Chapter 15

CFS™: Contextualized Feedback Systems®

CFS™: A System to Provide a Continuous Quality Improvement Infrastructure Through Organizational Responsiveness, Measurement, Training, and Feedback

by Leonard Bickman⁹, Manuel Riemer, Carolyn Breda, and Susan D. Kelley

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⁸ An earlier version of this paper appeared in Report on Emotional & Behavioral Disorders in Youth, Vol. 6, No. 4 (Fall 2006) (pp. 86-87, 93-94) It has been revised in July 2010 to be current with subsequent developments. In addition the previous article referred to the program as Contextualized Feedback and Training or ‘CFIT’. Because of a trademark issue the name has been changed to Contextualized Feedback Systems® or CFS™ (logo)

⁹ Leonard Bickman, Ph.D., is professor of psychology, psychiatry and public policy at Vanderbilt University, director of the University’s Center for Evaluation and Program Improvement, and associate dean for research at the University’s Peabody College. Manuel Riemer, M.S., is a doctoral student in quantitative methods in the department of Psychology and Human Development at Vanderbilt University and co-developer, with Dr. Bickman, of the Contextualized Feedback Intervention Theory. Carolyn Breda, Ph.D., is senior research associate at the Center for Evaluation and Program Improvement and an adjunct professor of sociology at Peabody College. Susan D. Kelley, Ph.D., is a research associate at the Center for Evaluation and Program Improvement. Dr. Bickman can be reached by email at Leonard.Bickman@vanderbilt.edu.
Over the last two decades, mental health service providers have been confronted with demands for improved service quality. There has been pressure to be accountable for outcomes, and such forces have led service providers and funders to search for ways to improve services. Previous reforms have focused on system-level interventions such as system integration. The evidence to date is that these efforts can affect system-level variables such as access, but rarely client-level outcomes. For these outcomes, the field is turning to evidence-based treatments as one solution to the problem. There is optimism that treatments developed in well-controlled laboratory contexts can be transferred to real life settings; however, we have begun to see that this could be more difficult than it first seemed. Part of the problem is the difficulty in changing the behavior of organizations and clinicians. Additionally, it is proving harder to adapt these treatments to real world setting, and most service organizations do not have an infrastructure that informs them about clinician practices and client progress in an objective and systematic manner. It is clinician practices and client progress issues that the system described herein addresses.

The Center for Evaluation and Program Improvement (CEPI) at Vanderbilt University has developed an evidence-based, outcome-driven continuous quality improvement system called Contextualized Feedback Intervention Training (CFIT). CFIT takes advantage of recent advancements in web technology to collect, track, analyze and influence performance outcomes. It offers service providers tools for continuing professional development and quality improvement and enables provider organizations to make data-based decisions and transform themselves into learning organizations.

In establishing the theoretical principles of CFIT, CEPI has incorporated a detailed review of previous reform efforts in mental health as well as of the literature on individual and organizational change. Psychological constructs such as goal setting, attribution, and cognitive dissonance, as well as organizational constructs including climate, culture, and leadership are modeled. CFIT has four major components:

- Organizational assessment;
- A comprehensive treatment progress measurement system;
- A formative feedback system; and
- Training.

Organizational Assessment

In addition to being a measurement and feedback system that operates at the clinical level, CFIT is designed to affect the culture of the organization and create a true learning environment. An important principal of CFIT is that innovations need to be carefully introduced into an organization. Each application of CFIT begins with an assessment of the organization's needs and readiness for change, i.e., readiness to adopt the measurement, feedback, and training components of the system. This assessment information is used to tailor the implementation process of the system to the specific organizational context, from bringing the organization's
technology up to the level required for system implementation to interventions for improving the attractiveness of the system for clinicians and other stakeholders. Consultations can help to identify the kind of measures an organization deems helpful and will use, as well as the type of feedback that will be provided. CEPI consultants support the organization throughout the process of implementation, and critical practical issues such as resources needed to sustain the system are thoroughly explored. Several measures, such as a readiness survey and implementation monitoring survey, as well as other tools, are available to help in this process.

