Implementation of NIAAA College Drinking Task Force Recommendations: How Are Colleges Doing 6 Years Later?

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Background: In 2002, the National Institute on Alcohol Abuse and Alcoholism (NIAAA) College Drinking Task Force issued recommendations to reduce heavy drinking by college students, but little is known about implementation of these recommendations. Current discussion about best strategies to reduce student drinking has focused more on lowering the minimum legal drinking age as advocated by a group of college and university presidents called the Amethyst Initiative than the NIAAA recommendations.

Methods: A nationally representative survey of administrators was conducted at 351 4-year colleges in the United States to ascertain familiarity with and progress toward implementation of NIAAA recommendations. Implementation was compared by enrollment size, public or private status, and whether the school president signed the Amethyst Initiative.

Results: Administrators at most colleges were familiar with NIAAA recommendations, although more than 1 in 5 (22%) were not. Nearly all colleges use educational programs to address student drinking (98%). Half the colleges (50%) offered intervention programs with documented efficacy for students at high risk for alcohol problems. Few colleges reported that empirically supported, community-based alcohol control strategies including conducting compliance checks to monitor illegal alcohol sales (33%), instituting mandatory responsible beverage service (RBS) training (15%), restricting alcohol outlet density (7%), or increasing the price of alcohol (2%) were operating in their community. Less than half the colleges with RBS training and compliance checks in their communities actively participated in these interventions. Large colleges were more likely to have RBS training and compliance checks, but no differences in implementation were found across public/private status or whether the college president signed the Amethyst Initiative.

Conclusions: Many colleges offer empirically supported programs for high-risk drinkers, but few have implemented other strategies recommended by NIAAA to address student drinking. Opportunities exist to reduce student drinking through implementation of existing, empirically based strategies.

Key Words: Alcohol Prevention, College Drinking, Policy, Community-Based Intervention, Prevention Practice.

ALCOHOL CONSUMPTION AMONG adolescents and young adults has decreased considerably in the United States since the early 1980s, but similar declines have not been observed among college students, and the prevalence of heavy drinking in this group remains high (Grucza et al., 2009; Johnston et al., 2008a,b; Nelson et al., 2009; Substance Abuse and Mental Health Services Administration, 2007; Wechsler et al., 2002). College administrators recognize student drinking as a major issue facing campuses and have worked to address the problem, using strategies such as targeted alcohol education, campus-based alcohol restrictions, social norms campaigns, and establishing an alcohol task force (Wechsler et al., 2000, 2004). The success of these efforts, however, has been limited in reducing student drinking and its related consequences.

In 1999, a Task Force on College Drinking was convened by the National Institute on Alcohol Abuse and Alcoholism (NIAAA) to review the existing evidence on college student drinking and related problems and provide recommendations on effective prevention and intervention strategies. The Task Force issued a report in 2002 that organized available prevention strategies into 4 levels based on the strength of the scientific evidence and whether the evidence was specific to student

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populations (Malloy et al., 2002). Tier 1 strategies were those with evidence of effectiveness in college student populations. Tier 2 strategies were those with evidence of effectiveness in general populations that could be applied to college environments. Tier 3 strategies were those strategies with logical and theoretical promise, but required additional evaluation. Tier 4 strategies were strategies with clear evidence of ineffectiveness. The report recommended delivering empirically based individual interventions for those at-risk for alcohol problems (i.e., norms clarification, cognitive-behavioral skills training, and motivational interviewing), and several community-based alcohol control policies including restricting the number of alcohol outlets in campus communities, increasing alcohol prices and taxes, and implementing responsible beverage service policies at on- and off-campus alcohol outlets (Malloy et al., 2002). The report also concluded that the age-21 minimum legal drinking age (MLDA) is an effective policy and recommended strengthening these laws and improving enforcement. This report, available free of charge on the Internet (http://www.collegedrinkingprevention.gov/), was distributed at higher education conferences and was widely covered through various media channels. In the years following this report, additional research has been published, which further supports the effectiveness of the recommended strategies, and also identified the use of regular compliance checks to reduce alcohol sales to underage youth as an effective strategy (Larimer and Cronce, 2007; Toomey et al., 2007).

