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Bridging the Gap Between Alcoholism Treatment Research and Practice: Identifying What Works and Why

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Despite the proliferation of alcoholism treatment research over the past 2 decades, there is a continued gap between what has been shown to be promising in the extant literature and what is commonly practiced by clinicians in the alcohol treatment field. The present article is an effort to bridge this gap by examining findings from the broad body of alcoholism treatment outcome research to determine how these findings may optimally be used by treatment providers. To this end, the authors provide clinicians with a succinct review of the current alcoholism treatment outcome literature and identify hallmarks of the most empirically supported treatments. Clinical implications of this literature for practitioners working with client with alcohol use disorders are discussed, with a focus on factors underlying effective treatments and on how these factors can be transferred from research to practice.

Although the majority of people who drink alcohol do so safely and in moderation, approximately 14% of the United States population meets lifetime criteria for alcohol dependence (see Grant, 1997; Kessler et al., 1994). Negative consequences of alcohol dependence and other alcohol misuse include interpersonal violence (Pernanen, 1991; Wood, Vinson, & Sher, in press), sexual victimization (Abbey, 1991), risky sexual behavior (Donovan & McEwan, 1995; Strunin & Hingson, 1992), and suicide (Grant & Hasin, 1999). Further, in the United States, costs associated with excessive alcohol use—such as the cost of lost work productivity, health care, and mortality—amount to over $140 billion annually (Harwood, Fountain, & Livermore, 1998). Because of its prevalence and because alcohol dependence is highly comorbid with other psychopathologies (Driessen, Veltrup, Wetterling, John, & Dilling, 1998; Tomasson & Vaglum, 1995), many clinicians—even those not specializing in substance use disorders—will find themselves treating a client with alcohol problems.

The widespread prevalence of alcohol misuse and its deleterious effects underscore the need for accessible, cost-effective, and empirically supported treatments. In the last 2 decades, major new findings on comparative treatment effectiveness have been released (e.g., Project MATCH Research Group [PMRG], 1997a, 1998), and a number of empirically supported treatments have been identified (Miller, Brown, et al., 1995). However, many have noted a continued gap between what has been shown to be promising in the alcoholism research literature and what is commonly practiced by clinicians (Hodgson, 1994; Miller, Brown, et al., 1995; Miller & Hester, 1986). In 1995, Sobell, Sobell, and Gavin (1995) called for a "greater dialogue" between researchers and clinicians regarding how alcoholism treatment research pertains to clinical practice. The present article is an effort to contribute to this dialogue. We begin by reviewing current research on the treatment of alcohol dependence and then propose some potential shared mechanisms of action among empirically supported treatments. Finally, we consider some clinical implications of our conclusions, offering suggestions for transfer from research to practice.

Promising Practices: Treatments Demonstrated to Be Effective

A number of approaches to the treatment of alcohol use disorders (AUDs) have been studied empirically and have been shown to be effective, and yet, no single best practice has been identified (Miller & Hester, 1995). In the late 1980s and early 1990s, researchers began to explore the concept of patient–treatment

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matching, which views treatment efficacy as a function of the interaction between type of treatment and particular patient characteristics (Institute of Medicine, 1990; Mattson et al., 1994). In 1989, the large-scale, multisite Project MATCH study (PMRG, 1997a) was designed to determine whether matching patients to treatment improved outcome. Although significant improvements in drinking outcomes across 12-step facilitation (TSF), cognitive–behavioral therapy (CBT), and motivational enhancement therapy (MET) interventions were noted, only 1 of 10 matching predictions was supported; patients with less psychopathology reported a greater number of abstinent days in TSF than in CBT (PMRG, 1997a). Further, outpatients who received TSF were more likely to remain abstinent from alcohol than those who received either CBT or MET. Ouimette, Finney, and Moos (1997) reported similar results in a nonrandomized patient–treatment matching study with alcoholic veterans.

Although the findings of Project MATCH and Ouimette et al. (1997) did not offer strong support for patient–treatment matching, neither of these studies tailored their treatments to particular patient characteristics or presenting problems. Such targeting of interventions might yield treatment-matching effects that were not observed by either of the above mentioned studies. Further, analysis of follow-up outcomes and secondary hypotheses revealed some matching effects for patient characteristics such as drinking-supportive networks (Longabaugh, Wirtz, Zweben, & Stout, 1998) and anger (PMRG, 1997b). Thus, there is still much to be determined with respect to the efficacy of patient–treatment matching. Yet, for now, the field has not evolved to the point at which one treatment can be chosen over another on the basis of efficacy or on knowledge of how a patient will match most appropriately to a particular treatment. Instead, clinicians will find themselves choosing among a range of treatments with demonstrated efficacy and will be well served by a familiarity with these treatment approaches. To this end, we focus here on four general types of treatment approaches that are among the most widely used and have received some of the strongest empirical support: (a) individual skill-based, (b) motivational enhancement, (c) environmental and relationship-based, and (d) psychopharmacological treatments. In addition, we also review 12-step approaches. Descriptions of each of these approaches are provided in Table 1.

Individual Skill-Based Treatments

Individual skill-based treatment approaches are grounded in social learning theory and are designed to help individuals to interact more effectively in their environments without the use of alcohol or other drugs. Coping and social skills training (CSST) is among the most commonly used and widely studied of the individual skill-based treatments.

