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Teaching Internal Medicine Resident Physicians About Alcoholics Anonymous: A Pilot Study of an Educational Intervention

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Abstract

Greater physician confidence in treating alcoholism is associated with a higher frequency of referring alcoholic patients for treatment, but many physicians have limited experience with Alcoholics Anonymous. We implemented a brief, didactic and experiential educational intervention about AA and evaluated its effect on knowledge and attitudes, using a before-after repeated measures study design. Thirty-six first-year internal medicine resident physicians received an educational intervention, which consisted of a 45-minute lecture about AA, a visit to an AA meeting, and a 30-minute debriefing session the next day. Residents' knowledge and attitudes were assessed by a brief written anonymous survey before and after the educational intervention. Residents reported increases in self-perceived knowledge about AA and had more favorable attitudes towards AA after the intervention. Our pilot study shows that a brief, didactic and experiential course can improve physician knowledge and attitudes about AA, and holds promise for improving physician interface with this commonly used intervention.

Keywords

Alcoholics Anonymous; medical education; housestaff; alcohol dependence; internal medicine

INTRODUCTION

The widespread nature of alcoholism and its enormous impact on public health are well known (1,2). The challenges inherent in diagnosing and treating alcoholism are made even more daunting by the fact that health insurance coverage and access to high quality care for alcohol dependence are often inadequate (3,4). Although there are no controlled trials comparing Alcoholics Anonymous with no treatment, research to date suggests that AA is efficacious for

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people with alcoholism either as a sole intervention or a component of a treatment plan (5,6). In one study by Morgenstern et al. (5), affiliation with AA was associated with more abstinence and fewer days of alcohol consumption. AA is free, and local meetings are available worldwide, contributing to its widespread utilization by patients. According to the 2004 National Survey on Drug Use and Health, 3.8 million Americans received treatment for a substance abuse disorder in 2004, and more than half (2.1 million) were treated in the context of a self-help group such as AA, making self-help groups the most commonly used intervention for substance abuse in the United States (3).

The education of future generalists in the diagnosis and management of substance abuse disorders is especially important, because it is uncommon for patients to receive treatment for a substance abuse disorder from a specialist in addiction medicine. In 2004, there were 23.5 million Americans who required treatment for a substance abuse problem, but only 2.3 million of these people received treatment at a facility specializing in the treatment of substance abuse, leaving the great majority to be cared for by generalist physicians (3,7). However, most generalist physicians feel poorly prepared to identify, assess, and address alcoholism in their patients (8–11). Although most physicians ask about alcohol use, they often do not intervene effectively in patients with identified disorders, and they also report dissatisfaction when caring for patients with alcoholism (12). Indeed, a recent study by the RAND Corporation confirmed that the quality of care for identified alcohol dependence is the worst among all chronic conditions. In that study, only 4.6% of patients diagnosed with alcohol dependence were referred for any sort of treatment, including inpatient rehabilitation, outpatient rehabilitation, self-help groups, counseling, or aversion therapy (4).

Clinicians who have higher levels of perceived skill and responsibility for diagnosing and treating alcoholism perform better in these areas. Research by Geller et al. suggests that trainees who feel highly confident in their abilities or highly responsible screen and refer patients for alcohol-related disorders almost twice as often as others (13). One major challenge of medical education, therefore, is to help physicians in training both to develop skills to diagnose and treat alcoholism and to feel comfortable and motivated enough to use these skills effectively. But how is this to be accomplished? Over the past thirty years, the preponderance of evidence has shown that experientially-based educational interventions are the most effective in changing the attitudes of medical trainees towards alcoholics and alcoholism, and in improving their confidence and their practice patterns (14–20). In fact, greater experience with alcoholism is the single greatest predictor of excellent clinical practice in this area, arguing for education through direct experience (21).

Previous studies have evaluated educational interventions to improve physician practice with regard to the diagnosis and treatment of alcoholism. D'Onofrio et al., using a randomized controlled design, showed that a brief curriculum improved self-reported knowledge and practice among emergency medicine residents with regard to screening and intervening for alcohol problems (14). Kahan et al., using a randomized controlled design, showed that a skills-based workshop improved the performance of medical students with a group of standardized patients, although a follow-up survey several months later showed attenuation of the difference (22). Ockene et al., using a pre-post design, showed that attendings, residents, and nurse practitioners who received a curriculum in patient-centered counseling showed increased counseling skills, preparedness to intervene, perceived importance of intervention, and measured knowledge (23).

