Alcohol use and abuse among college students pose an enormous and unique public health problem that is associated with significant harm to students. Colleges nationwide are seeking to address student alcohol use through a variety of programs and policies. An effort at Georgetown University in Washington, D.C., combines a campus-wide dialogue on the subject with the infusion of alcohol issues into the curriculum of an undergraduate course in the School of Nursing and Health Studies. Course evaluations indicate that participants benefited from the curriculum infusion approach. Participants became aware of the health education resources available to students and the campus culture contributing to alcohol. In addition, student participants evaluated their own alcohol use, with significant modifications of alcohol consumption behaviors.

**Keywords:** alcohol; college student; curriculum infusion; harm reduction

Each year thousands of young Americans die from alcohol-related incidents. Alcohol and the college experience have a particularly conflicted history: student alcohol use is a catalyst for joyous celebrations and pain and misery. The Task Force of the National Advisory Council on Alcohol Abuse and Alcoholism (NIAAA) (U.S. Department of Health and Human Services [USDHHS], 2002) reported that 1,400 student deaths, 70,000 sexual assaults, 500,000 injuries, 600,000 assaults by fellow drinking students, 400,000 students having unprotected sex, and more than 100,000 being too intoxicated to know if they consented to having sex occur each year as a result of the use/abuse of alcohol by U.S. college students.

Media coverage about young adult alcohol use increased in recent years following student deaths at the University of Maryland and at Quinnipiac College, the release of the Harvard University School of Public Health College Alcohol Study (Wechsler et al., 2002), and the National Institutes on Alcohol Abuse and Alcoholism Task Force report (USDHHS, 2002) on the impact of college student alcohol use. That media attention, in turn, prompted a response by policy makers, including an unprecedented hearing by the U.S. Senate Committee on Governmental Affairs (2002) on the topic of drinking among college students. Few public health indicators for serious injury and death point to such a direct cause-and-effect relationship. This article describes and evaluates a key collaborative component of one university’s institutional approach to student alcohol use. By implementing a course using curriculum infusion, we focused on harm reduction associated with alcohol use and ways students can be proactive in managing this risk.

Although the stories of tragic student deaths and staggering statistics of campus binge drinking make headlines, the U.S. public’s general reaction to the topic of alcohol consumption by college students is not one of shock or surprise. This attitude reflects a perception of drinking by college students embedded in the popular culture and marks it as a truly unique public health problem. Popular sentiment, although not condoning campus drinking, views it as a rite of passage, part of the “coming of age” that young Americans experience at college as they make the transition from adolescence to adulthood.

Universities have varied alcohol policies and diverse programs to deal with the nexus of unique circumstances surrounding alcohol use and abuse on campus, including residential oversight for students who are primarily underage drinkers in a culture that commonly promotes heavy drinking and experimentation (Anderson & Milgram, 2001). Georgetown University exemplifies the challenge of determining what combination of prevention and enforcement policies works and, over the years, has engaged in a variety of traditional approaches to control student alcohol use. Although
certain gains have been achieved by these efforts, they have generally been met with dissatisfaction across the ranks of the college campus.

►BACKGROUND

The United States is facing an enormous public health challenge in alcohol use among college students. Our national health promotion and disease prevention agenda, Healthy People 2010, includes as a major health goal for college students the significant reduction in binge drinking (USDHHS, 2000). Healthy People 2010 targets a reduction from the 1998 baseline of 39% of college students engaging in binge drinking during the past 2 weeks to a target of 20% for the year 2010. Binge drinking is defined as five drinks for men or four drinks for women at one sitting, at least once during the past 2 weeks (Wechsler, Dowdall, Devenport, & Rimm, 1995). According to the Harvard School of Public Health College Alcohol Study (Wechsler et al., 2002), 44% of college students are binge drinkers. Despite numerous efforts by colleges and universities in the United States that seek to address student alcohol use and abuse, this rate has remained constant over the past 8 years.

Testimony before the U.S. Senate Committee on Governmental Affairs (May 2002) addressed the magnitude of alcohol-related mortality and morbidity among U.S. college students. In his testimony, Dr. Raynard Kington, acting director of the NIAAA, characterized the harmful culture of high-risk drinking among college students, and its often-tragic consequences, as preventable. He described the goal of the NIAAA Task Force as transformation of the culture of alcohol use on college campuses. Dr. Mark Goldman, cochair of the Task Force on College Drinking, testified that college drinking is an enormous public health problem, one that has remained stubbornly consistent for decades.

Students typically perceive that their peers drink more than they actually do. Social norming is an attempt to educate college students that moderate consumption of alcohol is the norm, not the exception. At Georgetown University, 20% of students self-report they abstain from all alcohol use (Georgetown University, 2003). Incorporating health education into curriculum is one proven method for providing students with social norming data. The California State University system Committee on Alcohol Policies and Prevention has adopted the social norms approach in its prevention model. According to the U.S. Senate testimony of John Welty, president of the California State University at Fresno, social-norm marketing methods have yielded a decrease in alcohol abuse. The social norm strategy of correcting misperceptions produces substantial positive effects in reducing problem drinking among students (Perkins, 2002). Institutions that have persistently communicated accurate norms to students have experienced a reduction of up to 20% in high risk drinking (USDHHS, 2002).

