

# 'Tweaking 12-Step': the potential role of 12-Step self-help group involvement in methamphetamine recovery

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## ABSTRACT

**Aims** To determine from a review of the available literature the extent to which involvement in 12-Step mutual support groups could play a role in the recovery process for individuals abusing or dependent on methamphetamine. **Method** Review of the literature on outcomes associated with 12-Step meeting attendance and involvement in 12-Step activities among substance abusers, particularly those who abuse stimulants. **Results** There are few if any data available on methamphetamine abusers and their use of 12-Step approaches. Evidence derived from work with alcohol- and cocaine-dependent individuals indicates that involvement in 12-Step self-help groups, both attending meetings and engaging in 12-Step activities, is associated with reduced substance use and improved outcomes. Although involvement in 12-Step fellowship improves outcome, many individuals do not engage on their own in 12-Step activities, and there are high rates of dropout from such groups. There are a number of evidence-based therapies available to assist clinicians in facilitating 12-Step involvement; however, these have not been used with methamphetamine abusers. While there are some potential barriers to adopting manualized treatment interventions into clinical practice, the familiarity, in community-based practice, of the 12-Step approach may make this easier. **Conclusion** More actively integrating 12-Step approaches into the treatment process may provide low- or no-cost options for methamphetamine abusers and increase the capacity for providing treatment. Further research and evaluation are necessary to determine the extent to which methamphetamine abusers do engage in 12-Step self-help programs, whether they prefer more general (e.g. Alcoholics Anonymous, Narcotics Anonymous, Cocaine Anonymous) or drug-specific (e.g. Crystal Meth Anonymous) meetings, the rate of dropout and the outcomes associated with their involvement. Further, the efficacy of efforts to facilitate involvement of methamphetamine abusers in such 12-Step groups needs to be determined.

**Keywords** 12-Step, alcoholics anonymous, cocaine anonymous, crystal meth anonymous, methamphetamine, narcotics anonymous, recovery, self-help, treatment.

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## INTRODUCTION

Methamphetamine use has been a problem of increasing concern in a number of areas of the United States over the recent past [1,2]. The impact of the spread of methamphetamine use, with its serious behavioral, medical and psychiatric consequences [3–8], is being felt at the individual, familial, community and societal levels, placing a tremendous strain on the medical, public health and

criminal justice systems. The substance abuse treatment system has also experienced a substantial impact from increased pressures to provide services to an increasing number of methamphetamine abusers [9–11]. A serious concern stemming from this influx is the availability of effective treatments [5,10]. To date, no pharmacotherapies have been found effective in reducing methamphetamine use [12]. Thus, behavioral interventions remain the standard of treatment for methamphetamine dependence, although the effectiveness of most counseling interventions has not been tested rigorously [4,10].

D. M. Donovan & E. A. Wells declare no conflict of interests.

Standard community-based treatment appears to have a positive effect on reducing subsequent methamphetamine use and criminal involvement as well as having a positive effect on other areas of psychosocial function [5,13,14]. For instance, Hser and colleagues [14] found significant improvements from baseline to 9-month post-treatment follow-up in all key life areas (except for medical severity for men) measured by the composite scores of the Addiction Severity Index (ASI) for both female and male methamphetamine abusers treated in one of either 12 residential or 20 out-patient community-based treatment programs in California.

More specialized, manually guided, comprehensive treatment approaches such as the Matrix Model [15–17] also appear promising. Rawson and colleagues [16], in a multi-site trial involving eight community-based treatment programs in the United States, found that clients in the multi-component Matrix Model had more than twice the clinical contacts (26.8 versus 12.7), were 38% more likely to stay in treatment and 27% more likely to complete treatment, and had significantly more methamphetamine-free urine samples during treatment than those receiving standard care in the same clinics. Both interventions resulted in significant reductions from baseline to discharge and to 6-month follow-up in both self-reported methamphetamine use (from approximately 11–12 days of use in the past 30 days down to approximately 4 days of use at both discharge and follow-up) and methamphetamine-free urine samples (~69% methamphetamine-free urines at both discharge and 6-month follow-up). Both were also associated with significant improvement at 6-month follow-up on the drug, alcohol, psychiatric and family domains of the ASI. However, the Matrix Model and standard care conditions did not differ significantly from one another at either discharge or 6-month follow-up on any of these measures.

