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Implementation of Evidence-Based Substance Use Disorder Continuing Care Interventions

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Abstract

Continuing care following initial substance use disorder treatment often is associated with improved treatment outcomes and evidence-based interventions (EBIs) have been developed in this area. However, rates of patient participation in continuing care treatment and mutual help groups (MHGs) are low and a large gap exists between the existing EBIs and actual clinical care. This paper uses the Consolidated Framework for Implementation Research (CFIR; Damschroder et al., 2009) to review the literature on continuing care treatment and monitoring, and mutual help-group promotion. Although existing research provides implications for implementing EBIs in continuing care, few direct implementation trials have been conducted. This literature indicates that EBIs in continuing care have been successfully modified for different settings, that they can be delivered using different modalities (e.g., individual, group, and telephone-based care), and that low cost options are available. Additionally, much is known about the differential effectiveness of continuing care with different populations that may guide treatment programs and providers in selecting the most effective interventions for their clients. One significant barrier to successful implementation of EBIs for continuing care is the lack of information about incentives for providing continuing care across what in the CFIR terminology is a program's *outer setting* (i.e., external economic, political, and social setting), and its *inner setting* (i.e., internal political, structural, and cultural contexts). Implications for implementation of EBIs in SUD continuing care are discussed.

Keywords

Substance Dependence; Alcohol Dependence; Continuing Care; Mutual Help Groups; Implementation

Growing interest in promoting substance use disorder (SUD) continuing care has flowed from research demonstrating the importance of extending the duration of treatment beyond a brief episode of acute care. Further, SUDs increasingly are being viewed as chronic conditions for many persons that often require ongoing care management that is adapted to the needs of the individual. Continuing care is the stage of treatment following initial, more intensive, treatment and is conceptualized here to include individual, telephone, and group therapy; brief check-ups; and mutual-help meetings. A number of correlational and controlled studies have shown that receiving continuing care is associated with improved substance use outcomes although not all studies have yielded positive results. However, in clinical settings continuing care participation rates often are low and few mechanisms have been developed for monitoring clients over extended time periods to support management of their recovery (McKay, 2009a). Continuing care research supports increasing the duration of care, ongoing monitoring of clients, reaching out actively to engage and link clients to care, and using incentives to improve treatment outcomes (see McKay, 2009b for a review). However, in the field relatively few efforts have been made to implement and sustain such evidence-based interventions (EBIs, i.e., interventions with established efficacy and effectiveness). In an effort to better understand this discrepancy, this paper reviews the implementation of EBIs for SUD continuing care and provides recommendations for future implementation efforts in this important area.

The need to close the gap between research and clinical practice for the treatment of SUDs is great, particularly in the area of continuing care. According to Miller, Sorensen, Selzer, and Brigham (2006), clinicians typically use treatments based on folk wisdom accumulated by peers, and rely on observation and personal experience rather than EBIs. Similarly, others have concluded that although many EBIs have been developed, clinicians and treatment programs widely use practices with little or no evidence of effectiveness and they seldom are trained in or use EBIs (Carroll & Rounsaville, 2007; Sorenson, Hettema, & Chen, 2007; Delany, Shields, Willenbring, & Huebner, 2008). Wilbourne and Weingardt (2007) attribute this gap in part to researchers' use of passive dissemination techniques and call for both active micro and macro strategies to increase sustainable implementation of EBIs.

The gap between practice and research in SUD continuing care is substantial. For example, in a survey about EBI guideline use among leaders of U.S. Veterans Administration (VA) SUD treatment programs, 78% agreed that there was strong evidence for extended treatment for at least 6 months following initial treatment and 92% agreed this should be routinely recommended. However, only 62% rated their programs as 'high' on implementation of this guideline, despite substantial ongoing efforts of the VA to promote continuing treatment (Willenbring et al., 2004). Similarly, although 12-step mutual help groups (MHGs) are the most strongly endorsed and frequently recommended continuing care option (Fenster, 2006), one study found that 43% of VA SUD programs did not even refer clients to MHGs (Tracy

& Trafton, 2006). Although it is unclear how well these findings generalize to non-VA settings, they suggest a sizable gap between our knowledge and clinical practice.

The gap between research and practice has brought increasing attention to the need to study implementation of EBIs in SUD treatment. According to Sorenson et al. (2007), research in this area is at a rudimentary stage. Little research has examined how to best implement EBIs in SUD treatment and most publications in this area consist of anecdotes and testimonials, rather than controlled research. Unfortunately, typical implementation techniques, such as training clinicians through provision of therapist manuals and one-time workshops are relatively ineffective (Miller et al., 2006). Even when EBIs are used in community-based SUD treatment programs as part of clinical trials with intensive training and ongoing supervision, typically little thought is given to sustaining them (Guydish, Tajima, Manser, & Jessup, 2007) and the interventions are seldom continued once the research study and supervision ends (e.g., Fals-Stewart & Logsdon, 2004).

Various theories and conceptual models for studying implementation in health care and mental health care have been proposed to help promote, guide, and evaluate implementation efforts. The Consolidated Framework for Implementation Research (CFIR; Damschroder et al., 2009; Damschroder & Hagedorn, this issue) is a promising, integrative approach that seems particularly applicable to the dissemination of EBIs for SUD treatment. The CFIR was created to better characterize the implementation process since terminology varies across models and available implementation theories often fail to consider one or more important implementation constructs. This meta-theoretical framework consists of five major domains of implementation that should be considered in designing and evaluating implementation efforts: 1) intervention characteristics which typically must be adapted to the clinic, 2) outer setting of the organization or clinic, 3) inner setting of the organization or clinic, 4) characteristics of the individual involved with the implementation, and 5) process of implementation. Specific constructs are grouped under each domain and should be considered to guide formative evaluations conducted before, during, and after implementation occurs. A brief description of the CFIR domains and associated constructs is presented in Table 1.

To better understand implementation of EBIs for SUD continuing care, first we briefly will present the evidence supporting continuing care. Next, we review the available implementation research using the five domains of the CFIR as a framework. Finally, in the discussion section, we summarize the key findings and related implications for researchers and practitioners, again using the CFIR. Each of these sections will focus on the two primary types of continuing care: continuing treatment and monitoring, and MHG participation following treatment. Our review of the literature will focus on behavioral EBIs since pharmacological interventions are reviewed in another article in this series, and 12-step MHGs since they are most prevalent MHGs in the SUD field.