CSST seeks to teach basic skills that enable the problem drinker to (a) quit or decrease drinking and (b) manage life effectively without alcohol. CSST includes numerous strategies to address interpersonal, environmental, and individual skill deficits that pose a challenge to sobriety (Monti, Rohsenow, Colby, & Abrams, 1995).

Empirical support for CSST has been building over the 20 years that this approach has been implemented in clinical and research settings. Miller, Brown, et al. (1995) found skills training to be among the most well supported of treatment modalities, taking into account treatment efficacy, cost, and the methodological quality of the study investigating CSST. Further, CSST has demonstrated outcomes superior to other commonly used treatment modalities (e.g., Eriksen, Bjornstad, & Gotestam, 1986; Monti et al., 1990).

Motivational Enhancement Treatments

On the basis of a client-centered model, MET encourages clients to explore their drinking and its consequences in a supportive and nonthreatening environment (Miller & Rollnick, 1991). Evolving out of the tradition of brief interventions (Miller, 1985), motivational enhancement approaches such as motivational interviewing have grown increasingly popular and have distinguished themselves as an easily administered and effective means of decreasing problematic drinking (Heather, 1995; Miller, Benefield, & Tonigan, 1993). Motivational approaches are typically characterized by six basic elements that are thought to help catalyze changes in drinking behaviors (Miller, Zweben, DiClemente, & Rychtarik, 1992). These elements include feedback of personal risk or impairment, responsibility for change, advice to change, a menu of alternative change options, therapist empathy, and facilitation of client self-efficacy (FRAMES; Miller & Sanchez, 1994).

MET and other FRAMES-based brief interventions have been found to be among the treatments with the strongest evidence of positive and specific treatment efficacy (Miller, Brown, et al., 1995). Studies have demonstrated the efficacy of MET in treating alcohol problems as compared with wait list control conditions (e.g., Miller et al., 1993; Miller, Sovereign, & Krege, 1988) and with other treatment interventions. Notably, in Project MATCH (PMRG, 1997a), participants in the MET condition demonstrated similar reductions in drinking behaviors to those of participants in TSF and CBT. These gains were achieved with fewer sessions than were provided by the other two treatments. Further, in an analysis of secondary a priori hypotheses, PMRG (1997b) found outpatients high in anger to demonstrate better posttreatment drinking outcomes in MET than in CBT, suggesting that MET may be a particularly useful approach with these clients.

Environmental and Relationship-Based Treatments

Many have noted the critical role played by significant others in a client's drinking and recovery. For example, Sobell, Sobell, Toneatto, and Leo (1993) reported that over 60% of those who self-recovered from drinking problems identified spousal support as most important to their recovery success. Bowers and Al-Rehda (1990) noted that to attend only to the drinker and not to the partner and family is to provide an "unstable framework" for recovery. Both community reinforcement and behavioral marital and family therapy (BMFT) focus on the social context of the alcoholic individual.

Community reinforcement. The community reinforcement approach (CRA) is a broad-based, cognitive–behavioral treatment that emphasizes identifying and building on a client's support systems to facilitate recovery (Hunt & Azrin, 1973; Meyers & Smith, 1995). Since the 1970s, CRA has been shown to be an effective treatment for alcohol-involved persons (Azrin, 1976; Hunt & Azrin, 1973). Early research comparing CRA with traditional state hospital treatment showed that those assigned to CRA demonstrated better drinking outcomes, family functioning, and

Table 1
Description of Interventions for Alcohol Dependence

Treatment	Defining characteristics	Objectives	Methods used
Coping and skills training	Grounded in social–cognitive learning theory Conceptualizes drinking problems as a function of deficits in interpersonal and coping skills	Condition more adaptive responses to drinking-related cues Basic skills for coping, achieving, and maintaining sobriety	Behavioral self-control training, social skills, cue exposure, relapse prevention, drinking triggers assessment, functional analysis
Motivational enhancement	Evolved from brief intervention tradition Nonconfrontational Client-centered Emphasis on motivation or readiness for change	Develop safe, nonthreatening environment to explore substance use and consequences Evaluate whether and how behavior change should be made Reinforce client's self-efficacy for behavior change	Open-ended questions, reflective listening, avoiding labeling and argumentation, decreasing resistance, affirmation, eliciting self-motivational statements, expressing empathy, cost–benefit analysis of drinking behavior
Community reinforcement approach	Based in cognitive–behavioral theory Emphasis on building on client's support systems to facilitate recovery process	Develop and strengthen social support systems and incorporate these systems into recovery Examine interaction between drinking and environment	Skills training (e.g., sobriety sampling, functional analysis, social skills training, mood monitoring, recreational counseling, vocational counseling, drink refusal training), relationship counseling, treatment compliance monitoring, "buddy systems"
Behavioral marital and family therapy	Builds on social–cognitive learning theory Considers dyadic and family functioning to be integral to achieving and maintaining sobriety	Decrease or eliminate problem drinking by including partners and families in treatment Improve dyadic and family functioning Delineate structural roles of patient and family in the recovery process	Develop "house rules" for recovery, include spouse or family members in alcohol treatment adherence, decrease "relationship triggers" for drinking, participate in communication and problem-solving skills training, reinforce positive dyadic and family interactions
Disulfiram	Prescribed medication Inhibits aldehyde dehydrogenase (ALDH), which breaks down alcohol in the blood stream	Alcohol use becomes associated with aversive side effects Prevent alcohol use by causing nausea, vomiting, other aversive side effects when alcohol is ingested	Drug is ingested daily, compliance measures help to enhance outcome
Naltrexone	Prescribed medication Blocks opiate receptors in the brain, prevents positive effects of alcohol that make consumption rewarding	Alcohol consumption less rewarding Decreases urges to drink Prevents relapse following initial drink	Drug is ingested daily, compliance measures help to enhance outcome
Alcoholics Anonymous	Based on disease model—views alcoholism as progressive, chronic illness 12 traditions provide organizational structure 12 steps offer framework for the recovery process Spiritual orientation Introspection, self-understanding, and making amends with self and others critical to recovery process Membership is free	Accept alcoholism as a disease over which one is powerlessness Achieve and maintain sobriety through continued active involvement in the program, spirituality, and group support	"Working the steps," belief in a "Higher Power," acceptance and surrender, slogans and metaphors, receiving support and guidance (for newer members), from a sponsor attending meetings
Other 12-step approaches	Disease model Supportive fellowship revolving around 12 recovery steps Facilitated by a treatment professional Enhances involvement and use of 12-step programs such as AA Spiritual orientation	Accept alcoholism as a disease over which one is powerlessness Achieve and maintain sobriety through continued active involvement in the program, spirituality, and group support	Facilitator works with client to benefit from AA, working the steps, belief in a Higher Power, acceptance and surrender, receiving support from sponsor, attending meetings

