

Facilitating the Adoption of Empirically-Supported Substance Abuse Interventions with a Continuous Quality Improvement Model: A Case Study

Paul J. Toriello, Patricia Morse, Edward V. Morse, Joseph E. Keferl, and Else Pedersen-Wasson

Abstract

Despite the availability of empirically-supported substance abuse interventions, research shows that many agencies continue to use interventions with no empirical support. Even though manuals and technical assistance are available to facilitate empirically-supported interventions' (ESIs) dissemination and adoption, substance abuse counselors are not adopting these interventions in a widespread manner. Thus, the purpose of this article is to describe the "Rapid Cycle Change" approach as a continuous quality improvement (CQI) model that agencies providing substance abuse services can employ to facilitate empirically-supported intervention adoption, compatibility, and optimization. Specifically, an introduction to how a continuous quality improvement model can mitigate ESI adoption challenges for substance abuse agencies is delineated, followed by a description of the Rapid Cycle Change model. The practical application of this model is exemplified via a case study from a substance abuse counseling agency's use of the model as part of a national collaborative project. Finally, implications from taking this approach are discussed.

A movement toward the use of empirically-supported interventions (ESIs) in clinical practice has been happening for over three decades (McCrary, 2000). One significant event during this movement was a definition and initial list of ESIs proffered by an American Psychological Association (APA) Task Force formed in 1993. The Task Force defined ESIs as those that have "shown to be efficacious in controlled research with a delineated population" (Chambless & Hollon, 1998, p. 7). Thus, implementing interventions with an empirical foundation, as opposed to implementing interventions based on clinical impressions and/or tradition, has become the espoused principle associated with ESIs (Beutler, 1998). However, concerns with the work of the Task Force have been, at least, twofold. First, the original and revised reports from the Task Force did not identify ESIs for addressing substance abuse issues (McCrary, 2000). Second, many perceived that the definition of ESIs overemphasized randomized clinical trials and efficacy (i.e., internal validity) while disregarding quasi-experimental designs and effectiveness (i.e., external validity; Beutler, 1998; Howard, Moras, Brill, Matinovich, & Lutz, 1996). The former concern has become a non-issue due to the large menu of ESIs for substance abuse issues identified over the past decade (e.g., Motivational Interviewing [Miller & Rollnick, 2002]; Cognitive Behavioral Coping Skills Training [Morgenstern et al., 2001], and Naltrexone [Roman & Johnson, 2002]). However, the latter concern is still viable because it is linked to the fact that, despite the availability of ESIs, research

shows that many substance abuse agencies continue to use interventions with no empirical support (Dansereau & Dees, 2002; Drake, Goldman, & Leff, 2001). Even though internally valid manuals and technical assistance are available to facilitate ESIs' dissemination and adoption (Hohman & Loughran, 2003; Simons, Jacobucci, & Houston, 2002), substance abuse counselors are not adopting these interventions in a widespread manner (Clark, 2002; Institute of Medicine, 1998; McGlynn et al., 2003; Osborn & Thombs, 2002; Willenbring et al, 2004).

Addressing the ESI adoption issue is particularly challenging for substance abuse counseling agency administrators as they face increasingly significant pressures from insurance companies, grantors, and governments to use ESIs (Clark, 2002). Using a continuous quality improvement model is critical to facilitate overcoming such a challenge (Lehman, Greener, & Simpson, 2002; Lewis, 2005). Therefore, this article describes a continuous quality improvement model that agency administrators interested in adopting ESIs can use to mitigate the challenges to ESI adoption. Specifically, an introduction to how a continuous quality improvement model can mitigate ESI adoption challenges for substance abuse agencies is delineated, followed by a description of the "Rapid Cycle Change" model. The practical application of the Rapid Cycle Change model is exemplified via a case study from a substance abuse counseling agency's use of the model as part of a national collaborative project. Finally, implications from taking this approach are discussed.

Continuous Quality Improvement and ESI Adoption

Facilitating ESI adoption from a continuous quality improvement (CQI) model necessitates some departure from the aforementioned principle of ESIs. From a CQI perspective, the purpose of adopting ESIs is to support the philosophy of continuously improving agency performance and outcomes (Lewis, Lewis, Packard, & Souflee, 2001). This is different from a goal of merely practicing from the assumed inherent value of interventions developed via rigorous science. During CQI, ESIs are "means to an end", as opposed to the end. Agencies should not just adopt ESIs assuming their implementation will automatically precipitate improved performance and outcomes (Roman & Johnson, 2002). In fact, agencies that attempt to improve the quality of their services by operating from such an assumption risk experiencing failure in the adoption of the ESI, as well as unimproved or even worsened agency performance and outcomes (McGovern, Fox, Xie, & Drake, 2004).

