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Advising Depression Patients to Reduce Alcohol and Drug Use: Factors Associated With Provider Intervention in Outpatient Psychiatry

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Abstract

Background and Objectives—Mental health clinicians have an important opportunity to help depression patients reduce co-occurring alcohol and drug use. This study examined demographic and clinical patient characteristics and service factors associated with receiving a recommendation to reduce alcohol and drug use from providers in a university-based outpatient psychiatry clinic.

Methods—The sample consisted of 97 participants ages 18 and older who reported hazardous drinking (≥ 3 drinks/occasion), illegal drug use (primarily cannabis) or misuse of prescription drugs, and who scored ≥ 15 on the Beck Depression Inventory-II (BDI-II). Participants were interviewed at intake and 6 months.

Results—At 6-month telephone interview, 30% of participants reported that a clinic provider had recommended that they reduce alcohol or drug use. In logistic regression, factors associated with receiving advice to reduce use included greater number of drinks consumed in the 30 days prior to intake ($p = .035$); and greater depression severity on the BDI-II ($p = .096$) and hazardous drinking at 6 months ($p = .05$).

Conclusions and Scientific Significance—While participants with greater alcohol intake and depression symptom severity were more likely to receive advice to reduce use, the low overall rate of recommendation to reduce use highlights the need to improve alcohol and drug use intervention among depression patients, and potentially to address alcohol and drug training and treatment implementation issues among mental health providers.

INTRODUCTION

This study examined factors associated with provider recommendation to reduce alcohol and drug use among patients in outpatient treatment for depression who also reported hazardous drinking or drug use at the time of treatment entry. Hazardous drinking, for example,

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Declaration of Interest

The authors report no conflicts of interest. The authors alone are responsible for the content and writing of this paper.

drinking over recommended limits, may have a significant, negative impact on individuals with depression.^{1,2} Population-based studies have found an association between elevated depression symptoms and heavy drinking,³ and clinical studies have shown relationships between depression and alcohol problems.⁴ Even moderate drinking may be contraindicated for patients in treatment for depression because it may decrease antidepressant response, reduce adherence, and increase medication side effects.⁵ Individuals with depression also are at risk for alcohol problem escalation.⁶ Similarly, drug use is common among patients with depression, including misuse of prescription drugs and illicit drug use.⁷ Drug and alcohol use frequently co-occur, and polysubstance use is associated with higher rates of psychiatric disorders and greater depression severity.⁸ Therefore, it is good clinical practice for mental health providers to advise patients in treatment for depression to reduce or eliminate hazardous drinking or drug use.

Study of provider behavior, including examination of patterns of brief intervention delivery, is a growing research area with particular significance for exploring how to reduce alcohol and drug use.^{9,10} Examining patient characteristics is an important aspect of this research, in order to identify areas to improve clinical practices. For example, in a large Veterans Administration study, after controlling for alcohol use severity, white patients were less likely than Black and Hispanic patients to report receiving advice from a clinician to reduce alcohol use.¹¹ Clinical factors such as alcohol problem severity^{12,13} also may affect whether or not a provider gives advice to reduce use. While such variability likely exists in mental health contexts as well, no prior studies to our knowledge have examined patterns of brief interventions delivered by providers in outpatient psychiatric settings.

This study is a secondary analysis of a motivational interviewing trial to reduce hazardous drinking or drug use among depression patients.¹⁴ Participants were randomized to receive either motivational interviewing related to substance use or a brochure on substance use risks, and all received usual outpatient psychiatric care. At the time of study follow-up, participants were asked whether, as part of their usual care, they received advice to reduce alcohol or drug use. Given participants' depression symptoms and alcohol and drug use patterns at intake, it was expected that such advice would be part of usual clinical care apart from their research participation. We examined which patients were most likely to receive such advice, including patient demographic and clinical characteristics, and service factors such as the type and intensity of usual outpatient psychiatric treatment patients received. We anticipated that participants with greater alcohol consumption and depression severity and higher intensity of clinical services would be more likely to report receiving such advice.

