

**ALCOHOL EDUCATION PROVIDED TO
OPIOID TREATMENT PROGRAM PATIENTS:
RESULTS OF A NATIONWIDE SURVEY***

SHIELA M. STRAUSS, PH.D.

New York University College of Nursing

GAVIN HARRIS, B.A.

SUNY Downstate College of Medicine, Brooklyn

CARINA KATIGBAK, M.S.

New York University College of Nursing

DAVID M. RINDSKOPF, PH.D.

Graduate School and University Center of the City University of New York

SHEENA SINGH, B.A.

New York University College of Dentistry

ILANA GREENBLUM

New York University College of Nursing

LAWRENCE S. BROWN, JR., M.D., MPH, FASAM

Addiction Research & Treatment Corporation, Brooklyn, New York

STEVEN KIPNIS, M.D., FACP, FASAM

New York State Office of Alcoholism & Substance Abuse Services, Orangeburg

STEVEN A. KRITZ, M.D.

Addiction Research & Treatment Corporation, Brooklyn, New York

MARK W. PARRINO, MPA

American Association for the Treatment of Opioid Dependence, New York

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ABSTRACT

Alcohol-related problems are especially common among opioid treatment program (OTP) patients, suggesting that educating OTP patients about alcohol and its harmful effects needs to be a priority in OTPs. Using data collected in interviews with a nationwide U.S. sample of OTP directors ($N = 200$) in 25 states, we identified factors that differentiate OTPs that provided this education to all OTP patients from those that did not. Findings indicate that these factors include (1) providing this education in a greater variety of ways, (2) having a larger percent of staff knowledgeable about alcohol-related issues, (3) having a director who views alcohol issues as a high priority, and (4) having a written OTP policy.

INTRODUCTION

Alcohol-related problems are especially common in opioid treatment program (OTP) patients, particularly among those who use alcohol excessively. OTP patients who are excessive drinkers are more likely to use illicit drugs, have a poorer quality of life, have poorer treatment outcomes, and have higher rates of morbidity and mortality than those who do not drink excessively (El-Bassel, Schilling, Turnbull, & Su, 1993; Joseph & Appel, 1985; Senbanjo, Wolff, & Marshall, 2007; Stenbacka, Beck, Leifman, Romelsjö, & Helander, 2007; Zador & Sunjic, 2000). In view of the many harms that excess alcohol use can cause, its continued high prevalence among OTP patients (Pacini, Mellini, Attilia, Ceccanti, & Maremanni, 2005; Rengade, Kahn, & Schwan, 2009) is especially unfortunate. Educating all OTP patients about the importance of alcohol reduction and the impact of alcohol use on health, social functioning, and relapse therefore merits special priority.

As has been found to be the case concerning other health-related education in OTPs (Strauss, Astone, Vassilev, Des Jarlais, & Hagan, 2003), not all OTPs are likely to educate all of their patients about alcohol use and its consequences. Among the factors that may differentiate OTPs that educate all patients about alcohol from those that do not is the number of types (i.e., group sessions, individual sessions, videos, printed materials) of alcohol education offered. OTPs that offer a greater variety of ways in which alcohol education can be obtained are more likely to reach all of their patients and to accommodate different adult learning styles so that all patients can benefit from this service (Munoz-Plaza, Strauss, Astone, Des Jarlais, & Hagan, 2004). Also potentially influencing universal alcohol education is the percent of staff at the OTP who are knowledgeable about alcohol-related issues, including current strategies for treatment of patients' alcohol abuse. Some OTPs may practice a "specialized model" of service provision (Gerbert, Brown, Volberding, Cooke, Caspers, Love, et al., 1999; Morin, Koester, Steward, Maiorana, McLaughlin, Meyers, et al., 2005), with few staff addressing patients' excess alcohol use. It would appear that in

OTPs in which more staff are knowledgeable about alcohol-related issues, there is greater opportunity to provide alcohol education to all patients. In addition, because OTP directors are gatekeepers who can influence decisions about program development and emphasis, they are likely to play a key role in supporting universal alcohol education in their OTPs (Astone, Strauss, Hagan, & Des Jarlais, 2004; D'Aunno, Vaughn, & McElroy, 1999). Thus, their perspective on the extent to which alcohol issues should be prioritized for their OTP patients may be salient in differentiating OTPs that educate all patients about alcohol from those that do not. Notably, because written organizational policies provide structure and clarity (Kritz, Brown, Goldsmith, Bini, Robinson, Alderson, et al., 2008), increase the chances that services are provided in a consistent manner (Grabowski, Stitzer, & Henningfield, 1984), and enhance the delivery of patient education and counseling (Myers, Steward, Charlebois, Koester, Maiorana, & Morin, 2004), OTPs that have written policies are potentially more likely to provide universal alcohol education.