Note. AA = Alcoholics Anonymous.

work-related outcomes than those in the comparison group (Hunt & Azrin, 1973). Further, several broad reviews of the literature (Finney & Monahan, 1996; Holder, Longabaugh, Miller, & Rubonis, 1991; Miller, Brown, et al., 1995) have found CRA to be among the treatment approaches with the strongest cumulative evidence and rigorous methodological support. In addition to being a stand-alone treatment, CRA is also commonly used in combination with other approaches to maximize treatment efficacy (Mey-

ers & Smith, 1995). In particular, CRA has been used in conjunction with pharmacological interventions such as disulfiram in order to enhance medication adherence (Azrin, 1976; Schuckit, 1996; Smith & Meyers, 1995).

Behavioral marital and family therapy. The primary goal of BMFT is to work with both the individual and the spouse or family to decrease or eliminate abusive drinking and drinking-related consequences (Noel & McCrady, 1993; O'Farrell, 1995). BMFT has been shown to positively affect drinking as well as relationship-related outcomes (O'Farrell, 1994, 1995). Moreover, such favorable outcomes have been shown when BMFT has been compared with individual treatment (e.g., O'Farrell, Cutter, & Floyd, 1985), as well as to nonbehavioral couples treatment (e.g., Bowers & Al-Redha, 1990; McCrady, Stout, Noel, Abrams, & Nelson, 1991; O'Farrell et al., 1985).

Psychopharmacological Treatments

In the last two decades, an increased research focus on the neuronal processes in alcohol dependence has led to greater understanding of biological contributions to the development and maintenance of addictive behavior (Roberts & Koob, 1997). There is currently a great deal of hope that psychotropic medications that alter the way that the brain reacts to alcohol may also alter addictive circuits in the brain and thus may prove to be a potent treatment for alcohol dependence. Among the most promising of these drugs are disulfiram and naltrexone—the only medications approved by the Food and Drug Administration (FDA) as adjunctive treatments for alcohol dependence. Additionally, although it is still being reviewed for approval by the FDA, the drug acamprosate has been studied in numerous clinical trials in Europe and has shown promise in the treatment of alcohol dependence (Schuckit, 1996). Thus, acamprosate is included briefly in this review.

Disulfiram. Disulfiram (commonly known as Antabuse) is the most popular and well-researched of a category of medications called antidipsotropic medications, which cause physical illness when alcohol is taken into the system. By inhibiting the enzyme aldehyde dehydrogenase (ALDH), disulfiram prevents alcohol from being broken down in the blood stream (Schuckit, 1996), resulting in a series of aversive physical reactions (e.g., flushing of the face, headaches, nausea, vomiting, chest pain) when alcohol is ingested (Kosten & Kosten, 1991). The literature on disulfiram in the treatment of alcohol dependence has been mixed. Early studies suggested that it facilitated decreases in alcohol use (Kwentus & Major, 1979; Liebson, Bigelow, & Flamer, 1973), and Miller and colleagues (Miller, Brown, et al., 1995) reported a cumulative evidence score for disulfiram that was slightly positive. However, compliance with disulfiram has been shown to be a problem. For example, in a controlled study by Fuller et al. (1986), only 20% of individuals taking disulfiram showed good compliance, and those taking the drug showed only modest improvements. Further, significant side effects have been shown to be associated with disulfiram that, given the modest efficacy of the drug, may undermine the justifiability of using it.