METHODS

Participants

Study participants were adults 18 and older seeking outpatient services in the Langley Porter Hospital and Clinics (LPPHC), at the University of California, San Francisco (UCSF) Medical Center. They were enrolled in a study of motivational interviewing to reduce alcohol and drug use among depression patients,¹⁴ and the current report is a secondary analysis of the original study sample. Participants reported symptoms of depression and hazardous drinking or drug use at clinical intake, were recruited by research staff and were

randomized to receive either 3 sessions of MI or printed literature about alcohol and drug use risks. The study interventions were provided by research staff as an adjunct to usual outpatient depression care. Advice from usual outpatient providers to reduce alcohol or drug use was not part of the study protocol, but we examine provider behavior in this analysis to explore patterns of service in treating this clinical population.

All patients received usual care in LPPHC's Adult Psychiatry Clinic (APC) or its Partial Hospitalization Program (PHP). The APC services include individual and group psychotherapy and medication management, which varies based on clinical need and patient preferences. The PHP is an intensive outpatient service in which patients typically attend individual and group treatment for 5 hours each day for 10 consecutive weekdays, followed by tapering of services; it serves a more acute population than the APC. Both clinics offer evaluation, psychotherapy, and medication management for patients with a range of mental health problems, and patients receive treatment from psychiatry residents, faculty, and clinical staff.

The LPPHC does not offer specialized services for patients whose primary presenting issue is substance dependence. Individuals are screened by telephone prior to intake, and those who report serious alcohol or drug problems are referred to treatment programs in the community.¹⁵ However, prior studies have identified high prevalence of heavy episodic drinking and drug use among depression patients in this clinic.^{16,17} All providers in the clinic are instructed to conduct screening and intervention for alcohol and drug use according to accepted standards of care for depression and other psychiatric disorders, although there is no formal policy determining which patients should receive an intervention. While there is variability in intervention experience among providers and trainees, alcohol and drug use identification, brief intervention and motivational interviewing are integrated into the psychiatry residency curriculum.

Study inclusion criteria were based on hazardous drinking (ie, any consumption of 3 drinks in a day in the prior 30 days, for both men and women) or drug use (use of any illicit or non-prescribed drug in the prior 30 days) and moderate or greater symptoms of depression (15 on the Beck Depression Inventory II [BDI-II]) at clinic intake.¹⁸ We chose a hazardous drinking standard slightly more conservative than that recommended for the general population (which is 5 drinks for men and 4 drinks for women)² because patients in this treatment population are frequently taking antidepressant medication that can have adverse interactions with alcohol⁵ or increased risk of side effects and toxicity.^{19,20} Patients with current mania or psychosis were excluded.

Measures

Demographic information for participants was obtained from medical records, including results of a computerized assessment battery.¹⁵ Alcohol and drug questions included substance type (cannabis, cocaine, amphetamine-type stimulants, hallucinogens, inhalants, sedatives other than as prescribed, opioids other than as prescribed, heroin or methadone, alcohol, tobacco, and other). For each substance, participants were asked the number of days of use in the past 30 days. Alcohol questions included typical number of standard drinks consumed, and we combined quantity and frequency to obtain a measure of the total number

of drinks consumed in the prior 30 days. We also measured frequency of hazardous drinking (≥ 3 drinks) in the past 30 days.²¹ The Beck Depression Inventory-II (BDI-II) is a valid 21-item depression scale. A score of ≥ 15 is indicative of moderate or greater depression symptoms.¹⁸

Data about usual care that patients received apart from the study were drawn from computerized administrative records (individual psychotherapy, medication management, total number of clinic visits during the 6 months following study enrollment). As part of the parent study's 6-month telephone interview with participants, they were asked whether they had received advice from their LPPHC providers to decrease their substance use ("Did any mental health care provider recommend that you limit or cut down alcohol or drug use?"), similar to prior studies.¹¹ To examine possible effects of patient study enrollment on provider behavior, participants also were asked "Did you ever mention to any of your mental health care providers that you were taking part in this research study?"