Another possible factor that may differentiate OTPs that provide alcohol education to all patients from those that do not is whether the state in which the OTP is located requires that such education be provided. State Opioid Treatment Authorities share responsibility with the Center for Substance Abuse Treatment, the Drug Enforcement Administration, and private certification agencies for setting standards for OTPs. In many of the 46 states and the District of Columbia that have at least one OTP, there is a range of rules, regulations, and guidelines concerning patients' alcohol use (Harris, Strauss, Katigbak, Brar, Brown, Kipnis, et al., 2010). Thus, state requirements may influence the extent to which OTP patients in their states receive education about alcohol and its consequences.

Because little is known about OTPs' implementation of alcohol education as part of their mission and policy, we examine characteristics of OTP alcohol education policies and services. We also examine the extent to which OTPs provide alcohol education to all of their patients, and those factors that differentiate OTPs that provide this universal service from those that do not. Our analyses were conducted using data collected from a nationwide survey of OTPs ($N = 200$) regarding their alcohol policies and provision of alcohol services, and from interviews with the State Opioid Treatment Authorities ($N = 25$) in which the OTPs are located. Understanding these differences should identify those aspects of OTP operations that need to be targeted to incorporate this essential service for OTP patients.

METHODS

Sampling Frame and Participating OTPs

The research was conducted by surveying a nationwide sample of OTPs. To generate this sample, we first compiled a list of OTPs known to the Substance Abuse and Mental Health Services Administration (SAMHSA) on September 1,

2008. Each State Opioid Treatment Authority (SOTA) was then asked to provide a list of her/his state's OTPs. Deletions and additions were then made to the SAMHSA list according to the information that the SOTAs provided. Our sampling frame was limited to those states having at least 8 OTPs. This approach was intended to enable an examination in some of our analyses of within-state variation according to state-level influence. A total of 25 states satisfied the criterion of having 8 or more OTPs, with the 693 OTPs in these 25 states comprising our sampling frame. The list of these 693 OTPs was randomly ordered, and the OTPs were contacted sequentially from the randomly ordered list.

Procedures

As described in more detail elsewhere (Harris et al., 2010), a computer assisted personal interview (CAPI) was conducted by telephone with each SOTA regarding state-level alcohol-related requirements and guidelines. The areas addressed in this interview included alcohol education; evaluation (i.e., screening, assessment, and testing) of alcohol use; and alcohol treatment. Once these interviews with SOTAs were completed, OTP lists within the states were updated based on information collected from them. The randomly ordered list of OTPs was prepared, and letters of introduction were then sent to directors of the first 50 OTPs on the list of OTPs. These letters described the study and indicated that our project team would be calling them within the next few weeks to request their participation in a 30-45 minute telephone interview. A \$45 gift card was offered as an expression of appreciation for their participation. The New York University Institutional Review Board deemed this study not to involve human subjects, as the SOTAs and OTP directors were being asked to respond to questions about alcohol policies in their respective states/OTPs, rather than about themselves. Nonetheless, we assured all respondents that we would not report results that would identify them, their states, or their OTPs.

The project's protocol called for attempting to reach each OTP up to eight times, varying the days of the week and the time of the day at which the telephone calls were made. Every 2 to 3 weeks, letters describing the project were sent to the next 50 OTPs on the randomly ordered list, and the project interviewers began phoning these OTPs a week later. The telephone interviews with OTP directors continued until 200 OTPs had participated.

The study's project director conducted some of the interviews with OTP directors and also trained four interviewers to do so. Once the OTP director was on the telephone, the interviewer described the purpose of the research and determined whether the OTP was eligible to participate in the study. In order to be eligible, at least 25% of the OTP's current patients (excluding those patients being detoxified) needed to be maintained on methadone or on another medication to treat opioid addiction.

