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Mobilizing Community Support in People Receiving Opioid-Agonist Treatment: A Group Approach

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Abstract

This descriptive study evaluates a novel group intervention designed to help opioid-dependent patients in medication-assisted treatment identify and recruit drug-free individuals to support recovery efforts. The Social Network Activation Group works with patients who are actively using drugs and resistant to including drug-free family or friends in treatment. The group encourages patients to attend structured recovery, religious, or recreational activities in the community to find recovery support. For those with underutilized support, motivational interviewing and skills training are used to help patients resolve ambivalence and include family or friends in the treatment plan. Patients earn up to one methadone take-home each week that they attend the group and verify activity participation. They complete the group after introducing a drug-free family member or friend to their counselor. This study reports on a sample of 66 patients referred to this group as part of intensive outpatient treatment. Patients attended 71% of scheduled sessions and participated in a $M = 4.3$ activities. Mutual-help support groups (64%) and church (28%) were the activities most often attended. Thirty-six percent brought in a drug-free family or friend to meet their counselor. Family members were the most common choice (67%). The results demonstrate preliminary feasibility and mixed efficacy of the Social Network Activation Group for this highly select sample of patients, and provide additional evidence that many patients possess drug-free family or friends who are willing to support recovery efforts.

1.0 Introduction

People with opioid dependence who receive methadone-assisted treatment routinely engage in illicit drug use, which harms recovery and retention (Bell, Burrell, Indig, & Gilmour, 2006; Gowing, Farrell, Bornemann, Sullivan, & Ali, 2011; Marsch, 1998; Peirce et al., 2006). Clinical interventions to reduce this substance use and retain patients in treatment are often ineffective (see Amato, Minozzi, Davoli, & Vechi, 2011, for a review). Part of the problem may be that these patients spend much of their time in social environments that reinforce continued drug use and risk behaviors (De, Cox, Bolvin, Platt, & Jolly, 2007;

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Latkin, German, Vlahov, & Galea, 2013; Lloyd et al., 2008). Consistent interaction with other people that use drugs is strongly associated with much poorer treatment outcomes (Day et al., 2013; Goehl, Nunes, Quitkin, & Hilton, 1993). While counseling staff routinely instruct patients to “change people, places, and things”, it remains challenging for people to discontinue their social connections and activities with substance users in the absence of available alternatives.

An emerging literature demonstrates that the social networks of chronic opioid users also contain people that do not use drugs (Bohnert, German, Knowlton, & Latkin, 2010; Buchanon & Latkin, 2008; Kidorf, Latkin, & Brooner, 2016). Most studies utilizing drug-free network members of people with alcohol or drug use disorders have evaluated the use of intimate partners or family members to improve relationship functioning (O’Farrell & Clements, 2012; Stanton & Shadish, 1997). Because many people with opioid use disorder do not have drug-free romantic partners, perhaps a more practical strategy for including drug-free support is a community reinforcement approach (CRA; Azrin, Sisson, Meyers, & Godley, 1982). CRA utilizes available network support to increase social reinforcement through participation in family interactions and community activities (Meyers et al., 2011), and recent work with adolescents and emerging adults is encouraging (Godley et al., 2017; Kirby et al., 2017; Smith, Davis, Ureche, & Dumas, 2016).

Nevertheless, community programs rarely include family and other drug-free social network member in the treatment process. Helping patients activate drug-free network support could facilitate recovery efforts in at least two ways. The first is that it might simply increase the amount of drug-free social support (Cohen & Wills, 1985; Dobkin, De Civita, Paraherakis, & Gill, 1992). Social support is consistently associated with better health functioning and improved treatment outcomes (e.g., Lakey & Orehek, 2011; Litt, Kadden, Kabela-Cormier, & Petry, 2009; Longabaugh, Wirtz, Zywiak, & O’Malley, 2010; Warren, Stein, & Grella, 2007; Wasserman, Stewart, & Delucchi, 2001). The approach could also facilitate recovery by expanding the patient’s drug-free network support. A network support person can connect patients to community activities with other drug-free individuals (e.g., mutual-help groups; religious organizations), thereby providing a methodology to modify social networks and enhance community reinforcement (Meyers, Roozen, & Smith, 2013). For example, sustained attendance to mutual-help groups can improve substance use outcomes and facilitate changes to the social network (Gossop, Stewart, & Marsden, 2008; Kaskutas, Bond, & Humphreys, 2002; Kelly, Stout, Magill, & Tonigan, 2011).