Specific adjunctive interventions, such as contingency management [18,19], appear to enhance treatment outcomes further. In a multi-site trial of the NIDA National Drug Abuse Treatment Clinical Trials Network, Roll and colleagues [20] evaluated a contingency management (CM) intervention in which methamphetamine abusers submitting stimulant- and alcohol-negative urine samples earned draws for a chance to win prizes, with the number of draws increasing with continuous abstinence time. CM was added to the clinics' standard treatment as usual (TAU). No differences were found between the TAU plus CM versus standard TAU in the percentage of clients retained (55% versus 39%) or the number of counseling sessions attended (17.0 versus 15.6) over the 12-week trial. However, clients in the CM condition provided significantly more substance-free urine samples (58% versus 42%) and had a longer period of continuous

abstinence (4.6 weeks versus 2.8 weeks). A higher percentage of CM than TAU clients were completely abstinent over the course of the 12-week trial (18% versus 6%).

## POTENTIAL ROLE OF 12-STEP APPROACHES

Despite these promising findings, Brecht and colleagues [9] indicate that outcomes of treatment for methamphetamine abusers may not yet be optimal. An approach that may contribute to improved outcomes in the treatment of methamphetamine abusers is that based on the 12-Step self-help model developed by Alcoholics Anonymous (AA) and subsequently adopted and adapted by Narcotics Anonymous (NA), Cocaine Anonymous (CA) and, more recently, by Crystal Meth Anonymous (CMA). There is limited information addressing specifically the role of 12-Step approaches in the treatment and recovery process for methamphetamine abusers, and such approaches are not mentioned in reviews of treatments for methamphetamine (MA) [5,10,13,21]. However, there is an increasing body of literature that does examine such approaches with cocaine-dependent individuals [22–27]. Although a variety of differences exist between cocaine and methamphetamine abusers, treatment approaches that have been found effective with cocaine abusers also appear to be effective with methamphetamine abusers [17,28,29]. Thus, findings concerning the utility of 12-Step approaches with cocaine may generalize to methamphetamine abusers.

Twelve-step and mutual/self-help groups represent an important, readily available and pervasive resource in substance abuse recovery, whether or not associated with formal treatment [30–32]. Substance abusers can become involved with 12-Step programs before entering, as part of or as aftercare following or instead of, professional treatment [33]. These groups are highly accessible, are available at no cost in most communities throughout the world and, for some substance abusers, may be the only resource ever used to resolve a drinking or drug problem [32,34].

The 12-Step philosophy has had a strong influence on the evolution of formal alcoholism treatment in the United States [33,35]. This philosophy has also been integrated into the treatment of drug dependence. The Center on Substance Abuse Treatment (CSAT) Treatment Improvement Protocol dealing with the treatment of stimulant abuse (TIP 33) recommends that treatment programs strongly encourage clients to attend and participate in 12-Step self-help groups [21]. Participation in 12-Step groups is also a recommended component in the Matrix Model used in the treatment of both cocaine and methamphetamine dependence [15]. Programs

implementing the Matrix Model as part of the CSAT multi-site methamphetamine treatment study reportedly encouraged weekly or more frequent attendance at 12-Step meetings [16].

### **EVIDENCE SUPPORTING 12-STEP APPROACHES WITH STIMULANT ABUSERS**

A considerable body of evidence in the alcoholism field indicates that earlier engagement in 12-Step self-help groups, more frequent meeting attendance, involvement in a greater number of 12-Step activities (e.g. reading the Big Book, acquiring a sponsor) and a longer duration of participation are all associated with subsequent reductions in drinking and better overall outcomes across time [30,36–43].

A similar pattern of results appears to be emerging from studies with stimulant abusers.

Fiorentine [44], in a naturalistic study, examined 12-Step involvement among individuals receiving out-patient drug treatment. The sample was composed primarily of polysubstance abusers for whom stimulants constituted a major portion of the drugs used (primary drugs used in the year preceding treatment included crack cocaine, 57%; cocaine, 20%; and methamphetamine, 16%). Higher rates of post-treatment attendance at 12-Step meetings were associated with higher rates of abstinence from both drugs and alcohol. In particular, weekly or more frequent 12-Step meeting attendance was associated with drug and alcohol abstinence, while less-than-weekly participation was not. Forty per cent of individuals were categorized as 'persistors' (continued active participation) between the 6-month and 24-month follow-ups; they generally maintained high rates of abstinence. Those who never attended 12-Step meetings (26%) had a marked decrease in their abstinence rates. Those who dropped out of 12-Step participation (26%) also showed a decline in abstinence rates, which fell between the rates of the other two groups. Another important finding was that there was an additive effect of involvement in formal drug treatment and self-help group participation; those who participated concurrently in both drug treatment and 12-Step programs had higher rates of abstinence than those who participated only in treatment or in 12-Step programs [45].