However, these prior reports of educational interventions regarding management of alcohol problems have not emphasized knowledge and attitudes regarding AA in particular. This is important because there is a gap between patients and practitioners regarding the emphasis placed on spirituality in the treatment of substance abuse disorders. In particular, Goldfarb et

al. have shown that a group of medical students were less likely to emphasize spiritually based approaches to treating substance abuse than recipients of such treatment (24). Indeed, the work of Fazio et al. suggests that experienced substance abuse faculty and pre-clinical medical students naturally emphasize the importance of spiritual approaches to treating substance abuse, but this emphasis shifts toward the biomedical during third-year clerkships, and may need to be relearned during years of treating substance-abusing patients (25). Chibnall et al. have shown that physicians require specific training to become comfortable with spiritually based treatment modalities (26). There is a need for educational interventions focused on introducing generalist physicians to AA, interventions based upon experiential learning and introducing AA specifically as a spiritually-based treatment program for alcoholism.

To address this need, we designed and piloted a brief, didactic and experiential educational intervention focused on AA for first-year internal medicine resident physicians-in-training (interns). The objective of the educational intervention was to introduce the interns to AA as a resource. The premise was that greater familiarity with and understanding of AA would lead to greater incorporation of AA into management plans for alcoholic patients, by increasing both referrals to AA and support of patients already participating in AA (27). Although we focused our educational intervention on experiential learning through attendance at an AA meeting, the didactic portion of the course was also important for introducing key concepts such as the role of spirituality in AA, which is one feature of AA that is unique among treatment options for alcoholism. We evaluated the effect of the educational intervention using a before-after study design to measure changes in knowledge and attitudes about AA. We hypothesized that a brief, feasible educational intervention would increase knowledge and improve attitudes of resident physicians.

METHODS

Participants

First year internal medicine resident physicians were the participants in the educational intervention. The participants were drawn from the three-year internal medicine residency program at Montefiore Medical Center of Bronx, NY, an affiliate of the Albert Einstein College of Medicine. One hundred percent of the thirty-six interns in the program participated in the study, which was approved by the institutional review board of Montefiore Medical Center.

The Educational Intervention

The course was incorporated into a month-long ambulatory care clinical rotation, as part of a larger substance abuse curriculum. Its contents consisted of 1. a lecture and discussion, 2. attendance at an AA meeting, and 3. a debriefing discussion. One of the authors (AJR) delivered a forty-five minute lecture and discussion to introduce AA. The content of the talk, which was based on previous work about treating alcoholism in primary care, included the history and goals of AA, the structure and function of AA, evidence for the effectiveness of AA and other treatment modalities for alcoholism, information about how to refer a patient to AA, and how to support a patient who is in AA. Possible areas of discomfort with AA, including a perceived emphasis on religion, were included in the discussion (25,26). The twelve steps and the twelve traditions, the ideological bedrock of AA, were circulated and discussed, and the physicians-in-training were oriented to what occurs at an AA meeting.

That evening, the trainees attended a 50-minute AA Beginners Meeting, an open AA meeting specifically geared toward being accessible to those who have never before attended an AA meeting. This weekly Beginners Meeting was followed by two closed meetings, which the interns did not attend. There were more than 100 people in attendance at these meetings every week, most of whom were members of AA who had come in order to attend the entire evening.

The following morning, a coauthor (AJR) moderated a thirty-minute discussion with the trainees regarding their experiences at the meeting, reactions to what they had seen, and lessons learned. The trainees' experiences and reactions dictated the course of the discussion, but the reactions of the trainees to the perceived spiritual content of AA was explored with each group in addition to any other topics discussed.

Evaluation

The effects of the educational intervention on learner knowledge and attitudes were assessed by written self-report before the lecture and discussion and after the debriefing discussion. The questionnaire assessed demographics, prior exposure to alcoholism and AA, self-assessed knowledge of AA, perceived effectiveness of AA, and comfort with AA. All responses were on a nine-point Likert Scale (1 = strongly disagree, 3 = disagree, 5 = neutral, 7 = agree, 9 = strongly agree). A thorough search of the relevant literature did not reveal any pre-existing instruments that dealt specifically with our study question; therefore, we based our items on previously published substance abuse attitude questions (12,23,28). The questionnaires were anonymous, but were handed out in pairs marked with matching numbers, with the second questionnaire to be retained by the trainee and then filled out at the conclusion of the course.