Procedures

Depression, alcohol, and drug use measures were self-administered at the clinic during intake, on a computerized system that generates a printed report for providers to use in treatment planning.¹⁵ Thus, participant responses were available both to usual care providers and to research staff. Participants were identified via self-referral in response to flyers in clinic waiting area, and a research registry of LPPHC patients who have given permission to be contacted for future studies, as well as provider referrals.¹⁴ The intervention consisted of one 45-minute in-person MI session followed by two 15-minute telephone "booster" sessions. In a brief meeting (<5 minutes) the study therapist gave control group participants 2-page brochures on risks specific to the substances they reported using. The study therapist was a member of the research team and not involved in usual patient care in the clinic.

The research assistant contacted participants by telephone 6 months after enrollment for a 20-minute interview to administer follow-up measures. The 6-month interview included questions about usual care and alcohol and drug specialty care services. Providers referred some participants to the randomized study but were not informed about who enrolled apart from conversations participants may have initiated with their provider. Study procedures were approved by the UCSF Committee on Human Subjects.

Analyses

Bivariate analyses examined group differences between participants who reported receiving a recommendation to reduce alcohol or drug use from a psychiatry provider and those who did not, using *t* tests and Pearson's χ^2 . Based on the literature on variability in provider behavior in delivering brief interventions, factors tested included patient demographic characteristics (participant age, gender, and ethnicity),¹¹ clinical characteristics (baseline and 6-month BDI-II score; and report of hazardous drinking, quantity of alcohol usually consumed per month, and cannabis use in the prior 30 days),¹³ study treatment group (motivational interviewing vs. brochure/control group), usual services received (intensive outpatient, lower-intensity adult psychiatry, and/or medication management, total number of visits), and patient self-reported help-seeking to reduce substance use.²² Based on the

bivariate results, potential predictors were examined in multivariate logistic regression, with models run separately for baseline and 6-month substance use and depression variables. All predictors were entered at the same time. Statistical analyses were conducted using SAS v9.2²³ and SPSS.²⁴

RESULTS

The baseline study sample ranged in age from 19 to 69, with a mean age of 42.4 (SD = 13.7) and was 64.4% female. Mean BDI-II score was 24.7 (SD = 10.4), a level consistent with a diagnosis of major depressive disorder.¹⁸ At 6 months, 97 of the 104 enrolled participants completed telephone follow-up interviews, including the measure regarding whether or not a usual care psychiatry provider gave them advice to reduce alcohol or drug use.

Table 1 shows demographic characteristics, depression severity, and alcohol and drug use reported at baseline and 6-months, type of mental health services received, and number of usual-care psychiatry visits—all analyzed based on whether or not participants reported that their usual care provider advised them to reduce alcohol or drug use. Cannabis was the most commonly reported drug, and <10% of the sample reported use of other substances (not shown). Bivariate analyses indicated that those who were advised to reduce alcohol or drug use by their provider were likely to have reported greater amounts of alcohol consumed at baseline ($p = .049$), had higher depression severity at 6 months ($p = .039$), and to have been enrolled in intensive outpatient care ($p = .029$). There was a trend in the data for participants receiving advice to report higher rates of hazardous drinking at 6 months ($p = .094$).

Using logistic regression we tested candidate predictors of participants' reporting at 6 months that a usual care provider had suggested that they reduce alcohol or drug use. Models were run separately with measures taken at either baseline or 6 months, in order to examine the effects of clinical severity at these 2 time points. In the baseline model, we included BDI-II score, cannabis use and number of drinks consumed in the 30 days prior. In the 6-month model, we included BDI-II score, cannabis use and report of any hazardous drinking in the 30 days prior. Age, gender, usual care intensity (intensive outpatient vs. usual outpatient) and study condition (motivational interviewing vs. brochure) were included as control variables in both models. In the first model, greater number of drinks consumed in the 30 days prior to baseline ($p = .035$) was significant. In the second model, report of any hazardous drinking in the 30 days prior to 6-month follow-up ($p = .05$) was significant, and greater depression severity on the BDI-II at 6 months approached significance ($p = .096$) (not shown).