While the observed positive relationship between 12-Step involvement and clinical outcomes is encouraging, it is not possible to infer a causal relationship from correlational findings. However, a recent study with cocaine abusers has begun to elucidate the nature of this relationship. Weiss *et al.* [25], in a cross-lagged analysis, found that while self-help meeting attendance by individuals being treated for cocaine dependence did not

predict subsequent drug use, active involvement in self-help activities (as opposed to meeting attendance) in a given month predicted fewer days of cocaine use in the next month. Moreover, patients who increased their involvement in self-help activities during the first 3 months of treatment had significantly fewer days of subsequent cocaine use and lower scores on the Addiction Severity Index (ASI) drug use composite in the subsequent 3 months. Further, the best outcomes were found among those individuals who both received 12-Step oriented individual drug counseling (IDC) [46] and increased their 12-Step participation in months 1–3, while patients who neither received IDC nor increased their self-help participation had the worst outcomes. Individuals who received IDC but did not increase their participation and those who did not receive IDC but did increase their participation had outcomes that were intermediate between these other two groups. Thus, the combined effects of being involved in a treatment approach that emphasized 12-Step involvement plus actual engagement in self-help activities was associated with the best outcomes, better than those found with either of these alone. These data provide supportive evidence for the hypothesis that 12-Step involvement 'works'; that is, increased 12-Step meeting attendance and/or involvement appear to lead to a decrease in subsequent substance use among stimulant abusers.

### **LOW RATES OF ATTENDANCE AT AND HIGH RATES OF DROPOUT FROM 12-STEP MEETINGS**

Rawson *et al.* [47] found that long-term regular involvement in 12-Step groups and activities was initiated by fewer than 30% of cocaine abusers receiving out-patient treatment. The rate of 12-Step meeting attendance was only somewhat higher (40%) among those discharged from a 28-day in-patient cocaine treatment program. This low rate occurred despite what was described as 'strong encouragement' to attend from each of the treatment programs involved and the availability of 12-Step meetings on site [47]. Similarly, Weiss *et al.* [26] found that only 34% of clients enrolling in the NIDA Collaborative Cocaine Treatment Study (CCTS) had attended a 12-Step meeting in the week prior to their beginning treatment. Over the follow-up period, only a third of the clients (33.6%) were classified as consistently high meeting attenders, while 47.9% were classified as consistently low attenders and 18.5% had a decreasing attendance pattern across time. A similar pattern was found for involvement in 12-Step activities: 35.4%, 47.5% and 17.0% in the high, low and decreasing participation groups, respectively. Low and inconsistent involvement was associated with poorer outcomes [24–26]. The five

clinical sites participating in the CCTS evidenced a high degree of variability in meeting attendance by the sixth month of the trial, ranging from 20% to 69% of clients attending meetings. This occurred despite all sites using the manual-guided group drug counseling (GDC) [48], which recommended and emphasized self-help meeting attendance, as their standard 'treatment as usual'.

The findings that early engagement during and/or shortly after treatment and sustained involvement in 12-Step groups contribute positively to substance use outcomes have prompted clinical researchers to recommend that treatment programs emphasize the importance of self-help groups and encourage 12-Step meeting attendance and participation [21,24,31,45,49,50]. However, low rates of attendance during or after treatment are found despite the fact that most treatment programs incorporate a 12-Step philosophy and that professional staff report a high rate of referral to 12-step meetings [51]. Caldwell [49] noted that referral by professionals is not always introduced to clients in a manner that fosters acceptance of 12-Step groups. This is of concern, as substance abusers appear less likely to become involved in 12-Step activities if left to do so on their own than if more active encouragement and referral are provided in treatment [24,31,52]. Even if substance abusers initially attend meetings, there are typically high rates of attrition which may prevent individuals from receiving the maximum benefit from 12-Step involvement [24,25,44,53].