The lack of success in reducing student drinking has led some college and university presidents to call for public discussion about lowering the current age-21 MLDA. This group, called the Amethyst Initiative, in concert with their partner organization, Choose Responsibility, has advocated reducing the MLDA to 18 as a way to reduce student drinking and prevent the harms associated with it, an approach that runs counter to the conclusions and recommendations made by the NIAAA College Drinking Task Force.

The purpose of this study was to assess the familiarity with and degree of implementation of the substance abuse prevention strategies in Tiers 1 and 2 on and around college campuses among administrators at a nationally representative sample of colleges in the United States. Tier 4 strategies consisting of campaigns solely based on providing information, knowledge, or education campaigns were also examined, because prior research indicated that nearly all schools employed these strategies (DeJong and Langford, 2002; Larimer and Cronce, 2002; Wechsler et al., 2000, 2004), and the College Drinking Task Force determined that sufficient evidence existed that these programs were not effective. The 2002 report found insufficient evidence of effectiveness existed for prevention strategies in Tier 3; so, we did not examine implementation of these strategies in the present study. Secondary objectives were to examine whether the implementation of NIAAA recommendations differed by college enrollment size, by public or private status, and whether the president or chancellor of the college had signed on to the Amethyst Initiative.

METHODS

Sample and Participants

A sample of 4-year colleges was identified by using a list of regionally accredited schools provided by the American Council on Education, a coordinating organization for institutions of higher education in the United States. The list was stratified by enrollment size ($>2{,}500$ students [large] vs. $\leq 2{,}500$ students [small]) and public versus private status, using information gathered from the Integrated Postsecondary Education Data System available from the U.S. Department of Education (Knapp et al., 2009). A weighted sampling procedure was developed that sampled colleges in proportion to the average number of students attending schools in each of the 4 strata to include more colleges with large enrollment. The final selection included 569 4-year colleges and produced a nationally representative sample of colleges within each of 4 strata (100 small private, 100 small public, 101 large private, and 268 large public).

During the summer and fall semester of 2008, an administrator who was most knowledgeable about alcohol policies and programs (typically the Vice President of Student Affairs or the Dean of Students) from each of the sampled schools was invited to participate in an online survey about alcohol-related services and policies on their campus. The initial invitation was followed by up to 5 reminder e-mails and up to 10 attempts to reach them by telephone until the administrator responded to the survey, recommended a more knowledgeable substitute, declined to participate or was not reached. Administrators from 351 colleges returned a completed survey for a response rate of 61.7%. There were no differences in participation rates based on status of school (public vs. private); however, large schools were more likely to respond than small schools (68.2 vs. 50.5%; $p < 0.001$).

Schools within the sample that had signed on to the Amethyst Initiative were identified from the list of signatories available on the Amethyst Initiative website as of July 2009. Amethyst Initiative schools were not intentionally sampled, although 45 were included in the sample by chance. Thirty-four schools that had signed the Amethyst Initiative responded to the survey, and this response rate was significantly higher than for schools who did not sign the Amethyst Initiative (75.6 vs. 60.5%; $p < 0.05$).

Survey Measures

Survey questions assessed administrators' familiarity with and degree of implementation of the 2002 NIAAA recommendations for addressing student alcohol use and related problems. The questions were not identified in the survey as NIAAA recommendations.

Implementation of Tier 1 prevention strategies was assessed with the question "Are alcohol intervention programs for high-risk alcohol students who do not meet the diagnostic criteria for alcohol dependence available on your campus?" Response options included: (a) "Yes, we provide these services on campus for all students who request or are referred to them," (b) "Yes, but cannot accommodate all students who ask for or are referred to them," (c) "Yes, but we refer students to off-campus resources paid for by the school or student insurance," (d) "No, but we refer students to off-campus resources not paid for by the school or student insurance," and (e) "We do not provide any alcohol intervention services for undergraduate students." As a follow-up question, all respondents were asked "What types of alcohol intervention programs are currently offered?" and were instructed to check all responses that applied. Possible responses were as follows: (a) Brief motivational interventions; (b) Norms clarification alone; (c) Cognitive-behavioral skills training; (d) Motivational interviewing; and (e) Expectation challenging programs. A separate question assessed the alcohol treatment services offered by the college and in the community (data not presented). Respondents were also provided the opportunity to write in other intervention programs offered at their school.