Evidence-based Continuing Care

Below the research evidence supporting both continuing treatment and MHG following initial treatment are reviewed.

SUD Continuing Treatment and Monitoring

The field of addiction treatment has increasingly focused on the development and evaluation of continuing care interventions (Dennis & Scott, 2007; Humphreys & Tucker, 2002; McKay, 2005; McKay, 2009a). Continuing treatment interventions are provided for some period of time after discharge from an initial, more intensive treatment experience. A typical example of a continuing treatment is weekly group counseling after residential or intensive outpatient treatment, but continuing treatment interventions also include other modalities such as individual therapy, case management, home visits, telephone calls, and couples therapy. In the majority of research studies in which continuing care interventions of six months or less have been evaluated, the interventions have been provided after residential treatment regardless of how clients were doing. However, most longer continuing care interventions are “adaptive” (McKay, 2009a) in which the frequency or nature of the services provided change in response to changes in a client’s symptoms or status (Murphy, Lynch, McKay, Oslin, & TenHave, 2007; Murphy & McKay, 2004). Treatment is not changed solely on the basis of clinical judgment; rather, clients are assessed at regular intervals on what are referred to as “tailoring variables,” and these measurements are used to trigger changes in treatment according to predetermined decision rules (McKay, 2009a). Research findings have accumulated to support the hypothesis that continuing care is effective in enhancing long-term outcomes although not all studies have been positive (see McKay, 2005 and 2009b for a review). However, it should be noted that most of the treatments that have demonstrated effectiveness are not widely used (McLellan, Carise, & Kleber, 2003). Moreover, many patients do not complete initial treatment, do not enter continuing care, and do not remain in continue care for a significant time period (McKay et al., 2004; SAMHSA, 2008). As a result, few clients who might benefit from continuing care treatment actually receive a sufficient dose of it. The reasons why clients do not enter continuing care or drop out early have not been studied systematically, although access, cost, convenience, and degree of motivation for more treatment are probably all important barriers.

The number of studies of SUD continuing treatment interventions still is relatively small, and the studies themselves are heterogeneous with regard to design (McKay, 2009a; McKay, in press). Therefore, it is not possible to conclude that a specific manualized therapeutic approach such as Motivational Enhancement Therapy (MET) is an EBI in this area. However, findings from these studies support certain general EBIs. Continuing care is more likely to yield positive effects in controlled studies when it is at least 12 months in duration, and features active efforts to deliver the intervention to clients (McKay, 2009a; McKay, 2009b). Conversely, the theoretical orientation and intensity of the interventions appear less important. Examples of effective treatment related SUD continuing care treatments include home visits by a psychiatric nurse (Patterson, MacPherson, & Brady, 1997), Behavioral Couples Therapy (BCT¹; O’Farrell, Choquette, & Cutter, 1998), comprehensive community reintegration for criminal justice clients (Brown, O’Grady, Battjes, & Farrell, 2004), assertive case management for adolescents (Godley, Godley, Dennis, Funk, & Passetti, 2006), and telephone-based continuing care (McKay et al., 2005, 2009a). Evidence indicates that relatively low-cost practices can dramatically improve rates of sustained engagement in continuing care such as low level incentives (Chutuape, Katz, & Stitzer, 2001) and active

outreach following discharge or dropout (Coviello, Zanis, Wesnoski, & Alterman, 2006). Contracts, Prompts, and Reinforcement (CPR) is one of the more promising low cost interventions for increasing retention (Lash et al., 2007). It also should be noted that continuing care services increasingly are available via the internet as promising low cost interventions, although no controlled studies of this approach have been published thus far.

An increasing number of studies have evaluated interventions that provide a complete continuum of care, rather than just the continuing care phase of treatment. Longer interventions that feature more active efforts to engage and retain clients are more likely to yield positive effects (McKay, 2009a) and most of these interventions have adaptive features. These interventions have included comprehensive case management programs for welfare recipients (Morgenstern, Hogue, Dauber, Dasaro, & McKay, 2009), recovery management checkups with active linkage to treatment when necessary (Scott & Dennis, 2009), extended provision of monetary incentives for abstinence (Silverman, Robles, Mudric, Bigelow, & Stitzer, 2004), and extended care models in which SUD treatment is integrated with primary care (Lieber, Weiss, Groszmann, Paronetto, & Schenker, 2003; Willenbring & Olson, 1999).

SUD Mutual-Help Group Continuing Care

In addition to continuing treatment, SUD continuing care EBIs that focus on promotion of MHGs are an important source of care following initial treatment. MHGs, often called self-help or support groups, are the most widely available continuing care option, in part because they are well-integrated into professional treatment services (Laudet, 2003; Weisner, Greenfield, & Room, 1995). The most prevalent substance use-focused mutual-help programs, including Alcoholics Anonymous (AA) and Narcotics Anonymous (NA), follow traditional 12-step principles. Although not establishing causality, several prospective studies have shown that MHG attendance following initial treatment is associated with positive substance use outcomes. For example, Project MATCH, a large clinical trial of treatments for clients with alcohol use disorders that included both outpatient and continuing care treatment, found that more self-reported AA attendance was associated with a higher likelihood of abstinence at the 1-year and 3-year follow-ups among the outpatient sample (Project MATCH Research Group, 1997 & 1998). Comparable findings were obtained in several other studies of AA (Gossop et al., 2003; Kelly, Stout, Zywiak, & Schneider, 2006) and NA (Crape, Latkin, Laris, & Knowlton, 2002; Toumbourou, Hamilton, U'Ren, Stevens-Jones, & Storey, 2002). In addition, individuals who continued to attend MHGs over a longer period of time were more likely to maintain abstinence than were individuals who dropped out (Fiorentine, 1999; Kissin, McLeod, & McKay, 2003). More group involvement (e.g., getting a sponsor or reading 12-step literature) has been associated with better substance use outcomes, independent of the frequency and duration of attendance (Cloud, Ziegler, & Blondell, 2004; Fiorentine & Hillhouse, 2000; Gomes & Hart, 2009). However, despite the benefits of MHG participation, and the finding that 91% of patients with SUDs attended at least one 12-step group meeting either during treatment or in the year after treatment, 40% of these individuals had dropped out by a 1-year follow-up (Kelly & Moos, 2003).