The first set of interview questions with the OTP director concerned the organizational characteristics of the OTP and an overview of its policies, including whether or not the policies were written. This was followed by a series of questions about the OTP's alcohol-related policies and services, including patients' alcohol education; screening, assessment and testing for alcohol use; and treatment for those who abuse alcohol. With regard to alcohol education, we asked the director if the OTP provides alcohol education to any patients, and if so, to what percent of patients. For an OTP that educated some, but not all patients, we asked the director to indicate the types of patients who received the education. We also asked the OTP director how the education was provided (i.e., through group sessions, individual counseling sessions, videos, and/or pamphlets/other printed materials). In addition, the director was asked which model was emphasized in alcohol education (abstinence, harm reduction, or neither—as the approach is determined on a case-by-case basis). Finally, we asked the director to rate the effectiveness of the alcohol education on a scale from 1 to 10, with “1” indicating that it was *not effective at all*, and “10” indicating that it was *extremely effective*. Additional interview questions not specifically related to alcohol education included those concerning the relative importance of alcohol as a priority issue in the OTP, recent policy changes, facilitators and barriers to the implementation of alcohol-related services, and when relevant, the consequences of violating the alcohol-related policy.

The Study Sample

Starting in December, 2008, we interviewed directors in 200 of the 489 OTPs that we attempted to contact. These 200 OTPs constituted the study sample. Of the 289 OTPs that did not participate in the research, 12 had closed or were not reachable through the telephone numbers we could obtain for them; 17 did not meet our eligibility criteria; 17 were led by individuals we had already interviewed, as they directed more than one OTP in a network of OTPs that had identical policies and services; and 43 required the permission of a supervisor to participate (and this permission was never granted). At the time that our target goal of 200 directors was reached, we were in the process of attempting to gain the participation of 60 additional OTPs, whose participation in the research was no longer sought after our goal was reached. Excluding these 60 OTPs (some of which might have participated in the research), our participation rate was 59% among eligible, unique OTP directors who were not prevented by a supervisor from participating in the research.

Data Analysis

Descriptive statistics (means and standard deviations, percents) were first used to describe the organizational characteristics of the participating OTPs and the characteristics of the alcohol-related education they provided.

We then examined those factors that were salient in differentiating OTPs that provided alcohol education to all patients and those that failed to do so. We considered four factors at the OTP level:

1. the number of ways (i.e., group sessions, individual sessions, videos, printed material) in which alcohol education was provided, ranging from 0 to 4;
2. the percent of staff at the OTP that was knowledgeable about alcohol-related issues, ranging from 0 to 100;
3. the OTP director's rating of the importance of a focus on alcohol issues at the OTP on a scale whose responses ranged from 1 (*not important at all*) to 10 (*very important*); and
4. whether or not the OTP's policy was written (yes or no).

We also considered a factor at the state level: whether or not the state required alcohol education to be provided to at least some patients (yes or no). OTPs were nested within states, and the dependent variable (all patients at the OTP were educated about alcohol use or they were not) was dichotomous. The data were therefore analyzed using Hierarchical Generalized Linear Models (HGLM; see Raudenbush, Bryk, Cheong, & Congdon, 2004), with the dependent variable modeled according to the Bernoulli distribution. The analytical procedure first involved entering the level 1 (OTP-level) predictors only, retaining those variables that explained a significant amount of variance in the log-odds of the dependent variable. The level 2 (state-level) variable was then added to the model, to examine if there was additional variance that it explained. The software program HLM 6.0 (Raudenbush et al., 2004) was used in these analyses.

RESULTS

Participating Programs

As can be seen in Table 1, the 200 participating OTPs were located in all four census regions: 27.0% were in the Northeast, 32.0% were in the South; 19.5% were in the Midwest; and 21.5% in the West. There was about an equal percent of private for profit and private not for profit programs (45.0% and 39.5%, respectively), with only 15.5% publicly owned. On average, participating OTPs had been in operation for 19.1 years. About two thirds (68%) were part of a larger organization, and of these, 20.6% (14.0% of the 200 OTPs) were operated by a hospital. Participating OTPs served an average of 253 maintenance patients each day, and had an average patient/staff ratio of 29.6.