Implementation of Tier 2 prevention strategies was assessed with a series of 3 questions designed to gauge the degree to which colleges were involved in collaborative efforts with local or state authorities to restrict access to alcohol: "Has your university worked with advocacy groups or local or state authorities…": (1) "to place restrictions on the number of retail alcohol outlets or liquor licenses available in your local community (e.g., increasing the price of a license, increasing operating restrictions for renewal, reduce through attrition)?"; (2) "to increase the price of alcohol in your community, through increasing excise taxes or eliminating the practice of drink specials?"; and (3) "or local retail outlets to institute mandatory responsible beverage service training policies for servers in your local community?" Response categories included as follows: (a) "No," (b) "We have held discussions with local authorities about (*the strategy*) but have not yet taken action," (c) "We are planning (*the strategy*) with local authorities, but they have not yet been implemented," and (d) "Yes, we have successfully worked with local authorities on (*the strategy*)." One additional response option was included for Question 3: "Mandatory responsible beverage service training policies for servers is already practiced in our community, but the university is not involved." A similar question was asked about enforcement of underage drinking laws: "Does your university work with local law enforcement to conduct compliance checks of retail alcohol outlets in your community to monitor alcohol sales to underage patrons?" Response categories were (a) "No," (b) "We have held discussions with local law enforcement about compliance checks, but have not yet taken action," (c) "We are planning compliance checks with local law enforcement, but they have not been conducted yet," and (d) "Yes, we actively work with local law enforcement to conduct compliance checks of retail alcohol outlets." Respondents were also provided the opportunity to write in other responses.

Implementation of Tier 4 programs was assessed with the question: "Do you require alcohol education programs for all undergraduate students?" (response options: "Yes," "No," and "Don't know"). Whether education programs were required or not, all administrators were asked "Which of the following methods are used on your campus to educate students about alcohol?" Possible responses were "lectures, meetings, or workshops," "mailing or handing printed information to students," "online or computer-based programs," "poster or sign campaigns," "announcement or articles in student newspapers," "a special academic course on alcohol and other student life issues," and "lectures or meeting workshops for parents or guardians." Respondents were also provided the opportunity to write in other methods they were using to educate students. Respondents were asked to check all responses that applied.

Lastly, administrators were asked specifically about their familiarity with the NIAAA recommendations with the following description and question: "The National Institute on Alcohol Abuse and Alcoholism (NIAAA) has a task force on college drinking. This task force has made several recommendations on how to change the culture of drinking at U.S. colleges. Which of the following describes your universities' awareness of the recommendations:" The possible responses were as follows: (a) "We are unaware of the recommendations"; (b) "We have reviewed the recommendations and implemented all of them"; (c) "We have reviewed the recommendations and implemented some of them"; (d) "We have reviewed the recommendations and are in the process of deciding which recommendations can be reasonably implemented"; (e) "We are in the process of reading the print or online recommendations"; and (f) "We are waiting for the recommendations to be mailed to us for our review." The question on familiarity with NIAAA recommendations was asked after the questions about the specific recommendations.

Questions that allowed an open-ended response represented a small number of the total responses and formed a category of "Other" for reporting purposes. Colleges that did not provide a response were categorized as missing.

For comparisons across schools, a dichotomous measure (0, 1) was created indicating whether the strategy was implemented or not implemented for each prevention strategy in Tiers 1 and 2. Colleges with missing data were categorized as not implemented. A summary measure of the number of Tier 1 and 2 strategies implemented (of 5) was then created for each college. This score was then collapsed into 2 levels (0 to 1 vs. 2 or more). One college did not respond to any questions about NIAAA recommendations, and that college was removed from the analysis of the summary measure.

Data Analysis

Basic descriptive statistics of counts and proportions were calculated for each measure using SAS version 9.2 statistical software (SAS Institute Inc., Cary, NC). We also assessed the bivariate associations between strategy (each Tier 1 and 2 strategy and summary score), and college enrollment size, college status (public vs. private), and whether the president signed on to the Amethyst Initiative (yes/no), using chi-square tests with 1 degree of freedom and a p value cut-off of $\alpha = 0.05$.