Naltrexone. Naltrexone works by blocking the opiate receptors in the brain, making alcohol consumption less rewarding and has shown strong potential in the treatment of alcohol dependence (Garbutt, West, Carey, Lohr, & Crews, 1999). In addition to yielding higher abstinence rates than placebo control medication, (O'Malley et al., 1996), naltrexone has also been found to reduce alcohol craving (Volpicelli, Alterman, Hayashida, & O'Brien, 1992). Further, research has indicated that one of naltrexone's most powerful effects is reducing the number of drinking days and preventing relapse to problematic drinking among those who resume drinking (O'Malley et al., 1996; Volpicelli et al., 1992, 1997). Additionally, evidence suggests that patients high in alcohol craving may particularly benefit from naltrexone as compared with placebo (Jaffee et al., 1996). Trials of naltrexone, as with other psychotropic medications, have been conducted almost uniformly in conjunction with traditional psychotherapy approaches (see O'Malley et al., 1992; Oslin et al., 1998; Volpicelli et al., 1997). Thus, it is difficult to parse out which positive effects are associated with pharmacotherapy and which are associated with psychotherapy.

Acamprosate. Acamprosate is a substance structurally similar to the neurotransmitter gamma-aminobutyric acid (GABA), which is affected by alcohol and other central nervous system depressants. Thus, it appears that this drug may serve at least in part as a blocking agent. However, the precise mechanism of action of acamprosate in the treatment of AUDs is unknown. Acamprosate has been shown in numerous clinical trials to be associated with improved drinking outcomes, including fewer drinking days, increased abstinence rates, and enhanced treatment compliance (Paille et al., 1995; Poldrugo, 1997; Sass, Soyka, Mann, & Zieglgansberger, 1996; Whitworth et al., 1996). Moreover, in a review of pharmacological treatments for alcohol dependence, acamprosate was judged by Garbutt et al. (1999) to have good evidence of efficacy. Acamprosate also appears to have minimal side effects (Garbutt et al., 1999; Litten & Allen, 1999). At the time of this writing, FDA approval for the use of acamprosate in the treatment of alcohol dependence in the United States is pending, and a major research initiative (Project COMBINE) has been funded by the National Institute on Alcohol Abuse and Alcoholism to examine the efficacy of acamprosate in combination with other treatments.

Twelve-Step Programs

Twelve-step programs include Alcoholics Anonymous (AA) and other programs that are modeled on the same fundamental 12-step framework. In 12-step programs, a primary focus is on "working the steps" of recovery and on moving progressively through these steps toward recovery.

Alcoholics Anonymous. AA and other 12-step programs have emerged as the predominant help modality for alcohol problems in the United States (Room, 1993; Wallace, 1996). Grounded in a strong spiritual orientation and a mutual help format, the 12 traditions and 12 steps (see Appendixes A and B) constitute the framework of the AA program (McCrady & Delaney, 1995; Miller & Kurtz, 1994). With a few notable exceptions (Ditman, Crawford, Forgy, Moskowitz, & MacAndrew, 1967; Walsh et al., 1991), outcome research on AA alone has been rare, and when examined experimentally, its efficacy has not been well supported compared with other treatment interventions. However, some have suggested that such studies may not truly reflect the efficacy of AA (see Emrick, 1987; McCrady & Delaney, 1995), as they have relied on "coerced" samples (e.g., DUI offenders).

Referral to AA has become standard practice for many clinicians and AA has been evaluated in conjunction with 12-step-

based treatments (e.g., Humphreys, Huebsch, Finney, & Moos, 1999; Morgenstern, Labouvie, McCrady, Kahler, & Frey, 1997) or with treatments not explicitly based in 12-step philosophy (e.g., McCrady, Epstein, & Hirsch, 1996). In this capacity, AA has been found to be associated with improved outcomes among persons with AUD.

Twelve-step-based treatments. Twelve-step-based treatments are modeled on the basic principles of AA and are facilitated by treatment professionals. Among the most prominent of these treatments is the so-called *Minnesota model.* This model is an abstinence-oriented, spiritually focused approach that works in conjunction with AA and commonly includes psychoeducation, medication, and psychotherapy (Cook, 1988; Sheehan & Owen, 1999). Although some positive outcomes for Minnesota model treatment have been reported (see Stinchfield & Owen, 1998), there is an absence of controlled research supporting this approach's efficacy.

Other 12-step-based interventions have evolved out of clinical trials. Because of their similar structure, such interventions allow for the evaluation of some aspects of AA but are distinct from actual AA participation (PMRG, 1997a). A few studies of TSF have been conducted, and there has been evidence to support its efficacy. For example, in the first randomized clinical trial comparing TSF with other empirically based treatment modalities (cognitive behavioral coping skills and MET), PMRG (1997a) found improvement on drinking measures across all three treatments. TSF performed equally well to the other two treatments, and even demonstrated better outcomes among participants without comorbid psychopathology (PMRG, 1997a). Further, both the PMRG study and a study by Moos, Finney, Ouimette, and Suchinsky (1999) found persons in TSF to report higher rates of continuous abstinence than persons in CBT. As in Project MATCH, significant outcome improvements were found across treatment groups in the Moos et al. study. Although the Moos et al. study was not a randomized clinical trial, results support the Project MATCH findings regarding the efficacy of 12-step interventions and suggest the generalizability of these findings to clinical populations.