We examined the extent to which our study sample was likely to be representative of OTPs in the 25 states included in our sampling frame. To do so, using public use data files, we conducted analyses of data collected from OTPs that completed the National Survey of Substance Abuse Treatment Services (N-SSATS) in 2007 (United States Department of Health and Human Services,

Table 1. Characteristics of Participating OTPs (*N* = 200)

Characteristic	OTPs
Location (%)	
Northeast	27.0
South	32.0
Midwest	19.5
West	21.5
Ownership (%)	
Private for profit	45.0
Private not for profit	39.5
Public	15.5
Number of years OTP had been in operation (mean, standard deviation)	19.1 (12.6)
OTP was part of a larger organization (%)	68.0
Of these, OTP was operated by a hospital (%)	20.6
Number of maintenance patients served daily (mean, standard deviation)	253 (195)
Patient/staff ratio (mean, standard deviation)	29.6 (24.0)

2009). N-SSATS 2007 was designed to collect information from all facilities in the United States known to the Substance Abuse and Mental Health Services Administration on March 30, 2007, and had close to a 95% response rate. We examined N-SSATS 2007 data regarding census region; ownership; operation by, or location in a hospital; and the number of patients served. Analyses indicated that our study sample in the 25 states was similar to the OTPs in those states included in N-SSATS 2007 with regard to census region (33.4% of the N-SSATS OTPs in those states were in the Northeast, 28.9% were in the South; 16.3% were in the Midwest; and 21.5% in the West) and ownership (49.8% of the N-SSATS OTPs in those states were private for profit, 38.1% were private not for profit, and 12.1% were publicly owned). On average, 261 patients (*SD* = 204) were served in the N-SSATS OTPs in the 25 states included in our study sample, and 15.8% of these N-SSATS OTPs were operated by a hospital.

Alcohol Education Provided

Almost all participating OTPs (97.0%) provided alcohol education to at least some of their patients, and 62.5% provided this education to all of their patients

(see Table 2). We asked directors in OTPs that educated some, but not all patients about alcohol, to indicate the types of patients to whom they provided this education. As can be seen in Table 2, almost all (95.7%) provided this education to patients with a history of alcohol abuse. About two-thirds (62.3%) educated those with infectious diseases (like HIV or hepatitis C), and almost 7 in 10 (69.6%) educated those recently admitted to the OTP. The great majority (81.2%) provide this education to those patients who requested it.

The approach used in providing this education varied considerably. While close to half (44.3%) of the OTPs used an abstinence model, the remaining half were about equally divided between using a harm reduction model (28.4%), and no single model (27.3%), in this latter case adjusting the approach on a case-by-case basis. The ways in which the alcohol education was provided also varied considerably. In all, 78.7% used group sessions, 97.9% provided individual

Table 2. Characteristics of the Alcohol Education Provided in Participating OTPs (*N* = 200)

Characteristic	% of OTPs
Percent of patients given alcohol education	
None	3.0
Some	34.5
All	62.5
In OTPs providing alcohol education to some (but not all) patients, who is educated	
Those with a history of alcohol abuse	95.7
Those who have infectious diseases (e.g., HIV, HCV)	62.3
Those recently admitted to the OTP	69.6
Those who request it	81.2
Others (those who screen positive, were admitted to the OTP with alcohol use, current drinkers, family members of patients, patients in pre-admission)	17.4
Model emphasized in alcohol education	
Abstinence	44.3
Harm reduction	28.4
No single model (approach chosen on a case-by-case basis)	27.3
Ways in which alcohol education is provided	
Group sessions	78.7
Individual counseling	97.9
Videos	51.0
Pamphlets or other printed materials	87.1

counseling, 51.0% used videos, 87.1% used pamphlets or other printed materials, and many OTPs used several of these approaches. Directors in the OTPs that provided alcohol education to at least some patients rated the effectiveness of their OTPs' alcohol education in reducing patients' alcohol use an average of 6.6 ($SD = 1.5$) out of 10.

OTPs that Provided Alcohol Education to All Patients

We next examined those factors that explained differences between OTPs that provided alcohol education to all patients and those that did not. In building the model, we first considered only OTP-level predictors. To enable more meaningful interpretation of results, three of the four predictors were grand mean centered:

1. the number of ways (i.e., group sessions, individual sessions, videos, printed material) in which alcohol education was offered (mean = 3.00, $SD = 1.03$);
2. the percent of staff at the OTP knowledgeable about alcohol issues (mean = 79.6, $SD = 28.2$); and
3. the OTP director's rating on a 1 to 10 scale of the importance of a focus on alcohol issues at the OTP (mean = 8.44, $SD = 2.15$).

The final OTP-level predictor, whether or not the OTP's policy is written, was entered into the model un-centered (with 85% of the directors indicating that they had a written policy). As can be seen in columns 3-5 of Table 3, all four of these potential predictors were statistically significant in explaining variation in the odds that the OTP provided universal patient education about alcohol.