Many individuals participate in both continuing care treatment and MHG continuing care and concurrent participation in both forms of continuing care is associated with improved treatment outcomes. For example, compared to clients who participated only in 12-step MHGs or outpatient mental health continuing treatment after discharge from residential care, those who participated in both experienced better one-year substance-related outcomes (Ouimette, Moos, & Finney, 1998). In a study of individuals with alcohol use disorders, individuals who participated in both treatment and AA were more likely to be remitted at both 1- and 16-year follow-ups than were individuals who received only treatment in the first year (Moos & Moos, 2005).

Interventions to promote participation in 12-step MHGs can be traced to the use of Twelve Step Facilitation (TSF), a manual-guided therapy, as a treatment condition in Project MATCH (Nowinski, Baker, & Carroll, 1992). Project MATCH compared TSF to Cognitive-Behavioral Therapy (CBT) and MET in initial outpatient and continuing care alcohol dependence treatment settings. Outpatients who received TSF achieved significantly higher rates of continuous abstinence and were comparable on other drinking-related outcomes mediated by its greater success at engaging clients in 12-step activities (Tonigan et al., 2003). Similar results were found in a large, multisite study of SUD treatment in the VA (Humphreys, Huebsch, Finney, & Moos, 1999). Recently, Walitzer, Dermen, and Barrick (2009) examined the efficacy of a motivational enhancement approach and a directive TSF approach to facilitate participation in AA in comparison to usual care. Participants exposed to TSF reported more attendance and involvement in AA, and greater abstinence during portions of the year following treatment, relative to usual care participants who did not differ from those exposed to the motivation enhancement approach on these outcomes. Having reviewed the evidence pertaining to SUD continuing care, we next examine what currently is known regarding implementation of continuing care treatment and MHGs.

Implementation Research in Continuing Care

This section reviews research pertaining to implementation of continuing care interventions using the five domains of the CFIR framework as a means of organizing and summarizing these findings as they relate to implementation efforts. The continuing treatment and the MHG literature are summarized separately within each of the CFIR domains. As previously noted, Table 1 describes each of the CRIF domains, lists their relevant constructs, summarizes the implementation barriers found in the continuing care literature for each domain, and provides recommendations for future research.

For the purpose of this review, the PsycINFO database was searched for relevant studies, resulting in 257 published studies addressing implementation science, substance abuse, and either continuing care or self-help groups¹. The abstracts for the identified published studies were reviewed for relevance with 28 articles selected for further review. Additionally, other

¹Search terms for *substance abuse* were: alcohol abuse, alcohol dependence, alcoholism, alcohol problems, alcohol use disorders, substance abuse, substance dependence, substance use, drug abuse, drug dependence, drug use, addiction, problem drinking, at risk drinking, and hazardous drinking. Search terms for *implementation science* were: implementation, implementing, implementation science, implementation research, dissemination, disseminate, diffusion, adoption, adopting, technology transfer, translation, and training. Search terms for *continuing treatment* were: continuing care, aftercare, extended care, continuum of care, stepped care, step-down, step-up, disease management, adaptive care, treatment algorithms, and treatment regimes. Search terms for *Mutual Help Groups*

relevant articles known to the authors, or referenced in the literature being reviewed were examined. The information reported here generally comes from three categories of research: 1) efficacy/effectiveness studies that contain patient-level information that is useful to considerations of implementation; 2) studies that either gathered process data on implementation in an effectiveness trial, or provided a description of implementation barriers/facilitators in an effectiveness trial or effort to implement continuing care; and 3) implementation trials where an implementation intervention was evaluated/tested in some form. Since few continuing care implementation trials were found, most of the summarized information comes from the first two of these categories of research.

CFIR Domain 1: Characteristics of the Intervention

Characteristics of the intervention influence implementation by the degree to which they fit, or can be adapted to a particular setting. According to the CFIR, intervention source (e.g., internal or external), perceived evidence strength and quality, relative advantage, adaptability, trialability, complexity, design quality, and cost are important characteristics of the clinical intervention that need to be considered for implementation efforts. A number of studies in the continuing treatment and MHG implementation literature point to key *characteristics of the intervention* that should be considered in implementation efforts and these are reviewed next.

Continuing treatment and monitoring.—The perceived strength of the evidence supporting an intervention is an important construct in this domain. A survey of program leaders from 132 VA facilities found that “extended continuing care” was rated highest in strength of evidence among treatment options (Willenbring et al., 2004), indicating that research in this area is reaching clinical managers. However, it is not clear if this finding generalizes to other clinical settings. Furthermore, this finding did not necessarily translate into perceived strength of evidence for specific interventions that support continuing care. While a strong evidence base is a facilitator of adoption, it is not sufficient to ensure widespread adoption.

Another key characteristic of a clinical intervention’s adoptability is the extent to which it can be adapted to local contexts and retain its effectiveness. The CFIR framework notes that EBIs have core components that should not be changed along with an adaptable “periphery.” However, it is unclear for most interventions which components clearly contribute to their effectiveness. One exception is the CPR intervention which was developed in a stepwise manner, with contracts, prompts, and reinforcement each being associated with improved continuing care adherence (Lash, 1998; Lash & Blosser, 1999; Lash, Petersen, O’Connor, & Lehmann, 2001). While there are not a substantial number of rigorous component analyses of clinical interventions in this area to guide such adaptation, the continuing care literature does contain some very useful studies of interventions adapted to certain contexts or delivery systems. For example, McKay, Lynch, Shepard, and Pettinati (2005) found telephone-based continuing care for alcohol and cocaine dependence to be more effective than group

were: self-help, mutual help, mutual aid, Oxford House, SMART Recovery, Women for Sobriety, Peer recovery, 12-step, twelve-step, alcoholics anonymous, AA, narcotics anonymous, NA, cocaine anonymous, CA, meth anonymous, and CMA.

counseling or Relapse Prevention/CBT on most outcomes examined for IOP completers. Others studies have tested interventions based in medical and primary care settings conducted by nurses, physicians, and/or co-located behavioral specialists with positive results (see McKay, 2009a for a review).

Another key characteristic of an intervention's adoptability is its relative complexity. In general, the more complex an intervention (i.e., number of components, extent of training necessary, number of persons within an organization needed to implement it, degree to which it alters/disrupts routine), the more difficult it will be to implement (Damschroder et al., 2009; Fixsen, Naoom, Blase, Friedman, & Wallace, 2005; Greenhalgh, Robert, Macfarlane, Bate, & Kyriakidou, 2004). Continuing care EBIs that include increased duration of care and active efforts to deliver treatment to the patient tend to be relatively complex compared to the interventions (e.g., screening and medication management) that have received more attention in the broader field of implementation research. Similar constructs related to the *characteristics of the intervention* also are relevant to our review of the MHG literature.