What Works About What Works: Exploring the Common Ingredients

It is not surprising that a single "best" treatment for AUDs has not been identified despite a copious body of empirical literature. Research on general psychotherapy treatment outcomes has indicated that so-called *common factors* of various treatment approaches—rather than the specifics of a given treatment modality—may account in large part for treatment success (Lambert & Bergin, 1994). Similarly, it appears that there may be some common factors that underlie effective treatments for alcohol problems, making seemingly distinct treatment approaches, at least in some respects, quite similar. For example, McCrady (1994) and Morgenstern et al. (1997) have suggested that certain treatment ingredients (e.g., identifying dysfunctional cognitions, increasing self-efficacy and coping) may be shared by both 12-step and CBT approaches. That findings from Project MATCH (PMRG, 1997a) and the work of Ouimette et al. (1997) did not support matching effects for different types of substance abuse treatment is consistent with a common-ingredients perspective. The common factors that underlie the treatments with demonstrated efficacy may make titration of unique treatment effects difficult.

For clinicians, familiarity with a number of effective treatment approaches is probably valuable. Additionally, clinicians may be guided in delivery of treatment by focusing on some essential underlying principles or common factors. In particular, we propose that, regardless of treatment approach, clinicians are most likely to be effective if they (a) address motivation and reinforcing variables, (b) use a nonconfrontational approach, (c) teach specific skills, (d) promote active coping and goal setting, and (e) target socioenvironmental factors.

Address Motivational and Reinforcing Factors

In a variety of ways, each of the treatment approaches outlined in this review address the social, psychological, or environmental factors that may serve to reinforce alcohol use or abuse. CRA and BMFT strive to arrange environmental contingencies so that they motivate and reinforce sobriety rather than alcohol use (Maisto, O'Farrell, Connors, McKay, & Pelcovits, 1988; Noel & McCrady, 1993). Whereas CSST teaches specific skills for managing alcohol cravings, 12-step programs reinforce the message of abstinence through step work and slogans (e.g., "one drink, one drunk") and provide a sober network of peers. Indeed, people who attend 12-step meetings more frequently after treatment have been found to show increased levels of motivation (Morgenstern et al., 1997). Naltrexone or disulfiram addresses motivational and reinforcing factors by altering the physical consequences of drinking (Schuckit, 1996). Finally, a critical objective of MET is for the client to evaluate his or her drinking, identify discrepancies between extant drinking patterns and desired outcomes, and shift reinforcement contingencies so that motivation for change becomes greater (Miller, 1985).

Use a Nonconfrontational Approach

Although the general psychotherapy literature has demonstrated a strong therapeutic alliance to be among the most essential ingredients of effective treatment (Beutler, Machado, & Neufeldt, 1994; Strupp, 1989), confrontational approaches for alcohol problems have enjoyed a particular and somewhat peculiar popularity in the United States (Miller, Brown, et al., 1995). The popularity of this approach is based on the notion that confrontation is necessary to break through an individual's denial of his or her drinking problem. Despite this perception, there has been virtually no empirical evidence to support this view. In their review of the treatment literature, Miller and colleagues (Miller, Brown, et al., 1995) did not find a single positive outcome for studies of treatments using a confrontational approach. Further, therapist styles categorized as confrontational predict poorer outcomes for problem drinkers than nonconfrontational, client-centered approaches (Finney & Monahan, 1996). Because of the stigma associated with alcohol problems (see Farrell & Lewis, 1990; Imhof, 1996), confrontation may alienate or discourage clients and undermine the therapeutic relationship (see Miller & Rollnick, 1991; Strupp, 1989).

The treatments reviewed here are all nonconfrontational, taking a supportive or didactic approach. An empathic, nonconfrontational style is a hallmark of MET (Miller & Rollnick, 1991), and in CRA, recovery goals are identified and achieved through nego-

tiation rather than argumentation. In BMFT, clinicians confer with both clients and families to establish behavioral contracts and treatment plans. Additionally, BMFT seeks to rebuild the dyadic relationship by adopting an empathic, forgiving stance rather than one that is angry or punishing (see O'Farrell, 1995). Although some in AA use the program in a more confrontational manner, this is not inherent to the initial philosophy of the program, which is one of support and fellowship, not of confrontation and conflict (Miller & Kurtz, 1994).

Teach Specific Skills to Facilitate Changes in Drinking

The teaching of specific skills is a common component of many effective treatments of problem drinking (Monti, Gulliver, & Meyers, 1994; Monti et al., 1995; O'Malley et al., 1996). The introduction of necessary recovery skills is an essential feature of both skills training and community reinforcement approaches (Meyers & Smith, 1995; Monti et al., 1995). BMFT also teaches skills such as strategies to reduce and avoid drinking in addition to interpersonal skills involving the spousal relationship (O'Farrell, 1994). MET helps clients use their existing coping skills and resources by aiding decision making and creating behavioral change plans (Miller & Rollnick, 1991). AA and other 12-step programs offer a similarly didactic component to their approach. However, in these programs, skill learning typically occurs through listening to the experiences of others, reading program literature, and receiving advice and feedback from sponsors, rather than through a counselor or treatment provider. Pharmacological interventions do not specifically offer skills training, but they may serve to "level off" drinking, enabling the client to benefit better from other, more skill-focused interventions (O'Malley et al., 1996).