**A Comprehensive System for Measuring Treatment Progress**

In order to ensure systematic and accurate feedback, CEPI developed a battery of measures/questionnaires over the course of several years that satisfies expectations for scientific rigor and clinical usefulness. CFSTM offers a modern comprehensive measurement that can be tailored to the specific needs of clients and service delivery organizations. Using advanced web technology, the measurement has been developed to reflect the dynamic and complex nature of the therapeutic process. Information is collected on multiple domains (youth, caregiver, and clinician); portions of the battery (e.g., expectations of therapy, client motivation toward treatment) can be used at intake and concurrently with treatment. Concurrent measures assess both processes (therapeutic alliance, treatment motivation, and session impact) and clinical outcomes (life satisfaction, hope, symptoms and functioning). The CFSTM system automatically generates a measurement schedule for a client and his or her family, making it easy for clinicians to use.

**Client Progress.** Several scales are available to measure progress in client outcomes. Based on strengths orientation, client outcomes are defined as:

- A reduction in symptoms;
- An increase in functioning; and
- A positive outlook on life.

The CFSTM uses the Peabody Treatment Progress Battery (PTPB) as its core measurement system. The battery includes the Symptoms and Functioning Severity Scale (SFSS) developed at Vanderbilt, and two scales developed elsewhere, the Brief Multidimensional Students’ Life Satisfaction Scale (BMSLSS; Huebner, 2004), and the Children’s Hope Scale (CHS; Snyder, 1997). The SFSS is completed by the youth, the caregiver, and the counselor to ensure that different perspectives are taken into account when assessing progress. Teachers may also be asked to complete the SFSS in order to get a broader account of the client’s progress.

**Client Treatment Process.** Several scales included in the CFSTM battery assist clinicians in assessing important treatment process indicators. The most central measure is the Therapeutic Alliance Quality Scale (TAQS) which measures the youth’s relationship with the clinician. The client’s ongoing engagement and motivation to participate in treatment is assessed by the Motivation for Youth’s Treatment Scale (MYTS). The Youth Counseling Impact Scale (YCIS) taps into client’s perception of the impact counseling sessions have on him or her.
Caregiver Outcomes and Treatment Process. The worse a caregiver feels about his/her life, the more difficult it can be to care for the child in a positive way. CFSTM recognizes the importance of the family, and includes several scales that focus specifically on the primary caregiver in the treatment process. Two of these scales assess the caregiver’s well being; the Satisfaction with Life Scale (SWL; Pavot & Diener, 1993) provides the counselor with some general information about how the caregivers feel about their life, and the Caregiver Strain Questionnaire (CGSQ) provides the counselor with information about subjective and objective types of strain in caring for the youth. To allow the counselor to assess the caregiver’s level of engagement and participation in the child’s treatment, CFSTM offers the caregiver’s version of the Motivation for Youth Treatment Scale (MYTS). Finally, the caregiver version of the Therapeutic Alliance Quality Scale (TAQS) assesses the quality of the working relationship between the caregiver and the counselor.

Feedback Reports
Feedback is based on the information collected from the comprehensive measurement system. Information can be analyzed at all levels of the organization—by the clinician, supervisor, administrator, and financers. The goal is to revolutionize the way these groups operate by providing them with common information not available in most treatment settings. The feedback is provided online in a user-friendly format. Problem areas are highlighted in easy to understand ways such as color-coding. Individual scores can be compared to organization-specific norms and benchmarks. Treatment progress over time can be compared to typical treatment change of similar clients, and the counselor is alerted to deviations from this trajectory. Alerts are provided in a dashboard format for quick and easy access for busy clinicians. All CFSTM users are trained to use and interpret the feedback reports.

Comparison Through Aggregated Data. CFSTM also can be summative; the data can be aggregated to compare clinicians, clinics, provider organizations, and types of treatment. Such information can transform mental health services from being viewed as a commodity purchased primarily on the basis of cost to a service that is selected for its quality. With CFSTM, consumers as well as providers can use valid information to identify and select quality services and providers. Reimbursement for services can be made based on knowledge of effectiveness instead of customary factors such as service location (e.g., home, clinic, and hospital) or the length of a therapy session.

Weekly Review and Adjustment. Using CFSTM, Agencies can review the measurement schedule and can change the schedule based on their own needs. Clinicians can use the feedback to identify treatment factors that may need attention. The automated system works interactively with the clinician to bring art and science together for the best care possible for clients.