Mutual-help group continuing care.—As previously noted, key intervention characteristic within the CFIR is the degree to which the intervention can be adapted to fit different populations, formats and settings. Several studies have adapted the use of TSF as originally designed in Project MATCH with good results. TSF delivered in a group format is effective in promoting participation in 12-step MHGs and improving substance use outcomes (Brown, Seraganian, Tremblay, & Annis, 2002). Similarly, adaptations of TSF have been developed for clients seen in non-specialty care settings (Kelly & McCrady, 2008) and those who are dually diagnosed with substance use and other psychiatric disorders (Ries, Galanter, & Tonigan, 2008). Expert recommendations have called for developing briefer 12-step promotion interventions that are more broadly useful within existing practice and reimbursement frameworks (Humphreys et al., 2004). Accordingly, Timko and DeBenedetti (2007) compared clients entering outpatient SUD treatment who were randomly assigned to either standard referral or a more intensive, but still brief, referral to 12-step MHGs. Those who received the more intensive-referral were more likely to attend and to have greater involvement in MHG meetings, have greater abstinence rates, and have lower rates of substance use over a one-year follow-up. In related work, Kaskutas, Subbaraman, Witbrodt, and Zemore (2009) developed MAAEZ (Making AA Easier) and evaluated in a quasi-experimental design this practical intervention designed to help clients connect with the culture of 12-step MHGs. More clients in MAAEZ than in usual care were abstinent at the one-year follow-up, although they did not differ in meeting attendance or involvement in 12-step activities. Litt, Kadden, Kabela-Cormier, and Petry (2007; 2009) adapted TSF to emphasize changing the client's social network to be more supportive of abstinence and less supportive of drinking. They compared clients with alcohol problems assigned to network support, network support plus contingency management (reinforcement for completion of assigned tasks), or a case management control condition. Although, network support for drinking had decreased in all three conditions, only the two network support conditions resulted in increased support for abstinence. The network support conditions also resulted in better drinking outcomes than did case management.

Furthermore, by 24 months, the network support condition yielded up to 20% more days abstinent than the other two conditions.

CFIR Domain 2: Outer Setting

The outer setting or environment in which an organization or clinic will reside can act as a barrier or facilitator of an intervention's implementation. The CFIR highlights that implementation of treatment and MHG continuing care efforts need to take into account the outer setting in which an EBI will exist at a particular site. Outer setting constructs include patient needs and resources (different types of patients have unique needs and resources), cosmopolitanism (the degree to which an organization is networked with others), peer pressure to implement the intervention, and external policies and incentives. Important *outer setting* factors found in the continuing treatment and MHG implementation literature that should be considered in implementation efforts are reviewed next.

Continuing treatment and monitoring.—Findings suggest that clients with more severe SUD and psychiatric symptoms, those with more resources for recovery (e.g., cognitive abstracting abilities, religious beliefs, and high motivation levels), those with an increased perception of treatment staff supportiveness, and African-Americans are more likely to engage in continuing treatment for a longer time period (Harris, McKellar, Moos, Schaefer, & Cronkite, 2006). Additionally, increased convenience of the treatment center frequently has been found to be associated with greater continuing care participation (e.g., Schmitt, Phibbs, & Piette, 2003).

Only a few studies shed light on the importance of external funding and organizational policy to the implementation of SUD continuing care. A qualitative “autopsy” of what happened after a number of clinical trials of BCT in community SUD programs (Fals-Stewart & Logsdon, 2004) demonstrated the critical role of funding as a barrier to implementation success^{2, 3}. In 4 of the 5 programs, the BCT intervention was not sustained, and a key barrier in the non-sustaining programs was reimbursement for the treatment. In the one case where BCT was sustained the program was able to bill successfully for most of the BCT sessions. Further, in an implementation demonstration of BCT to promote aftercare (O'Farrell, Murphy, Alter, & Fals-Stewart, 2007), one important factor contributing to its success appeared to be that the therapist providing BCT was salaried by the program and did not need to bill to promote aftercare services.

A report detailing the implementation of the Betty Ford Center's Focused Continuing Care (FCC) protocol stressed the importance of the organization setting a new policy that FCC would be a standard telephone intervention provided to all clients (Cacciola et al., 2008). As a result, the Center funded the staff, training, and supervision necessary to implement FCC. Further, the Center operates on a self-pay basis only. In contrast, most treatment programs need to bill a third party payer for services. A report on implementation experiences in the

²In light of the recent events surrounding Dr. Fals-Stewart, the literature related to the effectiveness of behavioral couples therapy (BCT) was explored further. A current review of the literature indicates that there remains support for consideration of BCT as an EBI when those trials conducted by William Fals-Stewart are excluded (personal communication, Makin-Byrd, 2010).

³It is unclear if the clinical trials in this study included those in which BCT was conducted at least in part following initial treatment. Regardless, the conclusions of this post-trial review are still likely relevant to efforts to sustain use of BCT in continuing care.

US and elsewhere suggests that flexible or alternative forms of reimbursement need to be negotiated with insurance companies for successful implementation to take place (Vanderplasschen, Rapp, Wolf, & Broekaert, 2004). Similarly, a report on the redesign of the Dutch SUD treatment system (Schippers, Schramade, & Walburg, 2002) discussed the nation-wide implementation of new services, including “case management” and “aftercare,” based on a system-level decision to use central funding.

Mutual-help group continuing care.—Viewed in the context of the CFIR model and again similar to the continuing care treatment literature, most of the work on MHG promotion has focused on client needs and resources that are likely to influence the success of implementation efforts. TSF has been found to be effective for promoting participation in 12-step MHGs and improving substance use outcomes among clients dependent on both alcohol and cocaine (Carroll et al., 2000). Individuals who are heavier substance users and have more substance-related problems, are more dependent on substances, and lack control over their substance use are more likely to affiliate with MHGs. More impaired clients also are more likely to continue MHG attendance than are less impaired clients (Connors, Tonigan, & Miller, 2001; Tonigan, Bogenschutz, & Miller, 2006) and benefit more from MHG involvement (Morgenstern et al., 2003). A greater frequency and duration of MHG attendance also is associated with better SUD outcomes for clients with different substance diagnoses (Witbrodt & Kaskutas, 2005). With the exception of clients with psychotic disorders, dually diagnosed clients are as likely to attend 12-step MHGs as are those with only SUDs (Jordan, Davidson, Herman, & Bootsmiller, 2002). More importantly, dually diagnosed clients in general appear to benefit as much from 12-step MHGs as do clients with only SUDs (Ouimette et al., 1998; Ritsher, McKellar, Finney, Otilingam, & Moos, 2002; Ritsher, Moos, & Finney, 2002).

