence in their clinical judgment stands as a barrier to implementation of monitoring and feedback systems.

◆ Beware of those situations in which clients feel it may be in their interest to understate (or overstate) their problems and produce inaccurate ratings on feedback systems. The systems are predicated on accurate self-reporting of levels of disturbance and corresponding changes.

◆ Supplement with clinical support tools. As suggested by the general literature on feedback and the evidence presented here, problem-solving and decision-enhancement tools prove helpful to clinicians and, most importantly, clients whose treatment response is in doubt.

◆ As yet, we are uncertain of the necessity of sharing progress feedback directly with clients. In the PCOMS system, progress and relationship information is gathered within session and discussed routinely. Since both are a part of the session either may account for the therapeutic effects that have occurred. In contrast, the OQ-system has examined therapist feedback and direct client feedback separately with inconclusive results about additive effectiveness of direct client feedback.

◆ Consider using electronic versions of feedback systems that expedite and ease practical difficulties. Fortunately, the brevity of the PCOMs and the recent software for the OQ can provide instantaneous feedback to clinicians. The electronic PCOMs takes only a few minutes in sessions, while if the client takes the OQ immediately prior to the scheduled psychotherapy session, electronic feedback is available to the therapist prior to beginning that session.

Clinical Example

A male therapist at a large university counseling center was treating a female college freshmen client in individual psychotherapy. The client's initial presenting concern was anxiety and worries over her poor academic performance for which she received academic probation. Considering that the client's father was a university faculty and the client's lack of knowledge about university education, the therapist initially noted a possibly poor relationship between the client and her father. In working with the client's anxiety and worries, the therapist noted the client's naiveté in interpersonal relationships, including her rapid progression in her romantic relationship with an international student with whom she was engaged. As the work continued, the therapist noted his client's overdependence on him for emotional support and kinds of support for which he felt the client's mother should be providing, including decisions about her upcoming wedding plans.

As the client's wedding neared, the client's outcome worsened and was identified as a signal warning case on the OQ system. At that point the "red" signal and the following feedback message, along with the client's progress graph were provided to the therapist (For the comprehensive scripts of feedback system and messages, see the original studies; Lambert et al., 2001; Lambert et al., 2002; Whipple et al., 2003; Hawkins et al., 2004; Harmon et al., 2007):

> The patient is deviating from the expected response to treatment. They are not on track to realize substantial benefit from treatment. Chances

are they may drop out of treatment prematurely or have a negative treatment outcome. Steps should be taken to carefully review this case and identify reasons for poor progress. It is recommended that you be alert to the possible need to improve the therapeutic alliance, reconsider the client's readiness for change and the need to renegotiate the therapeutic contract, intervene to strengthen social supports, or possibly alter your treatment plan by intensifying treatment, shifting intervention strategies, or decide upon a new course of action, such as referral for medication. Continuous monitoring of future progress is highly recommended.

The generation of the signal alarm activated the provision of CSTs intervention as described earlier. On the ASC, the client was identified a "red" signal case on social support. The ASC feedback intervention led him to realize the extent of the client's family issues. He discovered that the client's parents were disapproving of the client's choice of mate and were unsupportive of their daughter's upcoming wedding. The feedback in concert with other clinical data led the therapist to shift his treatment to actively intervening to help the client develop good relationships with her parents. The client's overall outcome improved as reflected on the eventual improvement in her OQ scores.

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