One challenge seems to stem from the convention that ESI criteria, including the APA Task Force's, emphasize interventions developed via randomized clinical trials (RCTs). While RCTs represent the "gold-standard" for developing an efficacious intervention, several have noted barriers inherent to disseminating RCT-developed interventions in real-world clinical practice. First, agency clientele are often diagnostically complex, as opposed to the uncomplicated diagnostic groups studied in strict RCTs (Silverman, 1996). Second, the manualized interventions studied in RCTs restrict the clinical flexibility needed to individualized case conceptualization and treatment planning (Ball et al., 2002). Third, agencies rarely have the resources to support the training and supervision at a level consistent with that provided during RCTs. Finally, even though the strength of an RCT-developed ESI is internal validity, RCTs are weak in regard to external validity (Beutler, 1998). In essence, an agency may not have the resources to support the adoption of an ESI. Additionally, an ESI may not address the individual needs of a clientele that is significantly different from the clientele studied in a RCT. These issues (a) are particularly germane to substance abuse counseling agencies and (b) partially explain why such agencies are often unsuccessful in their ESI adoption efforts (Roman & Johnson, 2002).

ESI Adoption Issues in Substance Abuse Counseling Agencies

The above issues represent typical incompatibilities between substance abuse counseling agencies and a given ESI, in regard to idiosyncrasies of clientele, clinical philosophy/culture, clinical policies, and resources (McClellan, 2002). For example, a substance abuse agency's policy that clients who relapse (i.e., use alcohol or drugs) during treatment are automatically discharged may conflict with an empirically-supported motivational intervention that supports continued treatment of such clients. Another agency may not have the resources to implement the number of counseling sessions indicated with an empirically-supported cognitive behavioral therapy. With CQI as an option to merely adopting an ESI, substance abuse agencies could strive to optimize the use of an ESI within the context of their policies, treatment philosophies/cultures, and resources. Thus, the guiding principle changes from mere ESI adoption to ESI adoption and optimization as a means to continuously improve substance abuse agency performance and outcomes.

In addition to the above incompatibilities, substance abuse counseling agencies often lack the CQI leadership, communication, and planning infrastructure shown to be critical in ESI adoption. For example, decisions to adopt ESIs are often made in unstructured, reactionary, if not haphazard manners (Lehman, Greener, & Simpson, 2002). Additionally, adoption plans are typically not pilot tested, improvement gains are not clearly defined and "troubleshooting" or adjustment mechanisms are nonexistent (Addiction Technology Transfer Center [ATTC], 2000; Gustafson, Cats-Baril, & Alemi, 1992; Lewis et al., 2001). Thus, ESI adoption efforts become fragmented and non-resilient, making the impact of the efforts unclear and difficult to sustain or even track over time (ATTC, 2000; Gustafson et al., 1992).

Using a CQI model to adopt ESIs may help remedy these issues. For example, two essential elements of CQI models that may foster ESI adoption are the presence of a "change team" and an identified "change leader" (ATTC, 2000; D'Aunno, Vaughn, & McElroy, 1999; Gustafson, 2002; Lewis et al., 2001). A change team could be a means to build structure and involve staff in the ESI adoption process. Change team membership could promote staff "buy-in" to the ESI, and foster a sense of responsibility and commitment to the sustained adoption of the ESI. A change leader could "spearhead" the ESI adoption process and operate from a position that ensures sustainability of the ESI adoption. Without a change team and leader, agency staff would be uninvolved in or disconnected from the ESI adoption process, thereby "feeding into" the view that ESI adoption efforts are a separate function within the agency, as opposed to a critical component of their daily work life (ATTC, 2000; Lewis et al., 2001).

Pitfalls of Using a CQI Model to Facilitate ESI Adoption

When adopting ESIs using a CQI model, substance abuse counseling agencies can face at least two pitfalls: (a) CQI resistance and ambivalence and (b) CQI inertia. Resistance and ambivalence largely have to do with agency staff being unsure about their commitment to and/or efficacy in implementing the ESI. Addressing resistance and/or ambivalence should not involve "heavy-handed" management approaches where staff feel forced to adopt the ESI. Such "imposed" ESI implementation, wherein staff are not invited to invest in the process, can lead to a range of negative staff reactions from subtle staff "push-back" to outright sabotage of the ESI (Lehman et al., 2002). Rather, a key to CQI is careful planning. Trainings on and supervision of the ESI should be structured in a manner to address staff resistance and/or ambivalence toward the ESI (Culbreth, 2003). To avoid overwhelming staff and to minimize resistance or ambivalence, components of the ESI should be implemented sequentially (Beutler, 1998; Gustafson, 2002). Moreover, soliciting feedback from staff during focus groups helps engender their investment in the ESI, as opposed to com-

municating that they should be passive recipients of management mandates. Soliciting and responding to staff feedback is imperative as staff are often in the best position to understand how an ESI may or may not fit within agency practices.