In addition to severity of substance use and the presence of other psychiatric disorders, researchers have examined other client needs and resources that affect MHG participation. Individuals whose beliefs are more consonant with 12-step principles are more likely to affiliate with 12-step MHGs (Kelly & Moos, 2003; Mankowski et al., 2001) as are individuals with stronger religious beliefs (Kelly & Moos, 2003; Timko, DeBenedetti, & Billow, 2006). Women are as likely as or more likely than men to begin and continue to participate in MHGs, and this is associated with as good or better outcomes (Kaskutas et al., 2005; Moos, Moos, & Timko, 2006). Compared to Caucasians, African-Americans are more likely to attend MHGs, and sustain MHG attendance after initial treatment (Kaskutas, Weisner, Lee, & Humphreys, 1999). Compared to non-Hispanic white individuals, Hispanic individuals are less likely to attend AA after treatment, but they benefit as much when they do attend (Arroyo, Miller, & Tonigan, 2003). Court-mandated clients attend more MHG meetings than those not mandated (Humphreys, Kaskutas, & Weisner, 1998).

Like treatment-based continuing care, the convenience of MHGs has been highlighted in several studies as a factor related to utilization. On-site 12-step meetings increase attendance among clients and predict continuous abstinence over the next year (Laudet, Stanick, & Sands, 2007). Clinicians from treatment programs with high MHG attendance rates among clients tend to work with local 12-step MHG members to conduct meetings at the treatment center and involve clients in 12-step activities (Passeti & Godley, 2008).

CFIR Domain 3: Inner Setting

The inner setting or environment within an organization or clinic in which an intervention will reside can act as a barrier to, or facilitator of an intervention. In the CFIR framework, the inner setting in which implementation efforts take place refers to the program's context. Inner setting constructs consist of structural characteristics, networks and communications, culture, implementation climate (including incentives), and readiness for implementation. Next, *inner setting* variables shown in the continuing treatment and MHG literature that have importance for implementation efforts are reviewed.

Continuing treatment and monitoring.—A number of studies provide evidence of the importance of inner setting constructs to implementing continuing care treatment interventions. In a one-site demonstration project implementing BCT to promote aftercare (O'Farrell et al., 2008) key inner setting facilitators of implementation were the development of performance goals (i.e., fidelity benchmarks), collection and feeding back of performance data to the program, and using those data to “tweak” the implementation in a formative manner (Stetler et al., 2006). As such, the implementation in this case benefited from several elements of CFIR's *positive implementation culture*, an inner setting construct. Other descriptive reports of treatment continuing care implementation efforts similarly note common inner setting facilitators including performance monitoring, feedback, and multi-stakeholder involvement. As reported by Fertman and Toca (1989), the implementation of an adolescent SUD aftercare program in three school districts in the U.S. was facilitated by a cooperative approach to developing the intervention among the schools and community agencies and the use of process data to continually modify the intervention. The report describing U.S. and European experiences in implementing case management with ongoing monitoring of clients during the continuing care phase for SUDs cites administrative support, a team approach, and extensive training and supervision as important facilitators for implementation success (Vanderplasschen et al., 2004). Further, the report describing the implementation efforts at the Betty Ford Center of the FCC intervention (Cacciola et al., 2008) also details the collection of process and satisfaction data during an early stage of the implementation and use of those data to re-work the intervention, thus demonstrating elements of the CFIR's positive implementation and learning climates. The redesign in the Dutch SUD treatment system that introduced new continuing care interventions also contained several of these implementation facilitators, such as multi-stakeholder involvement, benchmarking of performance, and measurement and feedback of performance data (Schippers, Schramade, & Walburg, 2002).

The U. S. Department of Veterans Affairs also uses benchmarking, measurement, multi-stakeholder involvement, and performance feedback system-wide for quality improvement efforts and to facilitate implementation of EBIs. Harris, Humphreys, Bowe, Kivlahan and Finney (2009) describe the use of a system-wide performance measure for SUD programs to increase the percentage of clients who maintain continuous involvement in SUD treatment for 90 days after a new episode of treatment. Using this performance monitoring system, the 90-day SUD Continuity of Care performance measure among veterans has improved by from 35% in 2005 to a 52% in 2009. A study by Shepard et al. (2006) demonstrated how incentives could be used with counselors to increase the participation of their clients in

continuing care. Such incentives can be used to increase uptake of interventions even in the case of counselors' ambiguous attitudes towards the intervention, as is found with SUD clients in contingency management interventions (Stitzer & Vandrey, 2008).

Mutual-help group continuing care.—Inner setting variables, or characteristics of the program such as the treatment environment and orientation, also influence MHG implementation. Among clients receiving TSF in Project MATCH, those who developed a stronger alliance in treatment were more likely to attend AA during and after treatment (Tonigan et al., 2003). Similarly, clients in more supportive treatment environments showed greater increases in 12-step involvement during treatment compared to those in less supportive environments (Kelly & Moos, 2003). A stronger spiritual orientation in treatment also has been related to more post-treatment MHG involvement (Mankowski, Humphreys, & Moos, 2001). Furthermore, as noted earlier, when clients' initial treatment has a 12-step orientation, they participate more in 12-step MHGs after treatment (Humphreys et al., 1999; Tonigan et al., 2003).

CFIR Domain 4: Characteristics of Individuals

Characteristics of the individuals involved with the intervention or its implementation is an additional domain specified by the CFIR as requiring careful consideration for implementation efforts since they can be significant barriers to, or facilitators of implementation. The constructs making up this domain relate to characteristics of treatment providers and include knowledge and beliefs about the intervention, self-efficacy for implementing the intervention, individual stage of change, individual identification with the organization, and other personal attributes. Next, *characteristics of the individuals* implementing continuing treatment and MHG implementation shown to be important in the literature are reviewed.