Statistical Analysis

Paired t-tests were used to compare the mean scores on each survey item before and after the intervention. Alpha was set to the 0.05 level of significance; no adjustments were made for multiple testing. All analyses were performed with SAS version 9.1(29) using PROC FREQ and PROC UNIVARIATE.

RESULTS

Baseline Characteristics of the Sample

Baseline characteristics of the thirty-six participants are summarized in Table 1. A majority of the group consisted of women (22). Caucasians (13) and Asian/Pacific Islanders (11) constituted the bulk of the group. Most of the participants (28) had never previously attended an AA meeting, but the majority of them (20) had some personal contact with a person with a substance abuse problem. The mean age of the participants was 27.7 years old.

Responses to the Questionnaire

The results of the questionnaire are summarized in Table 2. The questions are divided thematically between items relating to knowledge and items relating to attitudes and beliefs. Participants reported increased knowledge of what occurs at an AA meeting and increased understanding of the role of an AA sponsor after the intervention. There were also changes in attitudes and beliefs. After the intervention, the participants reported greater belief in the effectiveness of AA, increased comfort in referring patients to AA and in discussing the patients' sponsors, and greater comfort with the role of spirituality in the AA program.

DISCUSSION

Our pilot study demonstrated that a brief educational intervention consisting of a didactic session with discussion, coupled with AA meeting attendance and debriefing, was associated with improvements in knowledge and attitudes about AA. This educational intervention was modest, requiring less than two hours of curricular time, plus an evening spent at the AA meeting. The investigator who implemented the course was a chief resident who had received training in a similar setting, but was not a substance abuse expert. These features, plus the

widespread availability of AA meetings, make it feasible to replicate this educational intervention in diverse settings.

Our educational intervention was associated with improvements in both knowledge and attitudes regarding AA. However, it should be noted that only one of the seven questionnaire items failed to show a before-after change: "I would be comfortable asking my alcoholic patient how well AA is working for him." This item had the highest mean score for any item on the pre-test (8.3). As such, substantial improvement was not possible (a ceiling effect). In contrast, respondents had a lower degree of comfort with the task of asking an alcoholic patient about his rapport with his sponsor prior to the intervention (mean score 7.6), allowing room for improvement.

Our study has limitations. We did not assess an actual change in clinical practice on the part of the trainees, but prior studies have linked changes in knowledge and attitudes to changes in practice in this clinical area (13,14). However, as with any study that measures a surrogate endpoint such as a change in physician knowledge and attitudes, our study should not be regarded as definitive with regard to the ultimate goal—practice change—but should point the way for further studies designed to demonstrate changes in physician practice in treating patients with alcoholism or improved clinical outcomes for alcoholic patients. We also did not study actual knowledge through the use of a quiz, but rather studied self-reported knowledge. In addition, despite the anonymous nature of the questionnaire, social desirability bias may have influenced the interns to make unjustified claims about their knowledge and attitudes with regard to AA. However, such a bias would likely have been present both before and after the intervention, thus biasing the results toward the null. Finally, we did not study a comprehensive alcohol curriculum. Rather, we focused on one critical element that holds promise for increasing an intervention that has wide applicability. Other studies are needed to improve education about screening, brief intervention, and additional management of alcoholism in primary care settings.

There are many competing priorities in medical education, and only a limited amount of time to address them. Isaacson et al. showed that in the year 2000, only 51% of residency programs in internal medicine had a formal curriculum in substance abuse at all, and the median amount of time allotted by those programs that did was 5 hours, for all kinds of substance abuse combined (30). However, our pilot study demonstrated that with a minimum of time and effort it is feasible to introduce an experientially based educational intervention regarding the treatment of alcoholism, with an emphasis on AA as a resource. This educational intervention can be led by a generalist or a chief resident, rather than by a substance abuse specialist. In our setting, this intervention increased self-reported knowledge of and comfort with AA, and it has the potential to improve physicians' abilities to interface with AA as a treatment resource.