The feedback reports provide rich information about the clients and their treatment progress, which supports and informs the counselors’ decision making without replacing their clinical judgment. Additionally, clinical supervisors receive intensive specialized training on how to interpret feedback
Designed to Enhance Counselors’ Skills. The CFS™ system has been designed to enhance the counselor’s clinical skills to improve client outcomes by providing counselors with feedback on therapeutic process as well as on client progress. Supervisors can receive the same information to better assist direct-care staff in making evidence-based decisions regarding practice with a particular client. CFS™ information can also be used to manage services, not by financial budgets, but by client progress. Supervisors and directors can monitor performance outcomes including change in severity and client satisfaction. In addition they can make ongoing, timely changes to program design based on objective evidence, assure the quality of services being provided in various programs, and identify professional development needs as well as essential evidence-directed training.

Evidence-Based Training

CFS™’s clinical training is based on a common factors approach—those factors that are common across almost all therapies—rather than a specific therapeutic school (e.g., cognitive-behavioral therapy). The training has three objectives, to:

- Orient clinicians, supervisors, and administrators to the CFS approach and the CFS system (e.g., principles of the model, how to access and interpret data, inputting data);
- Teach clinicians and supervisors about common factors, evidence-based interventions to optimize therapeutic processes (e.g., developing individual and family dimensions of alliance, identifying and responding to alliance rupture); and
- Provide specific techniques for clinicians and supervisors to improve practice (e.g., a ‘clinical toolbox’ of activities for use in treatment and supervision).

The training model is based on the principle that learning needs to occur continuously and requires frequent follow up. In order to make this feasible for a typical mental health organization, and for clinicians with diverse educational backgrounds (primarily counsellors with bachelor’s degrees), CFS™ uses a combination of online modules and webinars.

Training the Trainers. Before the CFS™ system is fully operational, CEPI works with a small group who will become the CFS™ Trainers for that organization. Together, they develop training that fits the organization’s needs. At a minimum, all potential CFS™ users are trained how to interface with and use the CFS™ system, with break-out sessions based on staff role and function (e.g., data entry and quality control, integrating feedback information to enhance clinical practice).

Optional on-site train-the-trainer sessions focus on evidence-based interventions to optimize the therapeutic process. The organization’s CFS™ Trainers will in turn train supervisors as part of an intensive workshop. It is
expected that supervisors will use the knowledge and skills they obtain in this workshop to support the clinicians who provide direct care. As part of CFSTM, clinicians then participate in the online training, supported and enhanced by their supervisors. After this initial training period, clinicians are encouraged to review specific problem-focused online modules based on information they receive about their client or caregiver through the feedback reports. The main objective is to provide clinicians with information on how to optimize the therapeutic processes based on state-of-the-art knowledge as well as on the evidence generated for individual clients. Clinicians and supervisors can evaluate the success of their interventions, as well as refine interventions, through a continuing review of the feedback reports.

Common Factor Training Modules. CFSTM focuses on common factors that are relevant to almost all types of treatment settings and approaches. Common factors are those elements that are not particular to any therapeutic modality, but are common across almost all therapies. Research indicates that these common factors are the basis for achieving the benefits of therapy. Common factors can be classified into five broad categories:

- Client characteristics;
- Therapist qualities;
- Change processes;
- Treatment structure; and
- Therapeutic relationship.

The importance of these factors in determining outcomes is congruent with a strength-based approach.

Developed collaboratively by academic and clinical experts, the Common Factor Training Modules are kept short in order to be easily integrated into the clinician’s clinical practice. The training modules are updated to reflect the most recent developments in the clinical literature and ongoing experience with the CFSTM system. Each module provides a rating of the level of empirical evidence that exists in support of the suggested interventions. The online CFSTM system links all these different elements together into one seamless system that is easily incorporated into the clinicians’ daily clinical routines. Currently, CEPI offers training on building and repairing therapeutic alliances, addressing expectancies about counseling, and collaborative treatment planning.

Other Features of CFSTM

Individualization. Individualization of treatment is a strong value held by most service providers; however, there is little known information about how to achieve this individualization. CFSTM is tailored to each program based on specific performance objectives, regulatory requirements, program goals and other contextual dynamics. Specific methods are used to help ensure that clients are satisfied, benefit from the services, receive the appropriate level of care, and meet treatment goals. CFSTM provides counselors with the opportunity to strengthen their skills by offering tools that support and inform their treatment planning. The system provides continuous feedback, including evidence for the treatment of individual clients and feedback for program improvement efforts.
Synergistic With Evidence-Based Treatments. CFSTM is designed to be synergistic with other evidence-based treatments. It can provide the necessary infrastructure to know if treatment is being implemented with sufficient fidelity and if expected outcomes are realized. Without such a system, entropy can occur, allowing a once well-organized treatment structure to deteriorate. To sustain an effective program and promote innovation, ongoing monitoring is required.