The second pitfall is CQI inertia. Often, ESI adoptions via a CQI model start "with a bang" but do not sustain momentum (Lewis et al., 2001; McGovern et al., 2004). To minimize CQI inertia and maximize sustainable momentum, formal communication mechanisms are critical (Lehman et al., 2002). First, an agency's improvement trend lines of key processes and outcomes should be distributed regularly to agency staff. This will provide staff with current feedback on how the ESI is impacting the agency. Second, separate focus groups should be facilitated with agency clients and staff. The purpose of these focus groups is to elicit their feedback on effective and ineffective components of the ESI. Finally, change teams should meet regularly to review the above trend data and focus group feedback in order to identify potential issues and changes that may make the ESI more effective. As a means to address all of the above issues, the Rapid Cycle Change model is described next.

Rapid Cycle Change Model

The Rapid Cycle Change (RCC) model is based on four factors that research has shown to distinguish organizations that continuously improve versus those that do not. These factors involve: (a) identifying key problems, (b) involving key stakeholders and outside experts, (c) use of rapid cycle testing, and (d) picking a powerful change leader (ATTC, 2000; Chan, Rubin, Lee, Miller, & Cheng, 2002; Diamond, 1996; Gustafson, 2002; Whittaker et al., 2006; Winum, Ryterband, & Stephenson, 1997). The RCC model may be a promising model to facilitate ESI adoption and optimization. What follows are how each of the four factors would support this contention.

Key Problems

The first step for an agency using the RCC model to guide their adoption of an ESI involves answering the following question: What are we trying to accomplish? Depending on the agency's mission, answers to this question may include: Increasing client retention in treatment via an ESI, reducing the number of sessions of the ESI without compromising effectiveness, and reducing clients' "no-shows" to sessions. Answers to these questions (a) represent the initial departure from merely adopting the ESI for its own sake and (b) essentially constitute a given agency's major barriers to optimizing the adoption of the ESI. These answers become the key problems or "target behaviors" that guide ESI selection, optimization and evaluation efforts. For example, target behavior trend line data may show that many clients are leaving treatment against clinical advice. Such a quantitative finding may be augmented by qualitative data that clients believe that the agency staff need to be more flexible in regard to their discharge readiness. The agency may decide to adopt an ESI that has shown particular efficacy in addressing client retention. Thus, the ESI adoption becomes a means to improve agency performance in client retention.

Key Stakeholders/Outside Experts

As part of the RCC model, agency clients and staff should be integrally involved in planning, implementing, and evaluating the adoption of the ESI. As noted above, this involvement may include focus groups, and/or membership and participation on the change team. Regular soliciting of feedback from key stakeholders provides the change team with valuable information that can be used to interpret target behavior trends and to identify adjustments to the ESI that may result in improvement. This represents a second departure from mere ESI adoption. For example, these processes may facilitate ESI customization as a means to improve fit with the clients' diagnostic complexities and counselors' need for clinical flexibility. Thus, the agency may commence an ESI

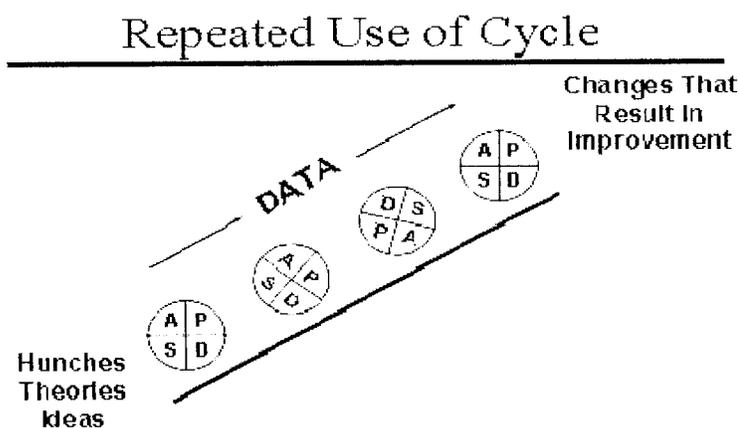
adoption with adherence to the ESI's original manual, but may diverge based on the feedback elicited from key stakeholders.