A number of years ago, the Addiction Treatment Services (ATS) program in Baltimore, an opioid-agonist treatment center, developed a structured therapy group intervention to work with opioid users and their drug-free family and friends (Kidorf, Brooner, & King, 1997; Kidorf et al., 2005). This group, entitled the Community Support Group, was designed to help patients utilize drug-free people in their own social networks and communities to provide support for abstinence and begin the task of expanding drug-free social support. This work is guided by an alteration model of network change, in which social networks can be modified through the addition of new people or links to new organizations (Valente, 2012). For example, drug-free support can help patients that have demonstrated an interest in attending mutual-help groups sustain participation over time and improve overall

engagement. Descriptive data generated from this intervention showed that participation is associated with increased rates of community activity and reduced rates of drug use (Kidorf et al., 1997; 2005).

Despite the introduction and success of this group, a subgroup of patients never participated in it because they failed to bring a non-drug using family or friend into treatment. Some of these patients reported having no drug-free family or friends, while others reported the presence of drug-free network members, but were resistant to include them in the treatment plan. To meet the specific clinical needs of these patients, we developed another intervention, entitled the Social Network Activation Group. The purpose of this group is to encourage patients to participate in community activities each week to improve opportunities for identifying and securing drug-free support (White, 2009). The group is also specifically designed to help patients that report having drug-free family or friends resolve their ambivalence to include them in the current treatment episode. It is embedded in the intensive outpatient schedule of treatment services designed to reduce rates of drug use and improve treatment participation.

The present study reports on 66 patients with current substance use that were referred to the Social Network Activation Group during the first year of its implementation. The study describes the group and presents data on its feasibility, which includes rates of attendance and completion of community activities. A secondary aim evaluates the proportion of patients that identified drug-free family or friends and attended a role induction session with the primary counselor, necessary to begin attending the established Community Support Group. The study also reports on the characteristics of the drug-free network members that agreed to support the patient in recovery.

2.0 Method

2.1 Participants.

All study participants (n = 66) were opioid-dependent outpatients receiving methadone as part of their overall care at ATS. They had all been advanced to the intensive outpatient schedule of the program due to sustained illicit drug use. ATS is a hospital-based community treatment program on the Johns Hopkins Bayview Medical Center campus. It has a census of approximately 350 patients. The study sample includes patients assigned to the Social Network Activation Group between October 2016 and October 2017. All data in this report were obtained using a structured clinical chart review by trained staff. The review was conducted as part of an ongoing quality assurance plan to assess the impact of the newly formed Social Network Activation Group. The Johns Hopkins Institution Review Board (IRB) approved the study.

2.2. Routine clinical services.

ATS employs an adaptive treatment model (see Figure 1) and random testing of urine samples (monthly to weekly schedules). The clinic is open seven days a week. New admissions initiate treatment at Step 2 (Step 1 is reserved for patients that achieve clinical stability for at least 6-months), and are only advanced to more intensive schedules of

counseling in the context of missed sessions and/or drug-positive urine specimens (Kidorf, King, & Brooner, 2006). For example, patients in Step 2 who test positive for any drug are advanced to Step 3 (1 hour of individual counseling and 2 hours of group counseling per week). Drug use (or missed counseling) in Step 3 results in further advancement to Step 4, which provides an intensive outpatient (IOP) level of counseling services (1 hour of individual counseling and 8 hours of therapy and skills-based group counseling). Behavioral reinforcement is employed to facilitate compliance with scheduled counseling sessions. Methadone delivery time restrictions are advanced following missed sessions, and one take-home per week is administered following complete adherence, independent of urinalysis results.