Continuing treatment and monitoring.—Willenbring et al.'s (2004) VA study of program leaders' beliefs about EBIs demonstrated generally strong beliefs about the effectiveness of continued treatment and the desire to use it. However, the extent to which the program leaders knew which specific interventions were likely to be effective was unclear. For example, despite being one of the most supported SUD continuing care interventions, behavioral marital therapy was endorsed as having high evidence of effectiveness by only 37% of program leaders and only 8% reported high implementation of it in their programs. The survey asked about barriers to the less implemented practices, and 54% reported marital therapy as a low demand/priority treatment (e.g., many clients may not have spouses or partners), while 68% reported a lack of staff time, and 53% reported lack of knowledge as a barrier.

Mutual-help group continuing care.—*Characteristics of the individuals* conducting the intervention also are important variables in the MHG implementation literature. Among SUD service providers, positive attitudes toward 12-step MHGs and less concern about MHGs having an emphasis on religion and powerlessness were associated with higher rates of referrals to 12-step groups (Humphreys, 1997; Laudet & White, 2005). Programs employing a higher percentage of staff in recovery make more referrals to 12-step MHGs

(Humphreys, 1997). Furthermore, staff who referred only to 12-step groups, compared to those who referred to other options, believed less in the effectiveness of CBT and other types of professional therapy, had more years of experience in SUD treatment, and worked in treatment programs that required clients to remain abstinent during treatment (Fenster, 2006).

CFIR Domain 5: Implementation Process

An active change process is typically required for successful implementation of EBIs. The CFIR model draws attention to the active change process that is typically required for successful implementation at the individual and organizational level. This domain, the *implementation process*, includes the constructs of planning, engaging, executing, and reflecting and evaluating. Implementation efforts may cycle forward and backward between the phases. Below, studies that have evaluated several of these *implementation process* constructs in the continuing treatment and MHG implementation literature are reviewed.

Continuing treatment and monitoring.—Numerous strategies discussed in the summary above of *inner setting* facilitators are relevant to the implementation process and should be considered to maximize implementation potential (e.g., performance monitoring, feedback, and multi-stakeholder involvement). In addition, it should be noted that the successful implementation efforts by O’Farrell et al. (2007), Fertman and Toca (1989), Cacciola et al. (2008), and Vanderplasschen et al. (2004) each involved more than one of the four essential CFIR process activities (e.g., planning, engaging, executing, and reflecting and evaluating) in support of implementation. Unfortunately, only these few studies included relevant information concerning implementation of continuing care in the treatment setting. However, another article in this special issue (Manuel, Hagedorn, & Finney, this issue) discusses the more populous literature on implementation studies and larger dissemination/implementation efforts to promote adoption of psychotherapies for SUDs (e.g., CBT, MET, and contingency management).

Mutual-help group continuing care.—The MHG literature examining the implementation process is reviewed below. The Self-help Toolkit Implementation Project (McKellar, Schaefer, & Timko, 2010) provides direct information regarding the implementation process for MHG continuing care. To improve the referral and retention of SUD clients in MHGs, the VA’s SUD QUERI (Quality Enhancement Research Initiative) Retention in Continuing Care Workgroup created a website for clinicians called the “Self-Help Toolkit.” Implementation of the toolkit has involved specific efforts to plan, execute, and evaluate its use and dissemination, reflect on evaluation findings, and subsequently initiate another series of planning, execution, and evaluation projects. The primary goal of the website is the promotion of the MHG referral algorithm, referred to as “Active Mutual-Help Referral.” The website also educates those unaccustomed to referring clients to MHGs or who are unaware of the variety of SUD mutual-help groups available to clients. McKellar, Schaefer, and Timko (2009) have found that determinants of how clinicians view the mutual-help website include perceptions of the relative benefits of MHG referral, the degree to which this practice is compatible with clinicians’ values or norms, and the degree to which clinicians can adapt or refine the website’s MHG referral algorithm to suit their own needs.

The initial findings suggest a highly positive reception from providers in terms of usefulness to their work (McKellar et al., 2010). Clinicians' perceptions of the toolkit are influenced by existing treatment program elements or readiness factors that impact clinician receptivity, such as the fit between the toolkit and the treatment program's values, the degree to which the treatment program is receiving support during the early phases of adoption of the toolkit, and whether systems exist for monitoring and feedback about success or failure of adoption. Having reviewed the existing implementation research using CFIR as a frame, we next summarize the findings for each of the 5 domains of the CFIR, and then discuss the areas most in need of attention from researchers and practitioners.

Discussion

Accumulating research supports the importance of promoting continuing care following initial SUD treatment with a goal of moving clients from initiation of treatment gains to sustainable recovery. Both treatment-based and MHG-based continuing care are associated with improved treatment outcome. Increasing the duration of treatment and continued monitoring of clients is associated with improved substance use outcomes. Although there are few clearly defined EBIs in the traditional sense of a particular manualized intervention such as MET, a range of continuing treatment interventions employ practices that have been linked to positive treatment outcomes, including providing care for at least 12 months in duration, engaging in active efforts to deliver the intervention to clients, and monitoring clients so that care can be adapted to their current functioning. In the MHG continuing care literature, evidence is accumulating to support TSF as a manualized EBI that has been successfully adapted to a number of circumstances and populations. More general EBIs for promoting MHG participation typically entail active and directive efforts to engage and retain clients, including education on the benefits of MHGs, orientation to involvement with these groups, and connection with group members to help motivate individuals' involvement following initial treatment. However, rates of sustained participation are poor for both continuing care provided in SUD treatment settings and MHGs, despite the availability of a range of EBIs in these areas and reported belief by clinicians that continuing care is important. The CFIR (Damschroder et al., 2009) offers an opportunity to apply knowledge from the field of implementation science to better understand this gap between the research and clinical practice with a goal of guiding future implementation efforts.

Review of the existing continuing care research using the CFIR makes clear that our knowledge of implementation of continuing care is limited. Most of our knowledge comes from studies with patient-level information that has some implications for implementation, or from studies that gathered process data or reflections on implementation barriers and facilitators as part of an effort to implement continuing care. Unfortunately, very few direct SUD continuing care implementation trials have been published in which an implementation intervention was evaluated or tested in some form. Such studies are needed to expand our knowledge of implementation of EBIs in continuing care and support their use in clinical practice.

The CFIR organizes what we know so far about continuing care implementation, provides insight into how to design implementation efforts in SUD continuing care, and points to gaps

in our current knowledge base. Strategies relevant to implementation of continuing care were evident across each of the five domains of the CFIR. Key constructs reflective of these strategies are summarized by CFIR domain below.