To the model described in columns 3-5 in Table 3, we added a state-level variable: whether the state required its OTPs to provide alcohol education to at least some OTP patients. Sixty percent of the 25 states had this requirement. As can be seen in the three right hand columns in Table 3, this latter variable was not a statistically significant predictor when added to the model. All of the Level 1 variables retained their significance when the Level 2 variable was added.

We illustrate the ability of these variables to explain differences in OTPs that provided alcohol education to all of their patients and those that did not. Specifically, we examine some of the consequences inherent in this model for OTPs in states that did not require at least some patients in its OTPs to be educated about alcohol. For an OTP that provided education in an average number of ways (i.e., three ways), whose directors provided the average rating of the importance of alcohol in their programs (i.e., they rated it 8.44), and who had an average percent of staff who had knowledge about alcohol-related issues (i.e., 79.6%), the probability that the OTP provided universal alcohol education if there is no written policy is 44%, and 69% if this policy was written. There is also an impact if the director viewed alcohol issues as having a greater priority in the OTP. Suppose that an OTP did not have a written policy, had 79.6% of staff who had

Table 3. Level 1 and Multi-Level Models of the Provision of Universal Alcohol Education in OTPs
Incorporating (OTP) Level 1 and State (Level 2) Predictors ($N = 195$)^a

Fixed effect	Mean (SD) or percent	Level 1 predictors only			Level 1 and Level 2 predictors		
		Coefficient	Odds ratio	Confidence interval	Coefficient	Odds ratio	Confidence interval
Intercept		-0.214	0.808	(0.301, 2.17)	-0.261	0.770	(0.240, 2.48)
Level 1:							
Policy is written	85%	1.04*	2.83	(1.06, 7.51)	1.05*	2.87	(1.07, 7.67)
Number of ways alcohol education is provided	3.00 (1.03)	0.756***	2.13	(1.48, 3.06)	0.760***	2.14	(1.49, 3.08)
Rating of importance of alcohol	8.44 (2.15)	0.169*	1.18	(1.00, 1.40)	0.172*	1.19	(1.01, 1.40)
Percent of staff knowledgeable about alcohol	79.6 (28.2)	0.0304***	1.03	(1.017, 1.045)	.0303***	1.03	(1.02, 1.05)
Level 2:							
State requires that at least some patients be educated about alcohol	60.0%				0.0721	1.075	(0.374, 3.09)

^aFive of the OTPs had missing data on one of the Level 1 predictors.

* $p < .05$. *** $p < .001$.

knowledge about these issues, and provided alcohol education in three different ways. In such an OTP, the probability that the OTP provided universal alcohol education is 38% if the director rated the importance of alcohol 7 out of 10, while the probability is 50% if the director rated it 10 out of 10.

The impact on the provision of universal alcohol education is especially great for OTPs that provided this education in a variety of ways. For example, suppose that an OTP did not have a written policy, had a director who provided an average rating of the importance of alcohol in his/her program, and had 79.6% of staff knowledgeable about alcohol-related issues. In such a program, the probability that the OTP provided universal alcohol education is 27% if there were two ways in which this education was provided, while the probability is 62% if there were four ways in which this education was provided. A considerable impact is also seen regarding the effect of having a greater percent of staff that were knowledgeable about alcohol-related issues. Suppose that an OTP did not have a written policy, had a director who provided an average rating of the importance of alcohol in his/her program, and provided alcohol education in three different ways. In such an OTP, the probability that the OTP provided universal alcohol education is 30% if 6 of every 10 of its staff had knowledge about alcohol-related issues, while the probability is 59% if all of the staff had this knowledge.

DISCUSSION

In spite of its many acknowledged harms, alcohol use continues to be highly prevalent among OTP patients. Notably, alcohol is a depressant like heroin and may therefore increase heroin's effects. Alcohol also cushions the depression and agitation that sometimes occurs as the effects of cocaine wear off (Center for Substance Abuse Treatment, 2005). Thus, some OTP patients who continue to use cocaine or heroin and who are unaware of the adverse impact of their continued alcohol use may continue to use alcohol for these purposes (Hillebrand, Marsden, Finch, & Strang, 2001; Pennings, Leccese, & Wolff, 2002). Other OTP patients who no longer use illicit drugs may have begun to use alcohol (or continue its use) while receiving treatment at the OTP. Without greater understanding of alcohol's harms, such individuals may view this legal substance as a less harmful alternative to illicit drugs, especially if doses of methadone are inadequate and their alcohol cravings increase (El-Bassel et al., 1993). By educating their patients about the many harms of alcohol use, OTPs can play a critical role in encouraging its cessation or reduction. This role is especially important as OTP patients have few other opportunities to receive education about the serious risks associated with alcohol use.