As part of Step 4 IOP counseling, patients are asked to bring into treatment a drug-free family or friend to support recovery efforts. We identify this individual as a community support person (CSP). The patient and CSP participate together in a Community Support Group to enhance recovery support and expand the patient's drug-free social network (Kidorf et al., 2005). These goals are achieved by scheduling patients and their CSPs to attend community activities together with the aim of adding new drug-free people to the patient's social network. In general, patients cannot complete Step 4 without the participation of a CSP.

Patients who are advanced to Steps 3 or 4 and report no drug-free social support in their network or strong resistance to including one in treatment are referred to the newly created Social Network Activation Group. As noted earlier, this group is designed to provide assistance in both identifying and mobilizing community support. While we encourage all patients to work toward activating social support, those who test drug-negative and are counseling adherent during Step 3 or the first 2 weeks of Step 4 can return back to Step 2 without the requirement of bringing in a CSP. All other patients who remain in Step 4 past the first 2 weeks remain scheduled to attend the Social Network Activation Group until they bring to treatment drug-free support.

2.3. Social Network Activation Group.

This group meets one time per week for one hour, and during the period of this study, was routinely led by a clinical psychologist or psychiatrist (MK, JP, JG). Group content was rationally conceived based on our experience in working with patients on the goal of enhancing community support. Group leaders follow a highly structured format, beginning each session by presenting the rationale of the group: to help patients identify a drug-free person to support recovery efforts and to help expand the drug-free social network. Each week, patients are expected to participate in at least one community activity with the goal of meeting new drug-free individuals. Most people choose to attend mutual-help meetings or religious services, though other activities are possible and encouraged (e.g., volunteer activities; recreational leagues; book clubs). To encourage adherence to the activity, the contingency to administer one take-home per week for full counseling compliance (see 2.2) was modified slightly to include written verification of activity participation. The most common examples of verification were NA or AA meeting slips signed and dated by group leadership, or church bulletins reflecting the correct week of attendance.

The group leader asks each patient in the group about his or her attendance to the scheduled community activities. Those attending an activity are encouraged to discuss their participation and efforts to enhance engagement (e.g., finding a sponsor; attending Bible study). For those not attending an activity, other group members help to generate a list of activities that might be of interest to the patient. The group also uses problem-solving strategies to help patients manage obstacles to activity participation (e.g., child care issues), and explores networking strategies for identifying drug-free individuals that are not in their personal social network. For example, many patients have drug-using friends who know people currently attending mutual-help group meetings.

It should be noted that many patients referred to this group possess drug-free family or friends but are reluctant to include them in treatment. There are a number of possible sources for this ambivalence. For example, the network member may be angry with the patient for past mistreatment, may be unsupportive of methadone-assisted treatment, or may simply not have enough time to participate. Alternatively, the network member might be interested in participating, but the patient may be concerned about revealing their drug use or treatment progress. A portion of group time might be used to help these patients manage ambivalence using basic motivational interviewing practices (Miller & Rollnick, 2013). For patients who resolve to include a drug-free network member in treatment, the group leader routinely uses role-playing strategies to improve competence in enlisting community support involvement.

Patients ordinarily remain in the group until they introduce a drug-free family member or friend to their counselor at a role induction session. At this session, the counselor explains the rationale of the intervention (including basic education about substance use disorder and its treatment), the expectations of the Community Support Group, and the schedule of groups. The prospective CSP then completes urinalysis or saliva testing to confirm drug-free status, and is scheduled to attend the Community Support Group.