Promote Active Coping and Goal Setting

All of the treatments outlined in this review require the client's active efforts in recovery, both during and after treatment. Goal setting is central to active coping, and each of the treatments mentioned in this review uses some kind of goal setting as a cornerstone of the treatment. For example, a component of CRA is *sobriety sampling* whereby the client works toward the goal of a time-limited sobriety (Meyers & Smith, 1995). Similarly, in MET, action goals are set, which require the client to generate plans for implementing behavior change. BMFT, like MET, uses goal setting, although BMFT often incorporates goals for the relationship as well as for the individual's recovery. In CSST, goals usually involve the implementation of skills outside of the therapy context. For example, the identification of particular cue or trigger situations for drinking may result in the goal of confronting that situation successfully without imbibing alcohol. AA and other TSF approaches are by nature goal directed, with each step offering the next objective in the recovery process. Goals associated with disulfiram and naltrexone pertain primarily to medication adherence. Treatment interventions that encourage continued active coping serve a crucial function in maintaining goals achieved in initial treatment. For example, research has supported the benefit of continued self-help group attendance with respect to alcohol outcomes (Humphreys & Moos, 1996; Humphreys, Moos, & Cohen, 1997; Moos et al., 1999; Timko, Finney, Moos, & Moos, 1995), and several studies have found positive outcomes for persons involved in AA as an after-care treatment (Montgomery, Miller, & Tonigan, 1995; Morgenstern et al., 1997; Thurstin, Alfano, & Nerviano, 1987). Though less studied, other methods of encouraging active coping include strategies such as "booster" sessions to review skills learned in treatment (Giannetti, 1993), less intensive follow-up treatments that allow for continued gains throughout the recovery process (McCrady, Dean, Dubreuil, & Swanson, 1985), and bibliotherapy that encourages recovering individuals to seek support and information on their own (see Harris & Miller, 1990; Sanchez-Craig, Davila, & Cooper, 1996).

Target Socioenvironmental Factors

Given the strong empirical support for the role of others in drinking and recovery, the most successful treatment approaches will address this important aspect. Demonstrated positive outcomes of approaches such as case management, which focus on meeting the patient's daily functional needs, underscore the role of contextual factors in recovery (Cox et al., 1998). Further, Hodgson (1994) and Humphreys, Moos, and Finney (1995) have noted that the role of environmental factors in the development, course, and treatment of alcohol problems should not be underestimated and that efforts to treat these problems should focus on socioenvironmental as well as individual factors. CRA and BMFT provide the most intensive focus on the role of interpersonal or social context in drinking and seek to mobilize such social networks to facilitate change. A primary strength of AA is that it actually provides a network of supportive others. In a study examining social networks and drinking outcomes, Longabaugh et al. (1998) concluded that AA was an "important ingredient" for clients recovering from alcohol problems because it provided critical social support for abstinence. Finally, psychopharmacological treatments such as disulfiram or naltrexone can be augmented by relying on supportive others such as friends or family members to improve medication compliance (Fuller, 1995; O'Farrell, 1993a). In fact, it has been noted that disulfiram, when used in combination with a CRA protocol can help to "increase opportunities for positive reinforcement" from the client's significant others, thus strengthening his or her network for recovery (Smith & Meyers, 1995, p. 255). Models for involving significant others in MET are also available (Miller et al., 1992).

Implications for Psychologists and Other Treatment Providers

Research in the past 20 years has helped to advance knowledge of AUDs and treatment efficacy. It has also dramatically changed the way clinicians think about treatments for these disorders (Kahler, 1995). Treatment professionals are now in the fortunate position of being able to look to this literature and to make informed treatment decisions based on findings derived from this body of work. Yet, treatment professionals may find it difficult to keep up with such a broad body of literature that encompasses a diverse array of populations, theoretical approaches, study methods, and findings. Moreover, information in the scientific literature may not be presented in a way that optimizes utility to those in clinical practice (Morrow-Bradley & Elliott, 1986; Strupp, 1989). It is our hope that the information presented in this article helps to bring some of the most relevant conclusions from the empirical

literature to clinicians in ways that can guide their clinical approach to the treatment of AUD. To this end, several guidelines for utilization of research findings in clinical settings are offered to practicing treatment providers.

The first step in providing appropriate assistance to people with AUDs is accurate identification of the problem. Alcohol problems have been shown to be quite prevalent (Kessler et al., 1994). Thus, clinicians should routinely screen for alcohol and other substance use disorders as part of an initial intake evaluation. Multiple screening instruments have been developed specifically for this purpose. Miller and colleagues (Miller, Westerberg, & Waldron, 1995) recommended several of these instruments on the basis of psychometric evidence, cost and accessibility, and ease of administration. These were the Michigan Alcoholism Screening Test (MAST; Selzer, 1971), the CAGE (Ewing, 1984), and the Alcohol Use Disorders Identification Test (AUDIT; Babor, de la Fuente, Saunders, & Grant, 1992). Ultimately, to formulate a formal diagnosis of alcohol abuse or dependence, appropriate evaluation procedures should be used. A number of structured clinical interviews are available for such evaluation, including the Structured Clinical Interview for the DSM-IV Axis I Disorders–Clinician Version (SCID; First, Spitzer, Gibbon, & Williams, 1997). These interviews generally map onto the *Diagnostic and Statistical Manual of Disorders* (*DSM–IV*; American Psychiatric Association, 1994) criteria and allow the clinician to assess current and past alcohol abuse and dependence symptomatology in order to develop a clearer picture of the constellation of symptoms. Alcohol misuse has also been associated with numerous deleterious physical effects (Wood et al., in press). Clinicians should be alert to the possibility of concurrent medical problems in their patients with AUDs and should collaborate with primary care providers to ensure the overall health and safety of the alcohol dependent client.