References

1. Moore RD, Bone LR, Geller G, Mamon JA, Stokes EJ, Levine DM. Prevalence, detection, and treatment of alcoholism in hospitalized patients. *JAMA* 1989;261(3):403–7. [PubMed: 2909780]
2. Saitz R. Clinical practice. Unhealthy alcohol use. *N Engl J Med* 2005;352(6):596–607. [PubMed: 15703424]
3. Substance Abuse and Mental Health Services Administration. Results from the 2004 National Survey on Drug Use and Health: National Findings. Office of Applied Studies, NSDUH Series H-28, DHHS Publication No. SMA 05-4062; Rockville, MD:
4. McGlynn EA, Asch SM, Adams J, Keesey J, Hicks J, DeCristofaro A, Kerr EA. The quality of health care delivered to adults in the United States. *N Engl J Med* 2003;348(26):2635–45. [PubMed: 12826639]

5. Morgenstern J, Labouvie E, McCrady BS, Kahler CW, Frey RM. Affiliation with Alcoholics Anonymous after treatment: a study of its therapeutic effects and mechanisms of action. *J Consult Clin Psychol* 1997;65(5):768–77. [PubMed: 9337496]
6. Walsh DC, Hingson RW, Merrigan DM, Levenson SM, Cupples LA, Heeren T, Coffman GA, Becker CA, Barker TA, Hamilton SK, et al. A randomized trial of treatment options for alcohol-abusing workers. *N Engl J Med* 1991;325(11):775–82. [PubMed: 1870651]
7. Lewis DC. The role of internal medicine in addiction medicine. *J Addict Dis* 1996;15(1):1–17. [PubMed: 8729143]
8. Friedmann PD, McCullough D, Chin MH, Saitz R. Screening and intervention for alcohol problems. A national survey of primary care physicians and psychiatrists. *J Gen Intern Med* 2000;15(2):84–91. [PubMed: 10672110]
9. Kaner EF, Heather N, McAvoy BR, Lock CA, Gilvarry E. Intervention for excessive alcohol consumption in primary health care: attitudes and practices of English general practitioners. *Alcohol Alcohol* 1999;34(4):559–66. [PubMed: 10456584]
10. Roche AM, Parle MD, Stubbs JM, Hall W, Saunders JB. Management and treatment efficacy of drug and alcohol problems: what do doctors believe? *Addiction* 1995;90(10):1357–66. [PubMed: 8616464]
11. Rohman ME, Cleary PD, Warburg M, Delbanco TL, Aronson MD. The response of primary care physicians to problem drinkers. *Am J Drug Alcohol Abuse* 1987;13(1–2):199–209. [PubMed: 3687884]
12. Saitz R, Friedmann PD, Sullivan LM, Winter MR, Lloyd-Travaglini C, Moskowitz MA, Samet JH. Professional satisfaction experienced when caring for substance-abusing patients: faculty and resident physician perspectives. *J Gen Intern Med* 2002;17(5):373–6. [PubMed: 12047735]
13. Geller G, Levine DM, Mamon JA, Moore RD, Bone LR, Stokes EJ. Knowledge, attitudes, and reported practices of medical students and house staff regarding the diagnosis and treatment of alcoholism. *JAMA* 1989;261(21):3115–20. [PubMed: 2716143]
14. D’Onofrio G, Nadel ES, Degutis LC, Sullivan LM, Casper K, Bernstein E, Samet JH. Improving emergency medicine residents’ approach to patients with alcohol problems: a controlled educational trial. *Ann Emerg Med* 2002;40(1):50–62. [PubMed: 12085073]
15. Hanlon MJ. A review of the recent literature relating to the training of medical students in alcoholism. *J Med Educ* 1985;60(8):618–26. [PubMed: 3894664]
16. Karnitschnig A. Alcoholics anonymous in medical school education. *Fam Med* 1989;21(2):146–7. [PubMed: 2925031]
17. Kinney J, Bergen BJ, Price TR. A perspective on medical students’ perceptions of alcoholics and alcoholism. *J Stud Alcohol* 1982;43(5):488–96. [PubMed: 7144181]
18. Walsh RA. Medical education about alcohol: review of its role and effectiveness. *Alcohol Alcohol* 1995;30(6):689–702. [PubMed: 8679008]
19. Saitz R, Sullivan LM, Samet JH. Training community-based clinicians in screening and brief intervention for substance abuse problems: Translating evidence into practice. *Subst Abus* 2000;21(1):21–31. [PubMed: 12466645]
20. Parish SJ, Ramaswamy M, Stein MR, Kachur EK, Arnsten JH. Teaching about substance abuse with objective structured clinical exams. *J Gen Intern Med* 2006;21:453–59. [PubMed: 16704387]
21. Warburg MM, Cleary PD, Rohman M, Barnes HN, Aronson M, Delbanco TL. Residents’ attitudes, knowledge, and behavior regarding diagnosis and treatment of alcoholism. *J Med Educ* 1987;62(6):497–503. [PubMed: 3599038]
22. Kahan M, Wilson L, Midmer D, Borsoi D, Martin D. Randomized controlled trial on the effects of a skills-based workshop on medical students’ management of problem drinking and alcohol dependence. *Subst Abus* 2003;24(1):5–16. [PubMed: 12652091]
23. Ockene JK, Wheeler EV, Adams A, Hurley TG, Hebert J. Provider training for patient-centered alcohol counseling in a primary care setting. *Arch Intern Med* 1997;157(20):2334–41. [PubMed: 9361574]
24. Goldfarb LM, Galanter M, McDowell D, Lifshutz H, Dermatis H. Medical student and patient attitudes toward religion and spirituality in the recovery process. *Am J Drug Alcohol Abuse* 1996;22(4):549–61. [PubMed: 8911592]