As part of the change team, external consultants should help identify ways to optimally customize the ESI as a means to improve performance on the target behaviors. Examples of customizations may include intervention sequencing, session frequency, and/or resource intensification for multicultural considerations (e.g., literacy, co-occurring disorder accommodations, training, etc). When appropriate, the external consultants may provide technical assistance and training to support the identified changes. The importance of involving outside experts is to learn from their successes and failures. Additionally, outside experts often can see the "forest from the trees"; a perspective that fosters fresh ideas for innovative adoption of the ESI.

Rapid Cycle Testing

Changes to the ESI that are identified via the above process should be implemented and studied under a rapid cycle. Research has shown that rapid cycle testing of changes on a small scale, and the subsequent use of other cycles to scale-up the changes, reduces the risk of ESI implementation inertia and failure (Network for the Improvement of Addiction Treatment [NIATx], 2006). For rapid cycle testing, the 'Plan, Do, Study, Act' (PDSA) cycle is an efficient way to learn what changes in the ESI results in agency improvement (NIATx, 2006). The PDSA cycle begins with a plan, and ends with action based on the learning gained from the Plan, Do, and Study phases of the cycle. After a study period, the change team will again review the latest improvement trend lines of target behaviors, client and staff feedback from focus groups, and then identify a new change or modification(s) to previous changes. The use of multiple cycles for sequential testing and implementation facilitates a process that evolves from hunches, theories, and ideas to actual changes in the use of an ESI that result in improvement (NIATx, 2006). Rapid cycle testing, using PDSA cycles, should continue as target behavior trend lines move in the desired direction, indicating progressive optimization of the ESI (see figure 1). It is important to note that rapid cycle testing is not designed to establish a causal relationship between changes in the ESI with changes in data trends. Rather, the purpose is to facilitate, via changes in the ESI, a trend's movement in the desired direction: a continuous improvement in quality.

Figure 1. Desired Process for RCC Model (NIATx, 2006)



Powerful Change Leader

At the heart of the RCC model is the change leader. A change leader is a person who will serve as "champion" or "cheer leader" of a change or set of changes pertaining to a particular component of the ESI and/or a particular target behavior. A change leader facilitates the RCC process from a position of influence and respect within the agency. For example, an agency supervisor may serve as the change leader for specific ESI changes related to increasing the motivation of clients to continue in treatment. Here, the change leader will form a change team, consisting of other opinion leaders and outside experts, whose purpose is to implement and study the specific changes. Other change leaders and change teams may be charged with implementing and studying changes related to other key problems faced by an agency, such as the impact of multicultural issues, intervention sequencing, and the like.

Practical Application of the RCC Model: A Case Study

A case study is presented next as a means to exemplify the use of the RCC model. The case study shows how a substance abuse counseling agency used the RCC model to mitigate the challenges of ESI adoption, detailed above, and ultimately improve their performance. Specifically, the experiences of a substance abuse agency's (i.e., Bridge House, Inc.) adoption of "Motivational Interviewing" (see Miller & Rollnick, 2002) as a means to improve the number of clients that remain in treatment at least 30 days are presented.

Bridge House Background. Bridge House, Inc. is a not-for-profit, residential substance abuse counseling agency. Since its inception in 1957, Bridge House has operated from a traditional substance abuse counseling philosophy that dictated treatment interventions. Bridge House clinical staff routinely used an aggressively confrontational approach where they strongly pressured clients to accept themselves as an "alcoholic/addict" and insisted that clients commit to one year of treatment and remain abstinent from substance use. Since 2002, Bridge House has been working to adopt Motivational Interviewing (MI). However, Bridge House was trying to adopt MI for the sake of adopting MI. As a means to transition to a CQI model, Bridge House has been participating in a national collaborative project with 13 substance abuse counseling agencies across the country. With demonstration grant funding from Center for Substance Abuse Treatment, the purpose for each agency in the collaborative project is to utilize the RCC model to adopt ESIs in order to improve their trends on key problems or target behaviors.

Key problems. At the beginning of the project, Bridge House decided to use the RCC model to optimize staffs' use of MI for increasing the percentage of clients that stay in treatment at least 30 days (i.e., early treatment retention). Bridge House decided to focus on early treatment retention as the key problem for two reasons. First, prior to participating in the collaborative project, the baseline percentage of clients that continued in treatment at Bridge House at least 30 days was only 48%, with the trend of this target behavior moving in an undesired direction. This seemed, in part, due to the aforementioned impact of the confrontation on the rapport between clinical staff and clients. Second, Bridge House staff believed that when operating from an MI approach, counselors would strive to build a collaborative relationship that emphasized agreed-upon goals, as opposed to arguing with clients to stay in treatment. This tactic directly paralleled a key strategy of MI that attracted the interest of Bridge House, which is to build rapport via eliciting client motivation to continue in treatment. Thus, the goal of Bridge House was to increase early treatment retention from the baseline rate of 48% to 68%. Retention was measured as the monthly percentage of clients who remained in treatment at least 30 days after admission.