DISCUSSION

This study examined patient and clinical service factors associated with providers recommending that patients with hazardous drinking or drug use who were also in treatment for depression reduce their substance use. While results indicate that patients with greater drinking and depression severity are more likely to get such advice, and this is the result we hoped to find, the fact that a minority of patients received a recommendation suggests that services may be improved. Patients frequently present in mental health settings with alcohol

and drug use in addition to depression.¹⁶ In our sample the majority of patients received medication management as well as psychological services, highlighting the importance of getting advice to minimize alcohol and drug use, given the potential for alcohol interactions with antidepressant medication.

Although treatments for alcohol and drug problems are most successful at early stages, most people do not seek treatment until their condition is severe. Instead, many individuals with alcohol problems first seek psychiatric treatment.²⁵ In mental health service settings (including psychiatry and primary care clinics), however, providers often fail to recognize warning signs about problematic substance use that present opportunities for intervention. As a result, potential problems can go unrecognized and untreated. Screening, Brief Intervention and Referral to Treatment (SBIRT) has been widely promoted as a public health approach to reducing hazardous drinking in medical and mental health settings.²⁶ As with prior studies in other health care settings,^{22,27,28} our findings indicate that the majority of depression patients may not get needed advice to reduce alcohol or drug use. However, it is encouraging to note that those reporting higher levels of alcohol consumption or greater service intensity are more likely to report receiving advice to reduce use, as prior studies have also found.¹²

Alcohol and drug use can increase depression symptoms, decrease patient adherence to behavioral interventions, and increase side effects of antidepressant medications. Mental health clinicians have an important opportunity to help patients by screening for hazardous alcohol and drug use, and providing brief interventions aimed at decreasing that use.^{29,30} Yet little is known about whether brief interventions for co-occurring AOD use are actually translating into clinical practice—ie, what proportion of patients in treatment for depression and other psychiatric disorders receive advice to decrease their alcohol and drug use, which clinical and demographic patient characteristics, and which service factors (eg, service type and intensity) predict patient receipt of such advice. This study contributes to the growing research on provider behavior by asking patients in treatment for depression university-based outpatient psychiatry clinic whether their provider recommended that they decrease their substance use, in order to inform future work in these areas.

Given these findings, future research is needed on the barriers to brief intervention or even screening and discussions about alcohol and drug use in psychiatric settings for depressed patients. A large body of research has examined barriers in primary care, but the barriers are likely different in psychiatric settings. Mental health providers have a unique opportunity to initiate these discussions, since they typically do not have the same time constraints as in primary care where 15 minute visits are the norm. However, therapists may experience different barriers and concerns than medical doctors—eg, concerns about the effectiveness of brief interventions, varying levels of knowledge about and skill at providing alcohol and other drug use interventions, and beliefs about the impact of advice-giving on the therapeutic alliance. Additional training on alcohol and drug misuse and adverse effects on psychiatric treatment outcomes may be needed in clinical psychology and psychiatric residency programs. Given the limited findings on efficacy of brief motivational interviewing for alcohol and drugs in psychiatric patients, more research is also needed to

determine which approaches to risky alcohol and other drug use are helpful in psychiatric settings.

Study Limitations

Designed as an initial investigation of provider behavior in treatment of depression patients, this study had a relatively small sample size. As in prior studies, we relied on patient report of whether or not providers recommended alcohol or drug use reduction,¹¹ which was not independently verified. We also included a heterogeneous sample of participants who used both alcohol and drugs, and a single measure on provider advice to reduce either one, and thus could not determine whether participants were told to limit drug versus alcohol use, nor could we examine the extent or duration of interventions that providers delivered. We did not examine provider characteristics, although prior work in an HIV clinic found no effect of provider characteristics on comfort level in discussing substance use with patients.³¹ These factors should be explored in future studies to inform strategies for brief intervention implementation in mental health.