RESULTS

Administrators at the majority of colleges (66%) reported that they had reviewed or were in the process of reviewing the NIAAA recommendations, while over one-fifth were not aware of the recommendations (Table 1). One administrator did not agree with the recommendations.

Approximately 2 in 3 colleges (67%) reported that they provide intervention programs for students who are problem drinkers or at high risk for experiencing drinking-related problems (a Tier 1 strategy), either on-campus or provide payment for services by an off-campus provider (Table 1). More than 1 in 5 colleges (22%) referred students to resources off-campus but did not provide a means to pay for those services, and 11% reported that they did not provide intervention programs. Among the schools that offered intervention programs, most (76%) offered at least one empirically supported program. These programs included norms clarification (66%), cognitive-behavioral skills training (57%), motivational interviewing (62%), and expectation challenging programs (38%). However, nearly 1 in 4 colleges with intervention programs did not offer any programs that were empirically supported. Overall, only half the colleges (50%) offered empirically supported intervention programs.

For the Tier 2 strategies, 1 in 3 administrators reported that compliance checks at alcohol outlets were conducted in their college communities (34%), and in more than half of these communities (60%) the checks were carried out without university involvement. Most administrators reported that they had not implemented, planned, or discussed efforts to restrict the number of retail alcohol outlets (79%), increase the price of alcohol (86%) or institute mandatory responsible beverage service training (73%) (Table 1).

Nearly all colleges (98%) reported that they use 1 or more methods to educate their students about the risks of alcohol use. Common methods used for educating students about alcohol were lectures, meetings or workshops (87%), poster

Table 1. Progress Toward Implementation of National Institute on Alcohol Abuse and Alcoholism (NIAAA) College Drinking Task Force Recommendations

	Count	%
Awareness of the NIAAA Task Force on College Drinking Recommendations		
Not aware of the recommendations	75	21
Reviewed and implemented all of them	10	3
Reviewed and implemented some of them	137	39
Reviewed and are in the process of deciding which can be implemented	55	16
In the process of reading	28	8
Waiting for the recommendations to be mailed to us	14	4
Disagree with the recommendations	1	0
Other	17	5
Missing	14	4
	351	
Tier 1 strategies		
Availability of intervention programs for high-risk students		
Provided on-campus for all students who request or are referred to them	181	52
Provided on-campus, but all students cannot be accommodated	21	6
Students referred to off-campus resources, paid for by the school or student insurance	28	8
Students referred to off-campus resources, not paid for by the school or student insurance	77	22
Not provided	36	11
Missing	8	2
	351	
Tier 2 strategies		
Collaboration with advocacy groups or local or state authorities to restrict the number of retail alcohol outlets or liquor licenses (e.g., license price, operating restrictions, attrition)		
No	276	79
Discussed, but not implemented	39	11
Planned, but not implemented	5	1
Successfully implemented	23	7
Missing	8	2
	351	
Collaboration with advocacy groups or local or state authorities to increase the price of alcohol (e.g., increasing excise taxes, eliminating price specials)		
No	301	86
Discussed, but not implemented	24	7
Planned, but not implemented	6	2
Successfully implemented	8	2
Missing	12	3
	351	
Collaboration with advocacy groups, local or state authorities, or retail alcohol outlets to institute mandatory responsible beverage service training policies for servers		
No	255	73
Discussed, but not implemented	28	8
Planned, but not implemented	5	1
Conducted, but the university is not involved	28	8
Conducted with active university participation	23	7
Missing	12	3
	351	
Collaboration with local law enforcement to conduct compliance checks of retail alcohol establishments in your community to monitor alcohol sales to underage patrons?		
No	164	47
Discussed with local law enforcement, but not implemented	38	11
Planned, but not implemented	9	3
Conducted by local law enforcement, but the university is not involved	70	20
Conducted with active university participation	47	13
Other	15	4
Missing	8	2
	351	
Total number of Tier 1 and Tier 2 strategies implemented		
0	82	23
1	158	45
2	70	20
3+	40	11
	350	

campaigns (70%), on-line and computer-based programs (65%), mailings and other printed information (60%), announcements or articles in student newspapers (48%), and a special academic course on alcohol and other student life issues (20%). Less than half of colleges require some or all of their undergraduate students to participate in alcohol education programs (42%).