Prevention, not punishment, is the goal of the harm-reduction approach. Curriculum infusion, blending alcohol-related issues into the curriculum content of academic courses, is an increasingly common and effective method of affecting students’ attitudes and behaviors about alcohol in a positive manner. Because academics are at the core of our colleges’ and universities’ missions, including alcohol prevention in the curriculum is essential to demonstrating its value to the educational mission of the institution. Because alcohol-related problems and their prevention are influenced by so many diverse factors, courses in such fields as economics, sociology, anthropology, criminology, health behaviors, political science, marketing, and communications all present useful opportunities for linking academics with prevention (Ryan & DeJong, 2002).

Ziemelis, Bucknam, and Elfessi (2002) provided factor analysis of prevention components that were associated with decreased binge drinking. Student involvement in prevention activities and curriculum infusion were two of the factors common to programs yielding the largest decreases in the prevalence of binge drinking. Using the classroom as a vehicle for student involvement in campus harm-reduction programs, engaging students in dialogues about their personal experiences with professionals, and using the project design to challenge students’ application of course materials to usable and positive campus prevention programs were the principal objectives of our particular curriculum infusion program.

►THE GEORGETOWN UNIVERSITY MODEL: FRIENDS

In July 2001, conversations began to identify and mobilize campus attitudes and resources, focusing on student awareness, education, and harm reduction. This group became known as Friends. Friends is an “ad hoc group of Georgetown students, faculty, and administrators” (Minto, Bennett, Keltner, Porterfield, 2002, p. 81), working together as equals. The group focuses on enhancing student lives and campus unity by reducing the adverse effects of alcohol use and abuse on campus. Progress and success of the group result from their realistic, proactive, and optimistic approach, in which stu-
Students are empowered to imagine and implement creative solutions and programs. Also vital to the group is their constant “adherence to [their] broad goals of reducing harm and building community” (Minto et al., 2002, p. 84). One way the broad goals are accomplished is through a nursing and health studies course, Health Promotion and Disease Prevention, which provides a forum for student teams to develop their own proposals to prevent alcohol related harm.

**METHOD**

The curriculum infusion approach was used in the course Health Promotion and Disease Prevention at Georgetown University School of Nursing and Health Studies. The course, which combined theory and application, was required of all health studies major undergraduate students in their sophomore year. Thirty-four students were enrolled in this one-semester course. The course was structured to provide theory and background within the framework of developing health promotion programs. Alcohol was selected as one health promotion issue to be examined, based on the work of the Friends group. Students explored the culture of the Georgetown University campus, the role alcohol plays in that culture and in the health of students, and their own health behaviors. University and District of Columbia alcohol policies and resources relating to the issue were studied, as were existing primary and secondary prevention efforts. Finally, lifelong issues relating to alcohol use, from fetal alcohol syndrome to social isolation of the elderly from alcohol use, were examined.

Resource speakers, drawn from all parts of the Georgetown University community and beyond, participated in the course. Outside experts, including Richard Keeling, M.D., editor of the Journal of American College Health, District of Columbia Alcohol Beverage Control officials, and Kathleen Mitchell, national spokesperson for the National Organization for Fetal Alcohol Syndrome, spoke to the class about the promotion of health and prevention of disease related to the use of alcohol. Students identified and assessed best practices at other colleges and universities and explored the culture of alcohol use at Georgetown.

Throughout the semester, students applied each course component in a practical manner, by designing a health promotion program aimed at reducing harm on the Georgetown campus. The university’s Health Education Services played a particularly important role in supporting the development of the students’ projects. Harm reduction was defined as decreasing the actual and potential dangers to students who consumed alcohol themselves, as well as to students choosing not to drink. The immediate health risks from drinking, as well as the problems caused by alcohol-related behaviors, were included within the definition used in the course. Student deaths, serious injury, vandalism, and sexual assaults stemming from alcohol use make headlines. Less publicized but also harmful effects of alcohol use, such as disturbing the peace on campus and in the Georgetown neighborhood, property damage, the consequences of poor decision making, and the negative impact of alcohol abuse on college students’ self-esteem were also taken into account. The harm from drinking includes the community consequences beyond the deleterious impacts on the individual drinker (Brower, 2002).

Thirty-one students enrolled in the Health Promotion and Disease Prevention course were surveyed 1 week before the end of the semester. The survey was developed and conducted by two students enrolled in the course as a class assignment. (One student who was absent did not participate in the course evaluation.) The two student authors are also involved in the Friends group on campus and sought to evaluate their course experience as contributing to a constructive engagement of students on the alcohol issue. Because the evaluation tool was developed with the perspective of their personal experiences in the course, the authors did not participate in the survey. The goal of the posttest-only survey was to evaluate the impact of curriculum infusion in this course. Data were collected and analyzed, with the objective of sharing the results beyond the class and the School of Nursing and Health Studies. The findings were shared with all constituencies on the Georgetown University campus (Cessato & Porter, 2002).