#### **EVIDENCE IS NEEDED REGARDING METHAMPHETAMINE USER ATTENDANCE AND PARTICIPATION IN 12-STEP MEETINGS**

Attendance and participation in 12-Step meetings has been associated with positive outcomes for substance users in general; however, there is virtually no literature about whether this is true specifically for users of methamphetamine. Nevertheless, programs treating methamphetamine users usually either require or recommend participation in 12-Step self-help meetings [54]. Crystal Meth Anonymous (CMA) has chapters in at least 30 states and the District of Columbia and meetings in over 90 metropolitan areas in the United States; chapters are also now available in Canada, Australia and New Zealand. Meetings are also available online (e.g. <http://www.xtwkrs.org>). Although many methamphetamine users also attend other fellowships, shared experiences, e.g. 'of darkness, paranoia and compulsions' ([http://www.crystalmeth.org/index.php?option=com\\_content&task=view&id=73&Itemid=70](http://www.crystalmeth.org/index.php?option=com_content&task=view&id=73&Itemid=70)) lead many to prefer CMA fellowships. There is a need to examine the role of CMA as it becomes more available. It is of interest to note

that in the CCTS, participants attended AA most frequently, followed by NA, with CA a somewhat distant third choice, in part because they reported experiencing 'triggers' and the experience of craving in response to discussions about cocaine [24]. This may also be true for methamphetamine abusers who attend CMA. On the other hand, there is the notion of being with 'one of your own' that may make affiliation and the development of a support network more likely to occur through CMA attendance.

There is a large rural population of MA users [55], a proportion of whom have limited access to specialized treatment programs. It may be that many methamphetamine abusers live in areas distant from available meetings or they may be in small communities where they would feel uncomfortable being with others from the community. Increasingly available internet-based, substance-focused self-help groups may be an alternative. The limited research on such online groups suggests that they offer an encouraging and supportive environment in which personal stories, questions and advice are openly shared [56]. However, the efficacy of such online self-help groups relative to their more traditional face-to-face meetings requires evaluation [57].

The availability of CMA meetings held specifically in organizations serving the lesbian, gay, bisexual and transgender (LGBT) community responds to a different, yet important, special population of methamphetamine users [55]. Sexual minority members may be reluctant to attend treatment services or self-help groups with non-sexual minority individuals, and they often have different underlying issues surrounding their methamphetamine use, including its use to enhance sexual experience [55]. Many CMA groups have grown up within LGBT service agencies to address the needs of these populations; their efficacy is as yet unknown. There are two additional populations for whom cultural tailoring may be needed: American Indians, for whom an approach that incorporates spirituality and tribal ceremony is advocated [55] and Hawaiian Natives, for whom cultural adaptation is thought important. CMA and other 12-Step support groups offer portability and adaptability such that each meeting is able to take on its own characteristics and to address focused needs of a specific community. Given this, it is imperative that researchers and recovering communities cooperate to gather and evaluate evidence regarding 12-Step self-help with the many special populations of methamphetamine users.

#### **A NEED TO FACILITATE ACTIVE INVOLVEMENT IN 12-STEP ACTIVITIES**

More active engagement strategies appear necessary to increase the likelihood of substance abusers becoming

affiliated with and engaged actively in 12-Step self-help groups. Treatment approaches or interventions that are meant to increase engagement appear to be effective in doing so and, thus, contribute to positive substance use outcomes through their impact on increasing 12-Step activities and attendance [22,25,31]. It has been recommended that community-based treatment programs, even those that label and represent themselves as '12-Step oriented', should evaluate whether their current program practices support active involvement in 12-Step self-help groups [58]. Further, they also should examine the methods employed by their counselors in this regard. Typically, when counselors do attempt to support 12-Step self-help group involvement in treatment as usual, they rarely use empirically supported methods [58]. When clinicians use empirically validated techniques to support 12-Step involvement it is far more likely to occur [31]. This has given rise to recommendations that some type of 12-Step facilitation intervention be incorporated into treatment [30,58,59].