Key stakeholders, outside experts, & change leader. Upon choosing this target behavior, a "Bridge House retention change team", which included staff opinion leaders, outside MI experts, and the Bridge House clinical supervisor as the change leader, was formed. Even though Bridge House leadership and most staff were committed to MI, there was still resistance from staff that needed to be addressed. Thus, per the RCC model, the purpose of the change team was to involve staff more directly in the MI adoption process and, more importantly, in the CQI process. Additionally, one of the outside experts facilitated monthly separate focus groups with Bridge House clients and staff as a means to involve them in the process by soliciting their perspective on what they believed impacted early treatment retention in Bridge House.

Rapid cycle testing. Over the course of eight months, the change team rapid cycle tested 12 different changes via the RCC model. Four of the changes directly involved a progressive optimization of staff using components of MI for increasing client retention. Specifically, an "MI cheat-sheet" was developed and distributed to staff as a user-friendly reminder of MI techniques. The cheat-sheet was revised three times based on staff feedback. For example, one revision that was rapid cycle tested was printing the cheat-sheet on a business size card, as opposed to letter size paper. This change was in response to staff feedback that the original cheat-sheet was too large and awkward to handle during a MI session. Another revision that was rapid cycle tested was using the cheat-sheet with only resistant clients. This change was in response to staff feedback that non-resistant clients did not benefit from the MI session. Thus, putting the above in RCC-PDSA model terms, the objective of the Bridge House client retention change team was to increase staffs' use of MI (Plan) by providing the MI cheat-sheet (Do), and then asking staff and clients how the cheat-sheet was working (Study), so that useful revisions could be made (Act).

The other eight changes rapid cycle tested were a mixture of policy, aesthetic, administrative, programmatic, and supervisory changes. These changes were based on the change team's response to client and staff feedback about making the Bridge House culture more MI consistent (i.e., flexible, collaborative, and empathic) and less confrontational and rigid. One recommendation was to dissolve a policy that required clients to commit to at least one year of treatment. In order to provide a more aesthetically pleasing atmosphere, a greeter was added to make newly arriving clients feel more welcome at Bridge House. Administratively, counselors' schedules were changed so they could spend more MI consistent time with clients. For example, the potentially confrontational task of inspecting clients' rooms was removed from the counselors' responsibilities. Programmatically, an "induction" phase was added to the Bridge House treatment curriculum. The purpose of the induction phase was to provide newly admitted clients with more intensive treatment, as well as the privilege of exercising on the weekends (i.e., an incentive to stay in treatment). On the supervisory level, a new, weekly client staffing meeting was implemented for counselors to solicit ideas on how to innovatively use MI to motivate clients to stay in treatment. After the initial version of this meeting, called "retention staffing", was rapid cycle tested, a change that only clients deemed at high risk for leaving treatment should be discussed during the meeting was rapid cycle tested.

Results

Overall, the 12 changes resulted in a dramatic impact on Bridge House's early treatment retention rates. The change team exceeded its goal of increasing early treatment retention by 20%. The target behavior trend line moved and appeared to stabilize in the desired direction over the change period. Interestingly, certain changes or combinations of changes were associated with larger increases in client retention (see figure 2). Across the change period, clients shared during focus groups that they felt the extra time with their counselors was the most significant change.

Counselors, while they concurred with the clients about the extra time, identified the retention staffing as most significant because the meeting motivated them to stay attuned to client retention issues. This feedback seems to correspond with the trend line data. General comments from clients related to the changes associated with the RCC process for MI adoption included observations on how Bridge House became a more client-centered program, as opposed to a program focused stringently on rules and compliance; they felt more empowered and excited about being in treatment. Staff revealed they felt more relaxed in a MI consistent culture, as well as more effective in their daily work. However, the results from changes tested via the RCC model were not interpreted as causal; because so many changes were made by the change team, discerning the relative impact of any particular change was difficult.

