

The Role of Mass Media Campaigns in Reducing High-Risk Drinking among College Students*

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ABSTRACT. *Objective:* This article categorizes and describes current media campaigns to reduce college student drinking, reviews key principles of campaign design and outlines recommendations for future campaigns. *Method:* The article describes three types of media campaigns on student drinking: information, social norms marketing, and advocacy. Key principles of campaign design are derived from work in commercial marketing, advertising, and public relations and from evaluations of past public health campaigns. *Results:* Information campaigns on the dangers of high-risk drinking are common, but none has been rigorously evaluated. Quasi-experimental studies suggest that social norms marketing campaigns, which correct misperceptions of campus drinking norms, may be effective, but more rigorous research is needed. As of this writing, only one major media campaign has focused on policy ad-

vocacy to reduce college student drinking, but it is still being evaluated. Lessons for campaign design are organized as a series of steps for campaign development, implementation and assessment: launch a strategic planning process, select a strategic objective, select the target audience, develop a staged approach, define the key promise, avoid fear appeals, select the right message source, select a mix of media channels, maximize media exposure, conduct formative research, and conduct process and outcome evaluations. *Conclusions:* Future campaigns should integrate information, social norms marketing, and advocacy approaches to create a climate of support for institutional, community and policy changes that will alter the environment in which students make decisions about their alcohol consumption. (*J. Stud. Alcohol*, Supplement No. 14: 182-192, 2002)

AMERICANS HAVE long been intrigued by the potential power of the mass media to help solve social problems. Television, radio and print advertising can entice people to buy a wide range of products and services, and television entertainment programs and movies exert enormous influence over our ideas, values and behavior. Therefore, according to conventional wisdom, it should be possible to use mass communications to get people to act on behalf of their own health and well-being or to “do right” by important social causes. Based on this assumption, since World War II, federal, state and local governments, private foundations and other nongovernmental organizations have sponsored hundreds of public service campaigns to promote social rather than commercial “goods” (DeJong and Winsten, 1998).

It is not surprising, then, that prevention advocates would look to the mass media as an important aid in addressing

the problem of high-risk drinking among college students. Some advocates have pushed for reform or other restrictions on alcohol advertising (DeJong and Russell, 1995). Others have sought to influence entertainment producers to end the glorification of high-risk drinking on television and in the movies (Montgomery, 1989). More recently, prevention advocates have produced a small number of media campaigns designed to change student knowledge, attitudes and behavior.

How can the power of the mass media be used effectively to reduce high-risk drinking among college students? To explore that question, this article begins by reviewing three types of mass media campaigns focused on student drinking: information, social norms marketing, and advocacy. This is followed by a review of key lessons for campaign design derived from work in commercial marketing, advertising and public relations and from past public health campaigns. The article concludes by suggesting how future campaigns on student drinking might be constructed so that they work in sync with environmentally focused prevention efforts now being implemented on college campuses.

A Review of Current Campaigns

Most media campaigns focused on college student drinking have been campus based, using a mix of posters, flyers, electronic mail messages and college newspaper advertisements. More recently, a few regional, state and national media campaigns have begun to address this issue as well.

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The following review describes three types of campaigns. First, *information campaigns* try to raise awareness of the problem, usually with the intent of motivating students to avoid high-risk alcohol use. Second, *social norms marketing campaigns* try to correct misperceptions of current drinking norms, based on the idea that if students no longer have an exaggerated view of how much alcohol their peers are consuming, fewer of them will be led to engage in high-risk drinking. Third, *advocacy campaigns* attempt to stimulate support for institutional, community or public policy change. Unfortunately, evaluation data for all three types of campaigns are still very limited.

Information campaigns

“Party Smart” is a media awareness campaign launched by Boston Mayor Thomas M. Menino as a response to the 1997 death of Scott Krueger, a freshman at the Massachusetts Institute of Technology who died from alcohol poisoning after a fraternity hazing. Each of the advertisements for this poster and billboard campaign uses a photograph taken from the point of view of a drinker, with the rhetorical tagline, “Remind you of last night?” One shows the blurry image of a toilet, the apparent target of an intoxicated drinker who needs to vomit. Another shows the splayed feet of a drinker lying in bed, the room spinning rapidly around him. A third shows a covey of young women pointing and laughing at a drinker (presumably a male) who has passed out or fallen on the floor.

The “Dirk” campaign, sponsored by the Ohio Department of Transportation, is a similar awareness campaign. Print advertisements are built around a fictional character, Dirk, who sets out to learn about the negative consequences of excessive alcohol consumption among Ohio college students. Television advertisements also focus on negative consequences. In one, the camera pans across a set of ringing alarm clocks and empty alcohol containers, then to a snoring student who is sleeping through a final exam. In the other advertisement, a young woman is sitting on a bed in a dorm room. A young man beside her wakes up, having no memory of who she is.