2.4 Assessments and outcomes.

Upon the patient's referral to the Social Network Activation Group, the counselor submits an attendance form to the group leader that lists up to two drug-free family or friends identified by the patient, and the patient's interest in attending mutual-help groups and church to identify drug-free support. The group leader uses this sheet to document group attendance, engagement in (and category of) of community activity, verification of activity, and introduction of CSP to the counselor. If the attendance form lacked information on the presence of drug-free network members, this data was taken from the Community Support Person Worksheet (Kidorf et al., 2016) that patients complete within the first month of admission.

2.5 Data analysis.

Descriptive analyses characterized all patients referred to the group, group and community activity attendance and adherence (attended / scheduled), and introduction of CSP to counselor. Patients were administratively censored after the one-year group observation period. Three exploratory multivariate logistic analyses were conducted, using: 1) time to starting the group and 2) baseline percent of "any" drug-positive urine samples as covariates.

The first multivariate regression evaluated group adherence (attended / scheduled group sessions) as a predictor of community activity adherence. The second multivariate regression evaluated predictors of introducing a CSP to the counselor (yes/no), adjusting for: 1) baseline identification of a drug-free network member (yes/no); 2) group adherence, and 3) community activity adherence as independent variables. The final multivariate regression evaluated predictors of retention, using: 1) group adherence, 2) community activity adherence, and 3) baseline identification of a drug-free network member as independent variables. For each analyses we show odds ratios (OR), 95% confidence intervals (CI), and p values.

3.0 Results

3.1 Characteristics of patients referred to the Social Network Activation Group.

Figure 2 shows the flow of patients to the Social Network Activation Group. During the period of study observation, 157 patients were advanced to either Step 3 or Step 4 due to illicit drug use. Many of these patients (n=56; 36%) were not referred to the Social Network Activation Group because they reported drug-free family or friends that they were willing to bring to the treatment program to support recovery efforts. The remaining patients (n = 101) were referred to the Social Network Activation Group. Of these patients, 19 left treatment against medical advice before attending a single group, 2 were transferred to an intensive treatment program for pregnant women, 12 completed Step 3 and were excluded from the requirement of CSP participation, and 2 identified a CSP in Step 3 and did not need to attend the group, leaving 66 patients in the present report.

Participants had the following demographic characteristics: Age: 43.2 (SD = 12.1) years; Sex: 53% female and 47% male; Race: 68.2% Caucasian, 24.2% African-American, 7.6% other. During the three-months prior to starting the group, mean rates of drug-positive urine samples were as follows: opioid-positive: 0.45 (SD = 0.40); cocaine-positive: 0.33 (SD = 0.40); benzodiazepine-positive: 0.21 (SD = 0.34); and “any-positive”: 0.79 (SD = 0.26). Almost all patients (86.4%) reported having at least one network member that was drug-free. Most patients (71%) also reported at least one network member that could be used as a CSP, though they were not currently willing to bring them into treatment to support recovery efforts. Finally, a slight majority of patients reported that they were interested in attending mutual-help groups (56%) or church (58%) to increase drug-free support.

3.2 Group and community activity attendance.

Patients attended a $\bar{M}$ = 8.2 group sessions ($\underline{SD}$ = 8.5; range = 1–43 sessions); 71% of scheduled sessions were attended. Patients attended a $\bar{M}$ of 4.3 ($\underline{SD}$ = 7.0) community activities. An activity was attended on 54% of scheduled weeks. Multivariate regression showed that time to starting group (OR = 0.910 (0.853, 0.970), $p < .01$) and group adherence (OR = 343.7 (10.66, 11,082), $p < .001$), but not percent baseline drug-positive urine samples (OR = .704 (0.030, 16.36), ns), were associated with community activity adherence. The large OR and CI for group adherence demonstrates a very strong relationship between willingness to attend the group and complete scheduled activities. Because earning a weekly methadone take-home dose was contingent on both group and community activity

attendance, those missing a group lost an important program incentive for participating in activities. Patients almost uniformly attended the same category of activity each week. Most (64.0%) chose to attend mutual-help groups, though others attended church (28.1%) or other social activities (7.9%).