Once an alcohol problem has been accurately identified, the clinician must decide upon a course of treatment. Although the outcome literature has not yet and may never identify a single best treatment for alcohol use disorders, several interventions have been shown to be effective. Thus, clinicians are likely to serve their clients with AUDs best by acquiring a basic level of familiarity with treatment approaches known to be effective. With this knowledge, clinicians may then choose a treatment based on factors such as time, cost, and competence in a particular modality. Further, clinicians are encouraged to focus on the extent to which ingredients common to many effective treatments are being provided.

The need to develop competencies in new treatment modalities is a potential challenge for clinicians who may shy away from using treatments unfamiliar to them. Treatment manuals and "how-to" books or articles outlining various approaches and techniques are one way of confronting this challenge. Resources are available for a wide variety of treatments (see Appendix C). These resources (sometimes specifically developed for treatment outcome trials) offer specific instruction for how to implement a treatment, commonly providing session outlines, treatment goals and strategies, and additional resources such as handouts. Treatment manuals and how-to books or articles generally do not require specific training to be used effectively and therefore lend themselves well to practitioners working in private practice or other settings in which such specialized training would be difficult to obtain. Moreover, treatment manuals and how-to references are commonly written in a straightforward and accessible style, making them relatively easy to read, understand, and follow.

A focus on teaching specific recovery-related skills to clients also appears to be useful. Such skills may include assertiveness, drink-refusal, communication, or other skills that are likely to aid the client in confronting the day-to-day challenges of maintaining sobriety. Additionally, clinicians may wish to assign homework for clients to work on during the time between sessions. Such assignments require the client to practice newly learned skills independently and then discuss their experiences—what worked, what didn't, and why—in subsequent treatment sessions. Interestingly, a study designed to evaluate the medication naltrexone (O'Malley et al., 1996) revealed that rates of drinking among those in a placebo or coping-skills group improved over time. This underscores not only the effectiveness of skills training but also the long-term effect that such skills can demonstrate in the recovery process.

Drinking-supportive social networks predict poorer outcome for alcohol-involved persons seeking treatment (Longabaugh, Beattie, Noel, Stout, & Malloy, 1993; Longabaugh et al., 1998). Thus, in addition to developing a familiarity with effective treatment approaches, the outcome literature suggests that clinicians should also take a broader and more inclusive approach to working with clients with AUD, incorporating social and environmental factors as a standard part of treatment. This may involve working with the alcoholic client in couples or family treatment, either in addition to or instead of traditional individual therapy. It may also involve work in treatment that revolves around interpersonal interactions with colleagues or social acquaintances or drawing on available community resources and supports.

Pharmacological interventions for AUDs have received increasing attention in recent years, and many clinicians have come to consider psychopharmacology an important component of treatment for these disorders. Yet, others may be wary of pharmacological treatment approaches (see O'Brien, 1996) and may be unfamiliar with how these medications are used in treatment. At least two such interventions (naltrexone and disulfiram) offer demonstrated efficacy in decreasing problem drinking, are federally approved, and are commonly used in treatment. Acamprosate is likely to become commonly used as well. Thus, knowledge of the use of these medications and their potential risks and benefits is essential to comprehensive and informed treatment of alcoholism. This knowledge will allow clinicians to assist clients in decision-making processes regarding medications and to work collaboratively with physicians who prescribe medications.

Evidence suggests that therapists can play an integral role in facilitating medication compliance (e.g., Allen & Litten, 1992; Azrin, Sisson, Meyers, & Godley, 1982) but must have a basic understanding of relevant medications in order to perform this task effectively. However, regardless of the efficacy of a pharmacological intervention, cognitive, behavioral, environmental, and supportive treatment components should also be in place to maximize the likelihood of recovery (O'Malley et al., 1992; Schuckit, 1996). For example, many who are prescribed medications such as disulfiram stop taking it precipitously, so that they may resume alcohol use, while others may not adhere to pharmacological treatment as prescribed (Fuller, 1995). A few studies have shown that disulfiram may be more effective when used in conjunction with other nonpharmacological treatments (e.g., CRA, BMFT) that

may enhance medication compliance (Allen & Litten, 1992; Chick et al., 1992; Schuckit, 1996). Moreover, many of naltrexone's therapeutic effects appear to lessen over time (see O'Malley et al., 1996), suggesting that this drug may be useful in establishing initial control over drinking but is best used together with other, nonpharmacological treatments for long-term recovery.