**RESULTS AND DISCUSSION**

Curriculum infusion exposed students in the class to campus resources relating to alcohol, in particular Health Education Services. Of the students surveyed, 81% agreed or strongly agreed that taking the Health Promotion and Disease Prevention class introduced them to campus resources that were otherwise unknown to them. Of students, 84% agreed or strongly agreed that they can educate friends about campus resources as a result of having taken the course. Prior to their exposure to campus resource personnel during this course, only 16% of students in the class were aware of these resources. For student harm–reduction programs, five of the six class groups utilized members of the campus health education team who presented and participated in the class discussion for help in the needs assessment, data interpretation, application of theory in program design, and evaluation plans for their programs. As evidenced by the evaluation of this course, curriculum infusion had a significant, positive impact on student knowledge about campus resources and improved student understanding about the importance and accessibility of those resources.

Curriculum infusion also promoted community building at Georgetown University, an important goal of the Friends program. Of students surveyed, 65% responded that the campus community plays a crucial role in any health promotion issue. That same number...
also recognized that to promote health around the use of alcohol, the Georgetown University community must be willing to change its culture, and that its members must be willing to change their personal habits.

Of the surveyed students, 65% agreed or strongly agreed that they have assessed their own drinking habits as a result of having taken this course. Forty-four percent of the class agreed or strongly agreed that they will modify their own alcohol consumption patterns as a result of knowledge learned in the course. The fact that employing curriculum infusion could prompt such significant changes in student behavior is tremendously important.

**Harm-Reduction Proposals**

Students worked in groups of four or five members. Each group designed a health promotion program for the Georgetown University campus aimed at reducing the harm related to student use of alcohol. Table 1 describes these projects that can be divided into improving resources for students and programming to reduce harm related to alcohol use. The six projects were presented during the final class of the semester to an audience composed of students, faculty, university administrators, all members of Health Education Services, and members of the Friends group.

Aspects of five of the six alcohol use/abuse harm-reduction proposals that were developed by students in the Health Promotion and Disease Prevention course have been implemented by Georgetown University. Student ownership of these proposals generated increased involvement in the ongoing work of the Friends group and motivated students to take the additional actions necessary to see their ideas incorporated into university activities and programs. The group’s work will continue into the next academic year.

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<tr>
<th>Projects Focusing on Improving Resources</th>
<th>Description</th>
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<tr>
<td>Ask Jack Hoya</td>
<td>Interactive Web site that provides off-campus, alcohol-free cultural and recreational opportunities and transportation resources.</td>
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<tr>
<td>BeWeiser</td>
<td>A social marketing project to raise student awareness of the “norms” on campus.</td>
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<tr>
<td>4-PEER</td>
<td>A 24-hr hotline providing resources related to alcohol and information regarding the university’s policies.</td>
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<tr>
<td>Freshmen Mentoring Program</td>
<td>A first-year course led by juniors and seniors to promote individual responsibility and safety around alcohol issues.</td>
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<tr>
<th>Projects Focusing on Programming</th>
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<tr>
<td>WACC = Weekend Activities on College Campuses</td>
<td>Programming both on and off campus, providing alcohol-free events and opportunities.</td>
</tr>
<tr>
<td>Harmless Hoyas</td>
<td>A student group that seeks to change on-campus policy to bring student social activities back on campus.</td>
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**CONCLUSIONS**

Curriculum infusion as a component of the innovative Friends group initiative gained widespread acceptance across a range of campus constituencies. It effectively motivated students, faculty, and administrators to work collaboratively to address a vexing problem in nontraditional ways.

Curriculum infusion successfully facilitates student awareness of the complexity of the alcohol use/abuse issue by candidly and comprehensively addressing the relationships among individual behavior, campus culture, institutional policy, prevention, and consequences. In the classroom, as part of an academic course, these important harm-reduction issues can be examined free from the fear of social stigma. This is an important factor when dealing with young adults.

Engaging students as active participants in reducing alcohol-related harm is essential. The college experience is about educating students to become responsible citizens. During their college years, young people learn academic course content and face the challenges presented by their transitions from adolescence to adulthood. The Health Promotion and Disease Prevention course integrated these two processes by structuring the students’ learning to address issues critical to their educational and human development. This initiative demonstrated that curriculum infusion can influence students’ personal life choices. College faculty members need to participate in their students’ transitions from adolescence to responsible adulthood. As part of the innovative Friends approach, curriculum infusion has the potential to make a significant contribution to reducing harm associated with alcohol use/abuse by college students. Curriculum infusion works and promotes academic and personal growth.

**REFERENCES**