25. Fazio L, Galanter M, Dermatis H, Levounis P. Evaluation of medical student attitudes toward alcoholics anonymous. *Subst Abus* 2003;24(3):175–85. [PubMed: 12913366]
26. Chibnall JT, Duckro PN. Does exposure to issues of spirituality predict medical students' attitudes toward spirituality in medicine? *Acad Med* 2000;75(6):661. [PubMed: 10875513]
27. Friedmann PD, Saitz R, Samet JH. Management of adults recovering from alcohol or other drug problems: relapse prevention in primary care. *JAMA* 1998;279(15):1227–31. [PubMed: 9555766]
28. Chappel JN, Veach TL, Krug RS. The Substance Abuse Attitude Survey: An instrument for measuring attitudes. *J Stud Alcohol* 1985;46(1):48–52. [PubMed: 3974235]
29. SAS Version 9.1. SAS Institute, Cary, NC.
30. Isaacson JH, Fleming M, Kraus M, Kahn R, Mundt M. A national survey of training in substance use disorders in residency programs. *J Stud Alcohol* 2000;61(6):912–5. [PubMed: 11188498]

TABLE 1

Characteristics of the study subjects (n = 36)

Variable	Number
Gender	
Male	14
Female	22
Race	
White	13
Asian/Pacific Islander	11
South Asian	7
African-American	3
Mixed Race	2
Have you ever been to an AA meeting in the past?	
Yes	8
No	28
Do you have either a family member or a friend with a substance abuse problem?	
Yes	20
No	16

TABLE 2

Results of the questionnaire distributed before and after the educational intervention (n = 36).

Category	Question	Mean Score Before Intervention (SD) ^a	Mean Score After Intervention (SD) ^a	P-Value
Perceived Knowledge	I know what occurs at an AA meeting.	5.2 (2.3)	8.1 (0.9)	< 0.001
Perceived Knowledge	I understand the role of a sponsor in the AA program.	6.3 (2.2)	8.0 (1.0)	< 0.001
Perceived Effectiveness of AA	I believe that AA is an effective treatment option to help alcoholics to remain abstinent.	7.6 (1.2)	8.1 (0.9)	0.008
Comfort with AA	I would be comfortable referring a patient to AA.	7.4 (2.2)	8.4 (0.9)	0.003
Comfort with AA	I would be comfortable asking my alcoholic patient how well AA is working for him.	8.3 (1.2)	8.5 (0.9)	0.4
Comfort with AA	I would be comfortable asking my alcoholic patient about his rapport with his sponsor.	7.6 (1.5)	8.4 (1.0)	0.002
Comfort with AA	I am comfortable with the importance of spirituality in AA.	6.3 (2.4)	7.4 (1.7)	0.008

^aNine-point scale where 1 = strongly disagree and 9 = strongly agree