The results of our study suggest that the vast majority of U.S. OTPs (97%) are providing alcohol education to at least some of their patients, especially those with a history of alcohol abuse. However, in OTPs that do not educate all patients about alcohol use, more than one third of patients who have infectious diseases

(such as HIV and hepatitis C) do not receive this education. This is of considerable concern in view of the adverse effects of alcohol on disease progression and medication adherence (Braithwaite, Conigliaro, Roberts, Schecher, Schaefer, McGinnis, et al., 2007; Samet, Horton, Meli, Freedberg, & Palepu, 2004). In addition, almost half of the OTPs promote an abstinence model in all of their alcohol education, an approach that may not be the most effective for all patients (Dobler-Mikola, Hättenschwiler, Meili, Beck, Böni, & Modestin, 2005). However, it is gratifying to note that a variety of types of education are provided, especially individual counseling, written materials, and group sessions, and that OTPs often offer several types of alcohol education. This suggests that OTP patients generally have several opportunities at the OTP to receive this essential information.

In all, 62.5% of the OTPs provided alcohol education in some form to all of their patients. Our findings indicate that OTPs were more likely to provide universal alcohol education if there was a greater number of types (i.e., group sessions, individual sessions, videos, printed material) of alcohol education offered, a greater percent of staff at the OTP knowledgeable about alcohol-related issues, the OTP policy was written, and the director gave a high rating to the importance of alcohol-related issues. What is especially notable about these factors is that they are all modifiable. OTPs that do not provide universal alcohol education can be encouraged to develop a written policy and offer alcohol education in a variety of different ways. They can also be encouraged to educate more of their staff about alcohol-related issues. This may be an especially promising approach as many OTP patients have frequent contact with counselors (Zweben, 2001). Those counselors more knowledgeable about alcohol issues should be able to effectively share this knowledge with patients and to do so with diminished stress (Coyle & Soodin, 1992). In addition, OTP directors can be educated about the importance of providing information about alcohol to their patients. With this understanding, they are more likely to consider the importance of making alcohol-related issues a priority in their programs. Notably, our findings indicate that state requirements have little influence on universal alcohol education in OTPs above and beyond factors at the OTP level.

As has been shown to be the case with HIV services in drug treatment programs (Grella, Etheridge, Joshi, & Anglin, 2000), some OTP directors may be more likely to educate the particular patients that they perceive to be at higher risk for alcohol abuse. These directors may believe that this education is of less relevance to other patients, who may have a multitude of other pressing psychosocial needs. Unfortunately, providers are often unaware of many patients' excess alcohol use (Conigliaro, Gordon, McGinnis, Rabeneck, & Justice, 2003), and may therefore not recognize those patients who especially need this information. Some program directors may argue that the provision of alcohol education is not part of their mission; others may feel that they do not have training or guidance from the state or from their organizations on how to address this issue,

and still others may indicate that they lack financial resources to provide this service. Fortunately, providing alcohol education is not typically cost prohibitive, and, in most cases, can be integrated into current health education curricula. In view of OTP patients' vulnerabilities and health-related needs, we urge OTPs to especially include education for their patients about the adverse synergistic effects of alcohol and methadone, the likelihood of poorer OTP treatment compliance and outcomes for patients who drink excessively, and the adverse impact of alcohol use on disease progression and medication adherence for the many OTP patients with HCV and/or HIV infection.

Several limitations to the research should be noted. In a 30-45 minute time span, the interview could only obtain a limited amount of information. Thus, the findings in this article only address some basic characteristics of the alcohol policies. In addition, because patients were not interviewed, we were unable to verify our findings from the patients' perspective. Finally, our study sample of 200 OTPs in 25 states had several similar characteristics to OTPs in those states that participated in N-SSATS 2007. However, we cannot know the extent to which the OTPs in our study sample are representative of OTPs in these 25 states with regard to their alcohol education policies. Nevertheless, the research provides valuable information about the extent of alcohol education provided by OTPs, and supports further efforts to explore this important issue in greater detail.

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Direct reprint requests to:

Shiela M. Strauss, Ph.D.
NYU College of Nursing
726 Broadway, 10th Floor
New York, NY 10003
e-mail: ss4313@nyu.edu