Intervention Characteristics

Characteristics of the intervention, the first CFIR domain, provide support for successful implementation of continuing care. Studies suggest that the evidence base for continuing care is strong and that clinicians are generally aware of it. However, clinicians often continue to use interventions and practices without empirical support. Additionally, a significant number of studies suggest that many interventions can be adapted to the needs of specific sites. For instance, TSF has been successfully adapted to a group format, to focus on individuals' broader social networks, rather than just 12-step MHGs, and to accommodate individuals with dual diagnoses. Similarly, treatment-based continuing care efforts have been conducted successfully using telephone and home-based visits, and with different types of providers. However, one difficulty in implementing many of the existing continuing care interventions is their relative complexity compared to other types of interventions that have been commonly studied in implementation research (e.g., screening).

Although much is known about intervention characteristics, some significant gaps exist in our understanding of continuing care intervention characteristics that will facilitate their implementation. For example, little is known about the relative advantages of the different continuing care EBIs in comparison to each other and their relative cost-effectiveness. Further, with the exception of the CPR intervention, we know little about the core or essential components of the continuing care interventions in contrast to those aspects that could be adapted in different contexts, dependent on need. Controlled studies of continuing care provided via the internet also are needed.

Outer Setting

The most frequently cited factors related to successful continuing care implementation are found within the *outer setting* domain of the CFIR. This wealth of knowledge is clearly tied to the overall number of studies that have examined the importance of client characteristics, viewed as needs, and resources that support continuing care involvement. Characteristics of clients served clearly impact the success of continuing care interventions and likewise efforts to implement such interventions. Both the treatment and the MHG continuing care literature suggest that African-Americans (compared to Caucasians), and clients with more severe SUDs, are more likely to engage in continuing care for a longer time period while those with co-occurring psychiatric disorders are at least as likely to engage in continuing care as those without these disorders. Additionally, the treatment-based continuing care literature suggests that individuals with more resources for recovery and those who perceive that staff members are supportive are more likely to engage in continuing care. In the MHG literature, findings also suggest that clients with beliefs consistent with a disease model or spiritual approach to recovery, women, and those with less prior experience with 12-step groups may be more easily engaged in MHGs. Additionally, persons with court-mandated attendance may do as well as those who are not court mandated. This information can guide clinicians in targeting groups that seem to benefit most from the particular continuing care intervention planned,

and point to the need to adapt or extend strategies to target groups that are less likely to participate in or benefit from current continuing care interventions. Furthermore, it can help them explore the extent to which initial treatments can teach or foster beliefs and resources consistent with continuing care.

In addition to client characteristics, the continuing care literature suggests additional *outer setting* constructs are relevant to implementation. The convenience of continuing care is an important factor. Furthermore, the lack of reimbursement for continuing treatment services is a common and significant barrier to implementation, whereas the availability of insurance reimbursement, government funding, and clients who directly pay for continuing treatment facilitate implementation. Additionally, involvement of MHG members from the community facilitates linking clients with the recovery community. Selecting interventions and adjusting them to patient characteristics and the treatment setting deserve careful consideration in the implementation of continuing care interventions. Finally, although preliminary research has addressed the importance of external incentives and policies on continuing care, this appears to be an extremely important area for future implementation efforts to address and better understand.

Inner Setting

Constructs relevant to the *inner setting* of the clinic or treatment program, the third domain of the CFIR, also are important factors in implementation of continuing care. A 12-step initial treatment program orientation appears to facilitate 12-step MHG involvement. Low rates of staff and supervisory turnover and multi-stakeholder involvement are important facilitators of maintenance of continuing care treatment interventions. Additionally, the use of goals or benchmarks that allow programs to monitor performance and modify interventions, are important factors in successful continuing care implementation. MHG implementation also is facilitated by strong therapeutic alliances, greater supportiveness, and spirituality during initial treatment. Use of incentives with staff to promote implementation of continuing care practices appear to be a potentially powerful, but underutilized facilitator. Clearly, the *inner setting* of initial treatment can facilitate or become a barrier to implementation of continuing care. However, little is known about the implementation climate, including goals and benchmarks for continuing care interventions, or about the role of program readiness for change (e.g., resources and knowledge) as it relates to continuing care implementation.

Characteristics of the Individual

Characteristics of the individual (provider) involved with implementation, the fourth domain of CFIR, likewise have a significant impact on the success of continuing care interventions. Not surprisingly, treatment and MHG continuing care implementation are facilitated by providers and program leaders with beliefs and attitudes supportive of the particular intervention while a lack of knowledge about the effectiveness of interventions can be a significant barrier to implementation of many EBIs. Additionally, clinicians who are in recovery themselves, who have fewer concerns about religion or spirituality as a part of treatment, without allegiance to non-12-step approaches to treatment, and those who require abstinence during treatment are more likely to facilitate 12-step MHG involvement

following treatment. It is clear that future implementation efforts will need to address important characteristics, such as the knowledge, beliefs, motivation, and self-efficacy, of both providers and clients to maximize potential for implementation success.

Implementation Process

The *implementation process*, the final CFIR domain, involves the important constructs of planning, engaging, executing, and reflecting and evaluating implementation efforts. Successful continuing care implementation efforts tended to involve several of these key CFIR process activities. These activities will be critical in the development and testing of implementation strategies that will assist programs in adopting evidence-based continuing care practices.

Implications

After having summarized the continuing care implementation research, we now focus on the implication of these findings for researchers and clinicians. As noted previously, research that directly examines implementation of EBIs in continuing care is limited. However, information is available to identify factors that appear to be supportive of continuing care implementation efforts. The existing literature viewed within the CFIR provides a starting point for closing the gap between research and clinical practice. Formative evaluation prior to, during and after implementation of continuing care interventions should be informed by the existing literature summarized above and in Table 1, and these evaluations should address all five CFIR domains, or utilize other comprehensive models of implementation. This approach will build our knowledge base regarding the extent to which continuing care interventions can be successfully implemented in particular settings, and how implementation efforts can be designed to promote sustainability and subsequent dissemination of the intervention to other settings (Damschroder et al., 2009). The current review brings attention to several gaps in the continuing care implementation literature where particular attention is needed. We have two primary recommendations culminating from our review that are presented below.