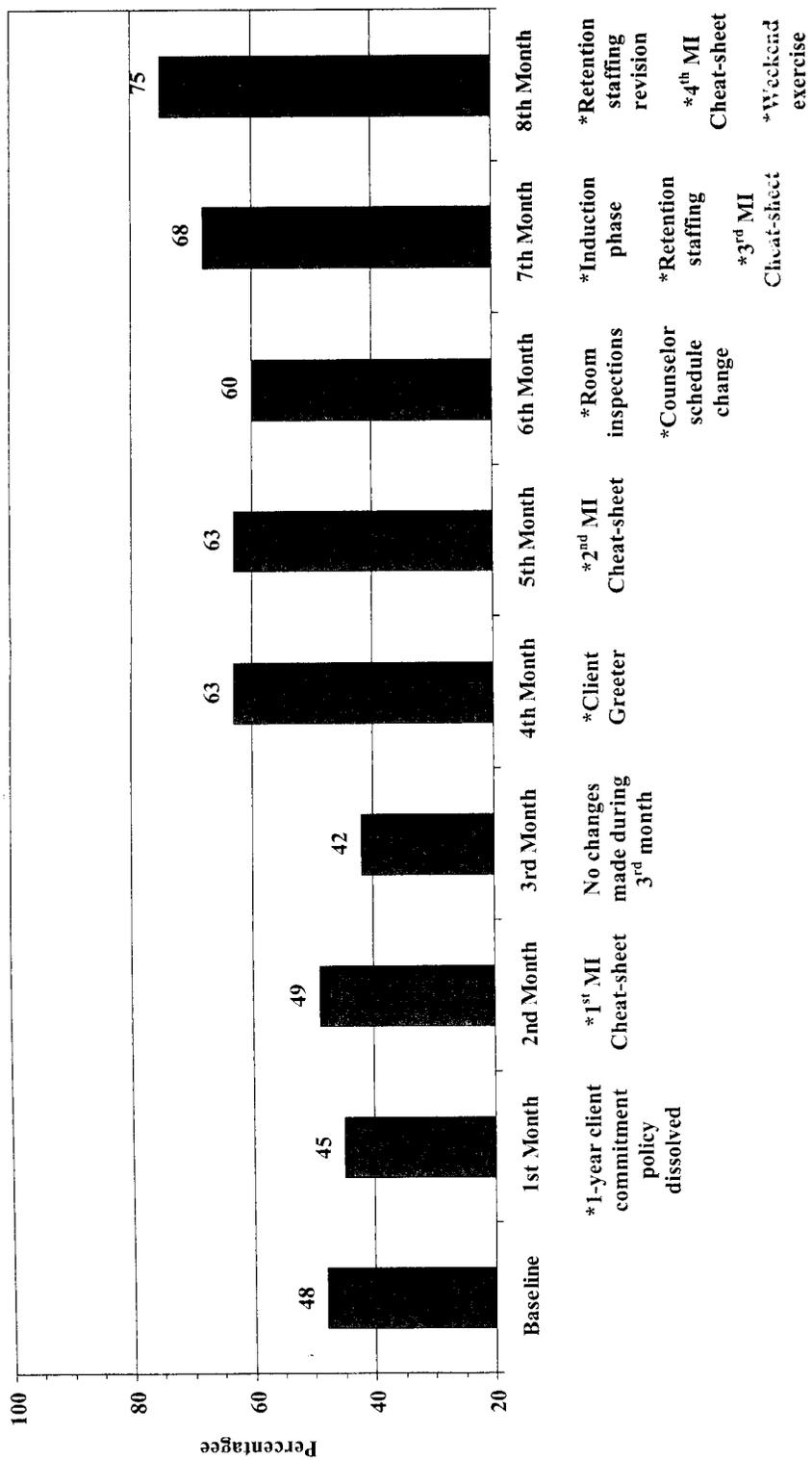
Implications & Summary

The above case study shows how the principles and practices inherent to the RCC model factors support ESI adoption, as a means toward continuously improving a substance abuse agency's performance and outcomes. However, the most significant implication of this exercise is the probable compromise of integrity from the original ESI. For example, Bridge House came to practice a version of MI that was considerably different from the version studied during the RCTs of MI. Nevertheless, adopting ESIs as a means for improving agency performance and outcomes appears to be a better approach for ESI adoption versus mere adoption of ESIs. For example, by using the RCC model to improve early treatment retention, Bridge House made a significant leap in their adoption of MI. The approach of focusing on CQI, as opposed to mere MI adoption, seemed to assuage those staff that were unsure if MI was a superior alternative to traditional confrontation and the rigid "one size fits all" program (Koch & Rubin, 1997).

Today, with the wealth of ESIs, the challenge for substance abuse agencies is to move from outcome studies to CQI techniques for improving ESI adoption and optimization (Beutler, 1998; Lamb, Greenlick, & McCarty, 1998; Simpson, 2004). Adding to this challenge is the "continuous" aspect of CQI. Substance abuse agencies should not cease their CQI efforts just because trend lines begin to move in desired directions. If the adage of "the only constant is change" is accurate, then agencies need to be vigilant regarding service quality, particularly as public policy toward substance abuse, treatment resources, and presenting issues of clients continue to change over time (Moxley, Manela, & Finch, 2000).