3.3 Introduction of CSP to counselor.

Thirty-six percent of these patients ultimately brought into treatment a drug-free CSP during the observation period. All CSPs were from the patients' personal social network, and all tested drug-negative. On average, it took patients approximately 11 weeks ($M = 76.3$ days; $SD = 72.6$) to introduce the CSP to their counselor during the role induction session. Family (66.7%) were most often represented, followed by friends (20.8%) or partners (12.5%). Of the family members, almost half were parents (43.8%), followed by other family (25%), siblings (18.8%), or children (12.5%). None of the variables included in the multivariate regression (time to starting group: $OR = .978$ (0.935, 1.02), ns; baseline percent drug-positive urine samples: $OR = 0.522$ (0.051, 5.32), ns; baseline identification of a drug-free network member: $OR = 3.79$ (0.863, 16.66), ns; group adherence: $OR = 11.46$ (0.627, 209.4), ns; community activity adherence: $OR = 1.13$ (0.051, 5.32), ns) were associated with introducing a CSP to the counselor.

During the observation period, four patients (6%) completed Step 4 without introducing a CSP to their counselor. One of these patients became involved in an intensive parenting training program, and two others, due to significant psychiatric concerns, were permitted to complete the group following strong efforts in drug-free activity participation (e.g., volunteering at church). Each of these patients had achieved sustained abstinence in Step 4, and understood that return to Step 4 would require CSP involvement. A fourth patient graduated Step 4 in two weeks and returned to Step 2 without the CSP requirement.

The remainder of the study sample (58%) did not bring a CSP into treatment during the study observation period. Of these patients, 41% left treatment against medical advice, while 17% remained in the group at the end of the study and had not yet identified a CSP. Multivariate regression showed that group adherence ($OR = 601.6$; $CI: 2.49, 145409$; $p < .05$), but not time to starting group ($OR = 1.06$ (0.994, 1.13), ns), baseline percent drug-positive urine samples ($OR: .045$ (0.001, 1.98), ns), baseline identification of a drug-free network member ($OR = 0.846$ (0.145, 4.93), ns), or community activity adherence ($OR = 2.19$ (0.176, 27.35), ns) were associated with remaining in treatment. The large OR and CI for group adherence demonstrates a strong relationship between willingness to attend the group and treatment retention, a situation where you have few, if any, people with low group attendance and high odds of remaining in treatment.

4.0 Discussion

The study provides good preliminary data on the feasibility of the Social Network Activation Group in a sample of patients with high rates of continuing drug use and strong resistance to including drug-free family or friends in treatment. The group excluded patients that were already amenable to including community support as part of their treatment. Most patients agreed to attend the group, which was embedded within an intensive adaptive treatment

schedule (Kidorf et al., 2006). That patients attended over 70% of scheduled sessions demonstrates good willingness to actively engage in the process of securing drug-free support. Additional support for this was provided by patient engagement in weekly community activities, which was associated with group adherence. The behavioral contingency plan appeared instrumental in facilitating attendance to group sessions and community activities (Brooner et al., 2004), thereby providing an excellent platform for studying group efficacy. However, because both behaviors were required to earn the program incentive, those missing group sessions routinely failed to attend community activities.

Efficacy findings were decidedly mixed. A little over a third of the sample brought into treatment a CSP to meet their counselor, usually a family member. While it appears that the Social Network Activation Group was instrumental in motivating inclusion of community support, other influences are possible, including participation in the other IOP groups, mounting stressors associated with their continuing substance use, and/or their individual counseling sessions that often focused on resistance to this therapeutic goal.