Finally, a growing body of research suggests that AA and other 12-step approaches are an effective source of help for alcohol-involved persons. Moreover, AA is one of the few sources of help in the United States that is both widely available and free of charge (except for voluntary contributions), thus offering maximal affordability. This is an important factor to consider for the many alcohol-involved clients for whom cost is a significant consideration (Johnson & Chappel, 1994). Given the efficacy, ubiquity, and accessibility of AA and other 12-step programs, clinicians are encouraged to consider referring clients to such programs as an adjunct to their treatment and should keep abreast of AA or other self-help meetings in their area of practice. AA is listed in the yellow pages of phone books in the United States, and a toll free number for this organization is often provided where schedules of local and regional AA meetings can be obtained. It is a good idea for clinicians to keep this information readily available. Further, as Miller and Kurtz (1994) suggested, it is a good idea for clinicians to be familiar with the ideology of AA and with truths and misconceptions regarding this approach in order to adequately prepare clients for referral. Numerous resources exist to help clinicians to work with AA in their clinical practices (Kurtz, 1997; Riordan & Walsh, 1994). Some have noted the importance of differentiating between AA attendance and AA involvement (McCrady et al., 1996). Specifically, degree of personal involvement in AA (e.g., working the steps of AA, spiritual commitment, etc.) has been shown to be associated with better alcohol-related outcomes (Montgomery et al., 1995; Morgenstern et al., 1997). Thus, clinicians are also encouraged to work with clients not only to attend meetings but also to become more personally invested in this program. This may include using therapy time to talk about AA experiences, making suggestions about finding a sponsor or taking on leadership roles within the organization, and focusing on issues of spirituality and making amends.

Ultimately, the more that clinicians feel competent in accessing the variety of empirically supported means of help available for AUD, the more flexible and comprehensive they can be in their offering of treatment options. It is our hope that the suggestions offered here will facilitate the integration of empirical inquiry and clinical practice and will contribute to the provision of optimal care for clients with alcohol use disorders.

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Appendix A

Twelve Steps of Alcoholics Anonymous

1. We admitted we were powerless over alcohol—that our lives had become unmanageable.
2. Came to believe that a Power greater than ourselves could restore us to sanity
3. Made a decision to turn our will and our lives over to the care of God *as we understood him*
4. Made a searching and fearless moral inventory of ourselves
5. Admitted to God, to ourselves and to another human being the exact nature of our wrongs
6. Were entirely ready to have God remove all these defects of character
7. Humbly asked Him to remove our shortcomings
8. Made a list of all persons we had harmed, and became willing to make amends to them all
9. Made direct amends to such people wherever possible, except when to do so would injure them or others
10. Continued to take personal inventory and when we were wrong promptly admitted it
11. Sought through prayer and meditation to improve our conscious contact with God *as we understood him,* praying only for knowledge of his will for us and the power to carry that out
12. Having had a spiritual awakening as the result of these steps, we tried to carry this message to alcoholics and to practice these principles in all our affairs.

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(*Appendixes continue*)

Appendix B

Twelve Traditions of Alcoholics Anonymous (AA)

1. Our common welfare should come first—personal recovery depends upon AA unity.
2. For our group purpose there is but one ultimate authority—a loving God as he may express himself in our group conscience. Our leaders are but trusted servants; they do not govern.
3. The only requirement for AA membership is a desire to stop drinking.
4. Each group should be autonomous except in matters affecting other groups or AA as a whole.
5. Each group has but one primary purpose—to carry its message to the alcoholic who is still suffering.
6. An AA group ought never endorse, finance or lend the AA name to any related facility or outside enterprise, lest problems of money, property and prestige divert us from our primary purpose.
7. Every AA group ought to be fully self-supporting, declining outside contributions.
8. AA should remain forever nonprofessional, but our service centers may employ special workers.
9. AA, as such, ought never be organized; but we may create service boards or committees directly responsible to those they serve.
10. Alcoholics Anonymous has no opinion on outside issues; hence the AA name ought never be drawn into public controversy.
11. Our public relations policy is based on attraction rather than promotion: we need always maintain personal anonymity at the level of press, radio and films.
12. Anonymity is the spiritual foundation of our traditions, ever reminding us to place principles before personalities.

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Appendix C

Alcoholism Treatment Resource Guides

Treatment	Resource
Individual skills-based treatments	"The Problem Drinkers' Project: A Programmatic Application of Social-Learning Based Treatment" (McCrady et al., 1985)
	Treating Alcohol Dependence: A Coping Skills Training Guide (Monti, Abrams, Kadden, & Cooney, 1989)
	Cognitive–Behavioral Coping Skills Therapy Manual: A Clinical Research Guide for Therapists Treating Individuals With Alcohol Abuse and Dependence (Kadden et al., 1992)
Motivational enhancement treatments	*Motivational Interviewing* (Miller & Rollnick, 1991)
	Motivational Enhancement Therapy Manual: A Clinical Research Guide for Therapists Treating Individuals With Alcohol Abuse and Dependence (Miller et al., 1992)
Environmental and relationship-based treatments	"Alcoholism" (McCrady, 1993)
	"Couples Relapse Prevention Sessions After a Behavioral Marital Therapy Couples Group Program" (O'Farrell, 1993b)
Twelve-step treatments	*Alcoholics Anonymous* (AA World Services, 1980)
	Twelve Steps and Twelve Traditions (AA World Services, 1978)
	Twelve-Step Facilitation Therapy Manual: A Clinical Research Guide for Therapists Treating Individuals With Alcohol Abuse and Dependence (Nowinski et al., 1992)
Pharmacological treatments	"How to Get the Best out of Antabuse" (Kristenson, 1995)
	"Aversion Therapies" (Rimmele et al., 1995)
	"Medical Management of Alcohol Dependence: Clinical Use and Limitations of Naltrexone Treatment" (Volpicelli, Volpicelli, & O'Brien, 1995)

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