A further limitation is that we used a hazardous drinking standard for study inclusion more conservative than national screening guidelines for the general population² because depression patients frequently use antidepressant medication that can have adverse interactions with alcohol.⁵ However, this leaves the possibility that some participants may have been drinking below national guidelines, and that their providers might not have been expected to advise alcohol use reduction. Future studies therefore should replicate our findings using a higher drinking cut off consistent with national guidelines and investigate whether a lower drinking limit for patients with depression should be established.

Providers may or may not have been aware that participants were enrolled in the parent study. While we controlled for treatment condition in the original study, the fact that these patients were enrolled in an alcohol and drug use study may have impacted provider's advice giving, for example, made them feel either more or less obligated to recommend reducing drug or alcohol use. Although we examined the impact of participant-reported discussion of the study with usual care providers, the providers may have been aware of participants' enrollment yet not discussed it, and knowing about enrollment might have influenced their behavior. For example, some providers may have thought that giving advice to reduce use was unnecessary.

Because participants were enrolled in a trial in which everyone received an intervention apart from usual care (either motivational interviewing or a brochure on substance use risks), we cannot draw conclusions about the independent impact of provider advice on substance use reduction. However, the fact that we observed a trend in the data for greater hazardous drinking at 6 months among those who had received provider advice versus those who did not suggests that providers identified and intervened with some participants who continued to drink at a hazardous level.

CONCLUSION

This study examined factors associated with patients' report that their mental health provider recommended that they reduce alcohol or drug use, in a clinical sample of outpatients who reported both depression and drug and/or hazardous drinking at the time they enrolled in treatment at an outpatient psychiatry clinic. We found that greater depression severity and alcohol use were associated with receiving such advice. However, the relatively low rate of advice in this sample indicates that further work is needed to identify effective ways to improve early identification and treatment of alcohol and drug use among depression patients.

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TABLE 1

Psychiatry outpatients with depression and hazardous drinking and/or drug use: clinical and service differences based on whether or not patients were advised by a provider to reduce substance use ($n = 97$)

	Advised to reduce use ($n = 29$)	Not advised ($n = 68$)	t or χ^2	Significance
Age (mean/SD)	39.9 (12.2)	44.0 (14.0)	1.4	.176
Gender (% female)	65.5	66.2	.01	.564
Ethnicity (%)			1.1	.893
White	82.8	83.8		
Black	6.9	5.9		
Other	10.3	10.3		
BDI-II score				
Baseline	27.5 (10.1)	23.8 (10.6)	1.6	.110
6 months *	22.1 (11.7)	16.6 (11.8)	2.1	.039
Drinks in prior 30 days				
Baseline *	33.5 (30.6)	21.3 (2.6)	2.0	.049
6 months	17.2 (17.6)	14.8 (17.6)	.6	.550
Any hazardous drinking (%)				
Baseline	72.4	69.1	.1	.473
6 months	68.5	48.5	2.4	.094
Cannabis use (%)				
Baseline	34.5	26.5	.4	.287
6 months	34.5	26.5	.4	.287
Services received (%)				
Intensive outpatient *	58.6	35.3	4.5	.029
Medication management	82.4	86.2	.2	.444
Individual psychotherapy	93.1	85.3	1.1	.238
Total number of usual care psychiatry visits (mean/SD)	8.8 (12.7)	9.3 (12.6)	.2	.837
Randomized to MI (parent study condition) (%)	55.2	48.5	.36	.353
Mentioned parent study to usual care provider (%)	35.0	25.9	.95	.330

Alcohol and drug use and hazardous drinking questions refer to consumption in the previous 30 days. BDI-II = Beck Depression Inventory-II; MI = motivational interviewing.

* $p < .05$.