Finally, as the substance abuse field changes and as ESIs continue to evolve with changing evidence, future efforts to further understand how substance abuse agencies make continuous changes and improvements seems important. While the above case study exemplifies how the RCC model can be a useful model to meet this challenge, we concur with the suggestion of Willenbring et al. (2004) to conduct controlled "quality improvement" studies of under-implemented ESIs. For example, examining how the use of the RCC model mitigates a substance abuse agency's resistance to change would be useful in understanding and possibly addressing why the adoption of ESIs is not widespread (McGovern et al., 2004). This approach could help answer questions like "Is the [ESI] useful in clinical settings...with what [clients] and under which circumstances? Is the [ESI] efficient in the sense of being cost-effective relative to alternative interventions?" (Chambless & Holton, 1998, p. 7). Now that the substance abuse field has a deeper base of ESIs, CQI techniques, like the RCC model, appear to be prime candidates for facilitating the next phase of the field's development. Since the question "is substance abuse counseling effective" has been answered with an unequivocal yes, the new question becomes "how can we best improve substance abuse counseling (Clark, 2002; Morgenstern et al., 2001)?"

Figure 2. Monthly Percentage of Clients Staying in Bride House for at least 30 days and Associated Changes



References

- ATTC (2000). *The change book: A blueprint for technology transfer*. Kansas City, MO: ATTC National Office.
- Ball, S. et al. (2002). Characteristics, beliefs, and practices of community based clinicians trained to provide manual-guided therapy for substance abusers. *Journal of Substance Abuse Treatment*, 23, 309-318.
- Beutler, L. E. (1998). Identifying empirically supported treatments: What if we didn't? *Journal of Consulting and Clinical Psychology*, 66, 113-120.
- Chambless, D. L., & Hollon, S. D. (1998). Defining empirically supported therapies. *Journal of Consulting and Clinical Psychology*, 66, 7-18.
- Chan, F., Rubin, S. E., Lee, G., Miller S. M., & Cheng, Z. (2003). A theoretical and operational framework for enhancing counselor and consumer involvement in rehabilitation planning and evaluation. *Journal of Rehabilitation Administration*, 27, 45-57.
- Clark, H. W. (2002). Bridging the gap between substance abuse practice and research: The national treatment plan initiative. *Journal of Drug Issues*, 32, 757-768.
- Culbreth, J. R. (2003). Chemical dependency counselor supervisors' perceptions of supervisee anxiety and resistance in clinical supervision. *Journal of Teaching in the Addictions*, 2, 39-50.
- Dansereau, D. F., & Dees, S. M. (2002). Mapping training: The transfer of a cognitive technology for improving counseling. *Journal of Substance Abuse Treatment*, 22, 219-230.
- D'Aunno, T., Vaughn, T. E., & McElroy, P. (1999). An institutional analysis of HIV prevention efforts by the nation's outpatient drug abuse treatment units. *Journal of Health and Social Behavior*, 40, 175-192.
- Diamond, M. A. (1996). Innovation and diffusion of technology: A human process. *Consulting Psychology Journal: Research and Practice*, 48, 221-229.
- Drake, R. E., Goldman, H. E., & Leff, H. S. (2001). Implementing evidence-based practices in routine mental health service settings. *Psychiatric Services*, 52, 179-182.
- Gustafson, D. H. (2002). Designing systems to improve addiction treatment: The foundation. *Alcoholism & Drug Abuse Weekly*, 14, 1-2.
- Gustafson, D. H., Cats-Baril, W. L., Alemi, F. (1992). *Systems to support health policy analysis: Theory, models, and uses*. Ann Arbor, MI: Michigan Health Administration Press.
- Hohman, M., & Loughran, H. (2003). Teaching evidence-based addiction practice: Project MATCH comes to the classroom. *Journal of Teaching in the Addictions*, 2, 1-16.
- Howard, K. I., Moras, K., Brill, P. L., Matinovich, Z., & Lutz, W. (1996). The evaluation of psychotherapy: Efficacy, effectiveness, patient progress. *American Psychologist*, 10, 1059-1064.

Institute of Medicine (1998). *Bridging the gap between research and practice: Forging partnerships with community-based drug and alcohol treatment*. Washington, DC: National Academy Press.

Koch, D. S., & Rubin, S. E. (1997). Challenges faced by rehabilitation counselors working with alcohol and other drug abuse in a "one size fits all" treatment tradition. *Journal of Applied Rehabilitation Counseling*, 28, 31-35.