Large schools were more likely to provide intervention programs for high-risk students. They were also more likely to have mandatory responsible beverage service training for

servers and compliance checks to monitor sales to underage patrons in their communities. Large schools also were more likely than small schools to have implemented 2 or more of the Tier 1 and 2 strategies (Table 2). Public and private colleges did not differ in their implementation of the NIAAA recommended strategies in Tiers 1 and 2, nor did colleges that signed on to the Amethyst Initiative differ from non-Amethyst signatories.

DISCUSSION

Most college administrators surveyed (78%) were aware of empirically based recommendations to reduce student drinking and related problems, although many (22%) were not. Continued efforts are needed to ensure administrators are aware of available and effective strategies to reduce alcohol-related problems among college students.

The primary approach colleges use to address student alcohol use is student education. This finding is similar to previous studies in other samples of colleges (Kolbe et al., 2004; Wechsler et al., 2000). The NIAAA College Drinking Task Force report found strong evidence that educational programs, by themselves, were ineffective in reducing student alcohol use and related problems (Malloy et al., 2002).

Most campuses have adopted recommended intervention programs for students who are at high risk for alcohol-related problems. However, only slightly more than half of colleges report that they have the capacity to provide these services on-campus for all students who may need them. More than 1 in 5 schools refer students to resources off-campus, but do not provide the means to pay for those services. Providing adequate services and employing appropriately trained and skilled staff may be cost-prohibitive for colleges. The extent to which available intervention programs can adequately address student need deserves further study.

The best available scientific evidence indicates that colleges can effectively address student drinking by working with authorities in their surrounding communities to implement efforts to reduce access to alcohol, including compliance checks, reducing alcohol outlet density, mandatory responsible beverage service training, and increasing the price of alcohol (Malloy et al., 2002). Despite these recommendations and strong evidence of continued problems with heavy drinking by students, very few colleges have taken steps to collaborate with local authorities or advocacy groups to implement these recommendations. The one community-based strategy that has been most widely implemented is compliance checks to monitor alcohol sales to underage patrons in retail establishments. Approximately 1 in 3 colleges are in communities that have active compliance check programs, although most of these programs operate without university involvement. Few colleges and universities have successfully worked in their communities to implement strategies to restrict alcohol outlets, increase the price of alcohol or institute mandatory responsible beverage service training. The specific challenges to implementing these empirically supported strategies in college communities deserve further study.

The reasons that more colleges have not adopted NIAAA recommendations are unclear. Because colleges are educational institutions, they tend to use educational approaches to address student alcohol use and related problems (Wechsler et al., 2004), despite evidence that these approaches are

Table 2. Implementation of National Institute on Alcohol Abuse and Alcoholism College Drinking Task Force Recommendations by College Type

			% Large schools (>2,500)	% Small schools (<2,500)	% Public schools	% Private schools	% Amethyst Initiative signatories	% Non-Amethyst schools
	Count	%	*n* = 252	*n* = 99	*n* = 239	*n* = 115	*n* = 34	*n* = 317
Tier 1 strategies								
Intervention programs for high-risk students								
Not provided	121	34	**28**	**44**	34	31	32	33
Provided	230	66	**72**	**56**	66	69	68	67
Tier 2 strategies								
Restrictions on the number of retail alcohol outlets or liquor licenses								
Not implemented	328	93	92	96	93	95	94	93
Implemented	23	7	8	4	7	5	6	7
Increase the price of alcohol								
Not implemented	343	98	98	98	97	99	100	97
Implemented	8	2	2	2	3	1	0	3
Mandatory responsible beverage service training policies for servers								
Not implemented	300	85	**82**	**92**	82	90	85	85
Implemented	51	15	**18**	**8**	18	10	15	15
Compliance checks to monitor alcohol sales to underage patrons								
Not implemented	234	67	**60**	**81**	65	69	73	65
Implemented	117	33	**40**	**19**	36	31	27	35
Total number of Tier 1 and Tier 2 strategies implemented								
0	82	23	**18**	**36**	22	26	24	23
1	158	45	**44**	**48**	46	44	53	44
2 or more	110	31	**38**	**15**	32	30	23	32