Basic Continuing Care Implementation Research Is Needed

First, despite its clinical importance, continuing care implementation research has been a relatively neglected area. Very few studies are relevant directly to implementation of continuing care, and even fewer studies specifically evaluated or tested strategies for this purpose. This pattern seems to be consistent with the SUD treatment implementation literature in general. As Sorenson et al. (2007) note, few controlled studies have addressed the causal mechanisms of the clinical adoption of EBIs in SUD treatment. Although both the treatment and MHG continuing care implementation literature have findings relevant to all five CFIR domains, the available literature does not address all of the constructs within these domains as seen in Table 1. One of the most striking gaps in the research is the lack of information on the relative advantages, disadvantages, and cost-effectiveness of the different EBIs. Further, little is known about the core elements of the specific interventions, and conversely what factors are amenable to modification without impacting overall

effectiveness of the intervention. In addition, information is lacking about the impact of incentives and/or consequences related to both the *inner setting* and *outer setting* domains.

Implementation Efforts Need to Address Multiple Domains

Second, the multiple domain approach of the CFIR that was used to review the literature highlights a shortcoming of implementation efforts in continuing care. Implementation efforts typically do not consider the importance of intervening across multiple domains. Several authors have noted this problem in the implementation of EBIs in the broader SUD treatment literature (e.g., Marinelli-Casey, Domier, & Rawson, 2002; Wilbourne & Weingardt, 2007). Delaney et al. (2008) raise the need for SUD implementation research to address the “environmental, organizational, and administrative factors that can promote the adoption, adaptation, implementation, and maintenance of evidence-based practices by providers, insurers, policy makers, and the community” (pg 1738). The need to address multiple domains is equally strong in implementation of EBIs in continuing care. For instance, as already noted, examination of the role of incentives and consequences in the *inner setting* and *outer setting* domains has been neglected. Multiple authors have called for greater use of incentives and consequences across levels of the treatment system. For example, in their position paper on promoting EBIs in continuing care, McKay et al. (2009) indicate that incentives and consequences that promote continuing care participation should be used at the patient, counselor and program level.

This review suggests that closing the gap between knowledge about EBIs in SUD continuing care and their use clinically will require a paradigm change in which both researchers and clinicians consider intervening across multiple domains rather than within a single domain, as has been typical thus far. Successful implementation that results in sustainable use of continuing care EBIs will require a formative evaluation of the barriers and facilitators across multiple domains, with implementation efforts that are adapted to fit the local environment. Barriers and facilitators at the systems level also will need to be addressed. It may be that the frequently-cited complaint of clinicians that researchers do not address problems of interest or relevance to them (Guydish et al., 2007) may, in part, reflect that research-established EBIs have too few facilitators and too many barriers for them to be adopted in particular settings. Implementation research is needed that identifies those EBIs that can be successfully exported. Further, several authors have called for systems-level change in SUD treatment that will provide incentives to organizations and clinicians to use EBIs, by requiring training and funding by government agencies, institutions, and insurance companies (e.g., Miller et al., 2006; Sorenson et al., 2007). EBIs for which there are few incentives across multiple levels or domains are unlikely to be adopted and sustained.

As noted by Kaskutas (in press), people treated for SUDs often remain precariously balanced between recovery and relapse following initial treatment. As currently designed, the utility of SUD treatment is limited by high post-treatment relapse and re-admission rates, and frequently prolonged addiction and treatment careers. Assertive linkage to continuing care helps individuals transition from brief experiments in sobriety (recovery initiation) to disease management and sustainable recovery maintenance, and an enhanced quality of life. It requires close connections between the worlds of professional treatment and community

recovery support resources, and implementation of continuing care promotion procedures to enhance engagement and retention with these resources.

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Table 1

Summary of identified barriers and related recommendations for implementation of SUD continuing care EBIs using the Consolidated Framework for Implementation Research (CFIR)

CFIR Domain	Domain Description	Relevant Implementation Constructs	Continuing Care Implementation Barriers	Continuing Care Implementation Recommendations
Intervention Characteristics	Aspects of the intervention influence implementation by the degree to which they fit, or can be adapted to a particular setting	Intervention source, Evidence strength, Relative advantage, Adaptability, Trialability, Complexity, Design quality, Cost.	<ol style="list-style-type: none"> 1. Lack of perceived evidence for specific interventions. 2. Unknown which intervention components are core elements versus adaptable periphery. 3. Existing interventions are relatively complex. 	Intervention source, perceived evidence strength, relative advantage, trialability, complexity, design quality and cost effectiveness need to be examined. Determine which intervention components are core elements versus adaptable periphery.
Outer Setting	The external context or environment in which a program or organization resides.	Patient needs and resources, Cosmopolitanism, Peer pressure, External policies, Incentives	<ol style="list-style-type: none"> 1. Inconvenience of treatment and meetings. 2. Lack of resources for recovery. 3. Low perception of staff supportiveness. 4. Funding/reimbursement for continuing care treatment. 5. Less severe substance use symptoms and overall impairment. 6. Weaker religious beliefs, beliefs inconsistent with 12-step approach. 7. Lack of involvement of community MHG members in treatment. 	Peer pressure to implement the intervention, and external policies need to be examined. Further research on the importance of external incentives for continuing care is needed.
Inner Setting	The internal setting or environment or context within the clinic or organization in which an intervention will reside	Structural characteristics, Networks and communications, Culture, Implementation climate (including incentives), Readiness for implementation	<ol style="list-style-type: none"> 1. Lack of a positive implementation climate. 2. Lack of communication and networking, administrative support, training, stakeholder involvement, goals and benchmarks, and performance incentives. 3. High staff and supervisor turnover. 4. Weaker treatment alliance and less supportive, spiritual and 12-step oriented treatment. 	Structural characteristics, networks and communication, culture and readiness for implementation need to be examined. More knowledge needed on incentives in the implementation climate.
Characteristics of Individuals	Characteristics of the clinicians, administrators and staff involved with the intervention or its implementation	Knowledge and beliefs about the intervention, Self-efficacy, Individual stage of change, Individual identification with the organization, Other personal attributes.	<ol style="list-style-type: none"> 1. Lack of knowledge of EBIs, MHGs. 2. Negative attitudes toward 12-step. 3. Fewer staff in recovery. 4. Less SUD treatment experience. 	Self-efficacy, individual stage of change, and individual identification with the organization need to be examined.
Implementation Process	An active change process occurs during implementation at the individual and organizational level.	Planning, Engaging, Executing, Reflecting and evaluating.	<ol style="list-style-type: none"> 1. Not evaluating all four phases of the implementation process. 	More studies need to examine multiple phases of the implementation process.