The high failure rate suggests that modifying the group approach may be necessary to better reflect the therapeutic challenges related to this select sample of patients. Because most patients reported having drug-free family or friends in their personal networks, an intervention with a stronger emphasis on behavioral reinforcement and motivational interviewing may improve outcomes. This suggestion is supported by data showing no association between community activity participation and CSP inclusion. For those who claim no drug-free network members, perhaps providing stronger programmatic connections to a wider range of community activities would be helpful, especially for those who do not favor mutual-help groups or religious services.

A notable limitation of this descriptive study is lack of random assignment, a design that would more conclusively determine the efficacy of the group on community activity attendance, CSP inclusion, and other treatment outcomes (e.g., urinalysis results). Another limitation is generalization of study results to other substance use disorder treatment programs. The Social Network Activation Group was both conceived and conducted by experienced clinicians in a program that had already established a milieu supporting work with family and friends. Nevertheless, the structured and rational format of this group, combined with the reliable efficacy of behavioral reinforcement (Higgins, Heil, & Lussier, 2004), suggests that this type of intervention could be implemented successfully in other clinical settings. Providing more staff training on the impact of social networks on treatment outcomes, incorporating community support within the broader treatment plan, and building bridges with community resources designed to expand drug-free support might further improve dissemination and implementation efforts.

While the present study does not address the projected benefits of CSP inclusion, earlier studies have demonstrated at least preliminary efficacy in sustained community activity attendance and reduced drug use over time for those attending the Community Support Group (Kidorf et al., 1997; 2005). A randomized trial of the Community Support Group is ongoing (Kidorf et al., 2018). In addition, significant other involvement has shown benefits for the engagement and treatment of adolescent and young adult substance users (Godley et

al., 2017; Kirby et al., 2017; Smith et al., 2016), and the treatment of adults enrolling in opioid detoxification (Brigham et al., 2014).

Finally, that a subset of active drug-using patients chose to leave the program prior to enlisting drug-free social support demonstrates an important risk of offering enhanced clinical services to this population. Some may simply reject the treatment and go elsewhere for less comprehensive or intensive care. In the present study, poorer adherence to scheduled groups was strongly associated with leaving treatment against medical advice. The relationship between adherence to other Step 4 groups and treatment retention was not evaluated, though we would anticipate similar findings. Unfortunately, treatment drop-out is a serious problem across most medication-assisted programs and is ordinarily driven by high rates of continuing substance use (Bell et al., 2006; Proctor et al., 2015). It is possible that better results might be attained in samples that are abstinent or at least engaged in lower rates of substance use.

The Social Network Activation Group produced good evidence of feasibility within a population of active drug users in a community-based treatment setting, thereby establishing a strong platform to evaluate efficacy and generalizability. That about a third of these patients brought in a drug-free social network member shows promise but also supports further refinement of group content and processes. Continued experience with the intervention will result in development of a formal manual with measures of fidelity, especially with the increased deployment of motivational interviewing and behavioral role-playing skills. Even at this early stage of development, the intervention is feasible and provides a good starting point for helping active drug-using and highly ambivalent patients begin the important task of incorporating drug-free family or friends in their recovery plan.

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Highlights

- the Social Network Activation Group demonstrated good feasibility among actively drug using and highly ambivalent opioid-dependent outpatients
- participants evidenced good willingness to attend group sessions and community activities
- about one third of the sample ultimately included a drug-free friend or family to participate in treatment

Figure 1.

Adaptive treatment model. Movement between steps based on drug-positive urine samples and session attendance. Step 3 graduation does not require inclusion of Community Support Person (CSP). Step 4 graduation requires CSP inclusion (unless patient graduates in first 2 weeks).

Figure 2.

Flow of Step 3 and Step 4 patients to Social Network Activation Group. Of those not identifying a CSP ($n = 101$), 66 patients attended 1 group and were included in analyses. Reasons for not attending the group ($n=35$) include: leaving treatment against medical advice ($n = 19$), graduating Step 3 ($n = 12$), referral to an IOP for pregnant women ($n = 2$), and CSP inclusion before starting group ($n = 2$).