With one exception [60], studies that have evaluated 12-Step facilitative interventions with stimulant abusers have found their outcomes to be comparable to or better than other active therapies, such as cognitive-behavioral therapy (CBT) or relapse prevention (RP). Wells *et al.* [27], compared a cognitive-behavioral relapse prevention and a 12-Step-oriented intervention delivered to cocaine abusers in a group format. The latter condition consisted of a 'recovery support group' [61] based on the 12 Steps of AA. It was designed to represent the 12-Step philosophy often employed in treatment programs and focused upon the first three of the 12 Steps (acceptance, higher power and surrender). Both groups, which were guided manually, were scheduled for 17 2-hour group sessions over a 24-week period. Clients in both conditions evidenced substantial reductions in substance use. However, no differences were found between conditions with respect to cocaine, marijuana or alcohol use either during the treatment period or at 6-month follow-up.

Carroll *et al.* [22] compared individually delivered 12-Step facilitation therapy (TSF), CBT and an individual clinical management (CM) condition, either with or without adjunctive disulfiram, in the treatment of individuals dependent on both cocaine and alcohol. The TSF intervention followed a manual adapted from Project MATCH [62] for use with cocaine-dependent clients [63]. The content of TSF therapy was designed to be consistent with AA, other 12-Step groups and 12-Step oriented treatment programs. The primary goal of TSF is to promote abstinence by facilitating the client's acceptance, surrender and active involvement in 12-Step meetings and related activities.

TSF treatment was effective in promoting patients' involvement in self-help groups over the 12-week

treatment period. Self-help involvement during treatment was significantly higher for patients assigned to TSF (13.8 mean days of self-help group attendance) compared to those assigned to CBT (1.1 days) or to CM (5.4 days). Furthermore, 58% of all participants reported attending at least one AA or self-help meeting over the follow-up period, with a mean of 3.9 days per month in which a self-help meeting was attended. The mean total days of self-help attendance during the 1-year follow-up was higher for participants who had been assigned to TSF compared with participants assigned to CM or CBT, but not significantly so (48.7 days versus 33.2 days versus 24.2 days, respectively). Both TSF and CBT were associated with significant reductions in alcohol and cocaine use over the course of the 12-week treatment period compared to CM; the substance use outcomes for TSF and CBT were comparable and not different from one another. At 1-year follow-up the differences between CM and either the TSF or CBT were no longer significant, and TSF and CBT had comparable outcomes [64]. Carroll and colleagues [22,64] also found that participants who attended any self-help groups, regardless of treatment condition, had significantly better cocaine outcomes during follow-up than those who did not.

In the NIDA CCTS [65] all clients received GDC [48] as a 'base' therapy. GDC educated patients about addiction and recovery and strongly encouraged 12-Step involvement. Out-patients were assigned randomly to receive GDC alone or in combination with cognitive therapy (CT), supportive-expressive therapy (SE) or IDC [46]. The IDC was based on 12-Step philosophy, emphasized the disease concept of addiction, advocated healthy behavioral and life-style changes and strongly encouraged and reiterated the importance of self-help group attendance. The SE and CT therapies were generally supportive of self-help meetings, but neither treatment strongly encouraged self-help attendance. Individual treatment was scheduled twice a week for the first 12 weeks and weekly during weeks 13–24, for a maximum of 36 sessions. GDC sessions were scheduled weekly for 24 weeks for a maximum of 24 sessions. Overall, clients in all treatment conditions reduced their cocaine use significantly; however, those in the combined GDC-IDC condition, combining group plus individual 12-Step-oriented approaches, reduced their cocaine use significantly more and did so more rapidly than those in the other conditions [65].

Weiss and colleagues [24] examined 12-Step involvement among clients in the four treatments of the CCTS. Overall, the combined GDC-IDC condition had the highest rates of 12-Step attendance and involvement. The incremental benefit of adding IDC to GDC was notable. Clients in the GDC-only condition reported, on average, that they attended at least one 12-Step meeting in just over a third of the weeks (37.9%) during the

6-month treatment phase. This compared to nearly half (47.7%) of the weeks attended by those in the GDC-IDC condition. Those treated in the combined GDC-IDC condition were also the most likely to report both frequent attendance at 12-Step groups and involvement in 12-Step activities. The difference across groups in frequent attendance was most pronounced during month 6 of the treatment phase: 63.6% of clients in the combined GDC-IDC condition compared to only 38.5%, 34.8% and 21.9% for the GDC-only, GDC-CT and the GDC-SE groups, respectively. Similarly, the percentage of frequent involvement in 12-Step activities was 59.1% for the combined GDC-IDC group compared to 30.8%, 30.4% and 18.8%, in the GDC-alone, GDC-CT and GDC-SE conditions, respectively. Finally, 47% of GDC-IDC participants had consistently high attendance and high involvement compared to only 31.2% of those who received GDC alone. Thus, there appear to be potential incremental benefits of combining individual- and group-based 12-Step facilitative approaches with cocaine-dependent individuals.