Associations in bold are significant at $p \leq 0.05$.

ineffective (Goldman et al., 2002). It is not known, for example, whether colleges have made effective use of experts in various academic fields, including political science, economics, law, public health, and urban planning, who are available on their own campuses. The NIAAA-recommended strategies primarily focus on changing the environment—an approach that is challenging and which administrators charged with addressing alcohol-related issues on campus may not have the experience or expertise to effectively implement. These strategies also require collaboration between college and community actors, and such relationships take time to develop. Expanding the involvement of people with different perspectives and skill sets may facilitate adoption of effective strategies.

Colleges with large enrollments were more likely to have implemented NIAAA recommendations to address student drinking. These colleges may have more resources to dedicate to student drinking issues, including efforts to work with key authorities in the community. It may also be that the consequences of drinking behavior by students at colleges with larger enrollment have a larger impact in their surrounding communities. As a result of this greater impact, campus and community partnerships and community-based interventions may be viewed as more vital to address student drinking.

Some colleges and universities in our sample signed on to the Amethyst Initiative to promote renewed debate about lowering the MLDA from 21 to 18 as a way to reduce problems related to student drinking. Consensus exists in the scientific community that the MLDA of 21 is an effective alcohol control policy that prevents serious consequences of heavy alcohol use, including death, as evidenced by numerous expert panels convened by various government agencies (Bonnie and O'Connell, 2003; Fell et al., 2009; Malloy et al., 2002; Office of the U.S. Surgeon General, 2007; Wagenaar and Toomey, 2002; Wagenaar et al., 2005). Colleges that signed on to the Amethyst Initiative were no more or less likely to have implemented strategies recommended by the NIAAA College Drinking Task Force. Discussion about the MLDA among college administrators may have drawn attention away from the NIAAA College Drinking Task Force report and recommendations.

Some important limitations should be considered when interpreting these findings. The data are based on self-report surveys. The administrator responding may have not been aware of existing efforts on campus or in their community. The findings may have also been influenced by social desirability bias, such that administrators portrayed their campuses as having carried out more than they actually have to be seen in a more positive light. However, if this were a major source of respondent bias, we probably would not have found that most administrators reported a lack of implementation of the NIAAA recommendations. It is also possible that where progress toward implementation was reported, the actual efforts did not represent meaningful progress toward reducing student drinking, and our findings may be an overstatement of actual implementation of these strategies. The survey response rate was comparable to that achieved in other similar surveys (Wechsler et al., 2000, 2004), but it is possible that campuses with administrators who did not respond to the survey are different from those that did respond.

Subsequent research should track implementation or discontinuation of these policies and programs over time. Research linking the implementation of these policies with student behavior, in combination with assessments over multiple time points, would also provide useful information for policymakers and practitioners. In addition, there are numerous emerging policies and practices being implemented on college campuses to address student drinking including parental notification policies, substance-free housing, revised disciplinary procedures for alcohol-involved incidents, and amnesty policies. New programs developed by colleges should contain provisions to rigorously evaluate them to determine whether they are effective. Future research with administrators on college efforts to combat student drinking should examine college plans and efforts to evaluate their programs.

The present study shows that colleges have not yet exhausted potential strategies that are supported by existing research. In fact, many empirically supported strategies to reduce student drinking remain viable and underutilized. Colleges and college communities should consider implementing strategies that are empirically supported and have not been tried. Barriers to implementation, despite the scientific evidence supporting recommended strategies, may include that college administrators believe they do not work, are too expensive, too time-consuming, or are not feasible to implement.

More research is needed to understand how colleges and communities that have implemented recommended strategies were successful and share this information with other colleges and communities. While there is evidence to support "what" are effective strategies for reducing student drinking, more research is needed to understand "how" to implement those strategies in college settings. Given the lack of progress toward implementation of the NIAAA College Drinking Task Force recommendations observed in our study, more research is needed to understand why colleges and college communities have not done more to address student drinking. These efforts could help identify areas where colleges could receive more support for implementing empirically supported strategies. Colleges and university administrators may require additional resources and skills to facilitate implementation of these strategies to effectively combat the persistent problem of heavy student alcohol use.

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