A Strong Base in Theory and Science. CEPI has conducted mental health services research since 1986. Leonard Bickman and Manuel Riemer have developed a theory of change, grounded in psychological and organizational research, which provides the theoretical foundation of the CFSTM system (Riemer et al., 2005; Sapyta et al., 2005). CEPI has used rigorous research methods in developing an empirical evidence base for the different components of CFSTM, and CFSTM measures have been found to be scientifically sound and practically useful. The training modules are based on the most recent evidence-based effective clinical interventions. A substantial five-year grant from the National Institute of Mental Health to develop and refine the CFSTM system demonstrates significant confidence in the potential of the CFSTM system. NIMH has awarded Dr. Bickman another five-year grant in June, 2010 to optimize CFSTM with another evidence-based treatment.

A Strong Base in Practice. One of the most important lessons learned in mental health services research is that successful quality improvement tools need to be developed in close proximity to the practice field and with active input from practitioners. From the beginning of the development of CFSTM and its applications, CEPI has worked closely with several mental health provider organizations.

It is also important that the technology be the most advanced available and be developed by experienced computer programmers.

Uses of CFSTM: A Few Scenarios

The following scenarios illustrate how the CFS system can be used:

Improving CFSTM Implementation. Kristi, the clinical director, reviews the quarterly implementation report with her two clinical supervisors. They discover that, overall, things have been better than last quarter but that one counselor, Mary, continues to struggle to get the questionnaires completed. Kristi meets with the counselor and her supervisor. Together they discuss the reasons for the unsatisfactory completion rate. They determine that Mary has had a difficult time getting cooperation from the family. Together they decide that it would be good for Mary to talk to another counselor, John, about his strategies for getting family support. John, who also struggled at the beginning, has since had good compliance rates.

Individualizing Treatment. Beverly is a 14-year-old girl referred for intensive in-home services by the Department of Mental Health. At intake, Beverly and her biological mother, Rhonda, reported several behaviors consistent with depression, including crying and moping around, decreased interest in friends and activities, and
sleeping a lot. After three months of treatment, Beverly’s counselor, John, has noted some improvement in her symptoms and functioning, consistent with youth and caregiver reports. However, John has been concerned about Beverly’s engagement and motivation during recent visits. He decides to review the weekly feedback report with his supervisor.

**Meeting External Standards.** A regional director needs to meet an accreditation agency’s requirements. Accreditation standards require collection and reporting of extensive demographic information. The CFS™ questionnaires collect these data (on client satisfaction and outcome measurements, for example), as well as additional information that meets continuous quality improvement (CQI) requirements. The director is now able to access and organize this information easily from the system, enabling her to respond to the agency’s needs and allowing her team members to focus their energies on other responsibilities.

**Adjusting Treatment and Training.** The clinical director has his quarterly meeting with his program directors. An item on the agenda is to identify training needs. Together, they review the last quarterly report and discover that some programs have difficulty getting caregivers motivated to actively participate in the youth’s treatment. They decide to develop a training agenda around caregiver motivation and engagement. In the next supervisor support meeting, the supervisors exchange information about helpful training material for caregiver engagement.

**Conducting Program Evaluation.** The management team is considering the use of several evidence-based treatments; however, the team does not know which interventions will work best. Moreover, they are concerned that unless treatments are carefully monitored, fidelity may degrade. The team decides to implement two different treatment programs and evaluate their relative effects after six months. The CFS™ system provides the information they need to make an empirically based decision at no additional cost. Additionally, because of the flexibility of the CFS™ system, they are able to add fidelity measures to monitor program implementation on an ongoing basis.

In summary, CFS™ provides a practical, but sophisticated and flexible system to monitor both the processes and outcomes of treatment. The feedback report provided by the system can be used to support clinical decision making, supervision, management and program evaluation. The system also produces reports that monitor the implementation of the system. The utility of the system is further enhanced by the provision of both in-person and web-based training.