#### **APPLICABILITY OF EVIDENCE-BASED 12-STEP FACILITATION TO COMMUNITY PRACTICE**

Manual-based treatment approaches, such as those that facilitate 12-Step participation, bring a number of potential advantages to community-based practice. In an ideal world, use of research-based treatment manuals can result in more focused, structured treatment and make treatment easier to disseminate by providing a structure for supervisors to use in teaching and monitoring progress [66,67]. In addition to the natural advantages of utilizing a structured approach that carries with it evidence of efficacy, current pressure towards evidence-based practice, emanating from policy makers and implementers and third-party payers, serves as a motivating force toward community adoption of research-based treatments. In spite of what appear to be obvious advantages to adopting evidence-based approaches, there are a number of factors that can serve as barriers to adoption [68]. However, compared with other evidence-based treatments, 12-Step facilitative interventions may face fewer of these barriers and may be utilized more readily.

Two of eight treatment sites participating in the Methamphetamine Treatment Project [54] reported using the Minnesota Model as their standard treatment for methamphetamine dependence and several incorporated elements of the Minnesota Model. Even if a treatment program's primary treatment model is not 12-Step-based, most chemical dependency counselors have familiarity with the 12 Steps, either through their professional education or their own personal recovery experience.

Assuming their acceptance of the 12-Step approach, they may see research-based treatments derived from it as more credible [68] than an approach based on a relatively foreign philosophy or set of skills. Concerns about competence to learn and deliver the treatment might also be reduced [68].

Twelve-Step facilitation in the Carroll *et al.* [22] study and the CCTS [65] incorporated numerous individual therapy sessions that may be difficult to replicate within the funding structure of current community-based treatment. However, there are additional promising approaches that might be adopted more readily, such as briefer group-based 12-Step facilitative interventions [27,69,70]. Systematic encouragement and community access, also called intensive referral [52,71], is another promising, brief 12-Step facilitation approach that overcomes this potential barrier and therefore deserves further testing in both research and clinical settings. Because delivery of this intervention requires only two to three individual out-patient sessions, it may be incorporated more easily into existing treatment structures without significant adaptation, and results of this approach seem comparable to more intensive 12-Step therapies.

#### **CONCLUSIONS**

Methamphetamine abuse has placed tremendous strain on the current substance abuse treatment system. More actively integrating 12-Step approaches into the treatment process may provide low- or no-cost options for methamphetamine abusers and assist in increasing the capacity for providing treatment to an increasingly large group in need. Further, evidence derived from work with alcohol- and cocaine-dependent individuals suggests that involvement in 12-Step self-help groups, both attending meetings and engaging in 12-Step activities, is associated with reduced substance use and improved outcomes. However, in light of the rates of individuals who do not engage on their own and the rates of dropout from such groups, active steps to facilitate 12-Step involvement have been recommended. There are a number of evidence-based manuals available to assist clinicians in this process. While there are some potential barriers to adopting manualized treatment interventions into clinical practice, the familiarity of the 12-Step approach may make this easier. It is likely that adaptations of these manualized interventions will be necessary to fit them into current program structures and reimbursement models. However, given the positive benefits of 12-Step involvement found with alcohol- and cocaine-dependent individuals, we anticipate that similar treatment gains and positive outcomes will be found among methamphetamine and stimulant abusers. As we have pointed out,

there are few if any data available on methamphetamine abusers and their use of such approaches. Further research and evaluation are necessary to determine the extent to which methamphetamine abusers do engage in 12-Step self-help programs, whether they prefer more general (e.g. AA, NA, CA) or drug-specific (e.g. CMA) meetings, the rate of dropout and the outcomes associated with their involvement. Further, the efficacy of efforts to facilitate involvement of methamphetamine abusers in such 12-Step groups needs to be determined.

### Acknowledgements

Funding for this manuscript is from Cooperative Agreement 5 U10 DA13714, as part of the National Institute on Drug Abuse (NIDA) Clinical Trials Network, U. S. National Institutes of Health.

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