Lamb, S., Greenlick, M.R., & McCarty, D. (1998). *Bridging the gap between practice and research: Forging partnerships with community-based drug and alcohol treatment*. Washington, D.C: National Academy Press.

Lehman, W.E.K., Greener, J.M., & Simpson, D.D. (2002). Assessing organizational readiness for change. *Journal of Substance Abuse Treatment*, 22, 197-209.

Lewis, A. (2005). Using data to improve outcomes in rehabilitation practice. *Journal of Rehabilitation Administration*, 29, 43-56.

Lewis, J. A., Lewis, M. D., Packard, T., & Souflee, F. (2001). *Management of human service programs* (3rd ed.). Belmont, CA: Wadsworth.

McClellan, A. T. (2002). Technology transfer and the treatment of addiction: What can research offer practice? *Journal of Substance Abuse Treatment*, 22, 169-170.

McCrary, B. S. (2000). Alcohol use disorders and the division 12 task force of the American Psychological Association. *Psychology of Addictive Behaviors*, 14, 267-276.

McGlynn, E., Asch, S., Adams, J., Keesey, J., Hicks, J., DeCristofaro, A., & Kerr, E. (2003). The quality of health care delivered to adults in the United States. *New England Journal of Medicine*, 348, 2635-2645.

McGovern, M.P., Fox, T.S., Xie, H., & Drake, R.E. (2004). A survey of clinical practices and readiness to adopt evidence-based practices: Dissemination research in an addiction treatment system. *Journal of Substance Abuse Treatment*, 26, 305-312.

Miller, W. R., & Rollnick, S. (2002). *Motivational interviewing: Preparing people for change*. New York: Guilford Press, 2002.

Morgenstern, J. et al. (2001). Manual-guided cognitive-behavioral therapy training: A promising method for disseminating empirically supported substance abuse treatments to the practice community. *Psychology of Addictive Behaviors*, 15, 83-88.

Moxley, D. P., Manela, R. W., & Finch, J. R. (2000). The role of evaluation in facilitating change in rehabilitation agencies. *Journal of Rehabilitation Administration*, 24, 41-55.

NIATx (2006). Primer on process improvement. Retrieved April 3rd, 2006 from

<http://www.niatx.org>.

Osborn, C. J., & Thombs, D. L. (2002). Clinical orientation and sociodemographic characteristics of chemical dependency practitioners in Ohio. *Journal of Teaching in the Addictions, 1* (1), 5-18.

Roman, P.M., & Johnson, J. A. (2002). Adoption and implementation of new technologies in substance abuse treatment. *Journal of Substance Abuse Treatment, 22*, 211-218.

Silverman, W. H. (1996). Cookbooks, manuals, and paint-by-numbers psychotherapy in the 90's. *Psychotherapy, 33*, 207-215.

Simpson, D. D. (2004). A conceptual framework for drug treatment process and outcomes. *Journal of Substance Abuse Treatment, 27*, 99-121.

Simons, L., Jacobucci, R., & Houston, H. (2002). Undergraduate and graduate students' attitudes toward addiction treatment manuals. *Journal of Teaching in the Addictions, 4*, 23-43.

Whittaker, J. K. et al. (2006). Integrating evidence-based practice in the child mental health agency: A template for clinical and organizational change. *American Journal of Orthopsychiatry, 76*, 194-201

Wil enbring, M. L. et al. (2004). Beliefs about evidence-based practices in addiction treatment: A survey of veteran's administration program leaders. *Journal of Substance Abuse Treatment, 26*, 79-85.

Winum, P., Ryterband, E., & Stephenson, P. (1997). Helping organizations change: A model for guiding consultation. *Consulting Psychology Journal: Research and Practice, 49*, 6-16.

Author Note:

Preparation of this article was supported by a Center for Substance Abuse Treatment grant (No. T115651) awarded to the Council on Drug and Alcohol Abuse for Greater New Orleans. Correspondence concerning this article should be sent to Paul Toriello, Dept. of Rehabilitation Studies, Health Sciences Bldg. Room 4425, ECU, Greenville, NC 27858-4353 or TorielloP@ecu.edu.

About the Authors:

Paul J. Toriello is an Assistant Professor of Rehabilitation Studies at East Carolina University. **Patricia Morse** and **Edward V. Morse** are Associate Professors of Clinical Psychiatry at Louisiana State University Health Sciences Center. **Joseph E. Keferl** is an Assistant Professor of Rehabilitation Counseling at Wright State University and **Else Pedersen-Wasson** is the Associate Executive Director of the Bridge House Corporation.