Mothers Against Drunk Driving has launched a print campaign, “Face the Brutal Truth About Underage Drinking,” to remind the public, especially young people, of the repercussions of underage drinking. Each advertisement shows a close-up of a distraught young man or woman with a caption that describes a possible negative consequence of drinking (e.g., “Alcohol consumption contributes to unwanted pregnancies”; “Alcohol kills more people under 21 than cocaine, marijuana, and heroin combined”; “Alcohol is involved in half of all sexual assaults on campus”).

Information campaigns focusing on negative consequences are unlikely to have much impact on college stu-

dents’ alcohol consumption. Students involved in high-risk drinking already know that alcohol misuse can lead to serious injury and death. They also know from their own experience, however, that dire consequences, while common enough to be noteworthy, are still relatively rare events, given that 81% of college students consume alcohol (Wechsler et al., 1998). As a result, serious injuries or death related to drinking are likely to be attributed to an error in the individual’s specific actions, rather than to predictable consequences of excessive alcohol consumption, as predicted by “just world” theory (Lerner, 1980).

It is also unlikely that the depiction of highly familiar but less serious negative drinking consequences, such as those in the Party Smart campaign, will penetrate the fog of denial that lets students continue to engage in high-risk drinking. Most young people take good health for granted, and many view long-term problems from their current drinking as too distant and unlikely to be of concern. Moreover, many young people do not understand the probabilistic nature of risk, and the inherent uncertainty facilitates denial. Finally, many young people overestimate their own capacity to change their behavior before long-term consequences become an issue (DeJong and Winsten, 1998).

The National Association of State Universities and Land Grant Colleges launched a different kind of information campaign in September 1999, with the endorsement of 113 university presidents. A one-page parody “advertisement” for “Binge Beer” was run in national and major regional newspapers to encourage parents to talk with their children about “binge drinking.” It should be noted that the advertisement generated extensive news coverage, which helped to extend the campaign’s message to a wider audience.

Although the advertisement was eye catching, the heart of the prevention message was buried, and it was not clear that it was directed to parents until the last line of copy. The “Binge Beer” ad may have succeeded in reminding a few parents that they should talk to their college-age son or daughter about the dangers of high-risk drinking, but no advice was provided on how to have that discussion. Several important messages have been identified that parents can convey to their college-age children (Devine and DeJong, 1998), but these were not indicated in the ad or a related website. An alternative strategy would have been to encourage parents to take an active role in helping their college-bound children choose a college that has implemented key programs and policies for creating a safe campus (DeJong and Zweig, 1998).

Social norms marketing campaigns

College students tend to overestimate how many of their peers engage in dangerous alcohol consumption. The disparity between actual and perceived drinking norms can be very large. If students believe that most other students drink

heavily and seek to conform to that perceived norm, then collective rates of high-risk drinking will be sustained or even increase. Incoming first-year students, independent from parental control for the first time and seeking guidance on how to fit into their new social environment, are especially vulnerable to exaggerated representations of drinking norms (Perkins, 1997).

Prevention experts have speculated that this dynamic might be turned around through a campus-based media campaign that corrects students' misperceptions about their peers' alcohol consumption. Quite simply, if students more accurately perceive how much drinking is really going on, then this should change their perception of the norm, which in turn should lead to reductions in high-risk drinking. The effort to get this message out—using publicity events, student newspapers, posters, email messages, and other campus-based media—is called a social norms marketing campaign (Perkins, Social norms, this supplement).

This approach has been tested on several different campuses. Northern Illinois University implemented a 5-year program to change perceptions of student norms regarding high-risk drinking (Haines and Spear, 1996). A subsequent student survey found an 18% reduction in perceived heavy episodic drinking (69.3% versus 57.0%) and a 16% reduction in actual heavy episodic drinking (43.0% versus 37.6%). Northern Illinois University has continued to implement the media campaign for several years, producing steady declines in the rate of self-reported high-risk drinking (Haines, submitted for publication).

Additional preliminary studies have been conducted at Hobart and William Smith Colleges, the University of Arizona, and Western Washington University. Although all of the evaluation designs are subject to criticism, the consistent pattern of findings reported by these campuses is impressive, especially in light of survey data showing relatively little change at the national level (Perkins, Social norms, this supplement). Additional research is needed to explore campus-based social norms campaigns.

In Montana, the social norms approach is being tried in a state-funded media campaign called "Most of Us." This campaign is directed to all young people in Montana under age 25, including college students, and its objective is similar to that of college-based campaigns. A baseline survey confirmed that misperceptions about how much alcohol young people actually drink are widespread among all subgroups of 18- to 25-year olds in the state (Linkenbach and Perkins, submitted for publication). A quasi-experimental evaluation of the campaign is currently underway.

Advocacy campaigns

As of this writing, there is only one major media campaign focused on college student drinking that has sought to create a climate of support for environmental change.

Launched in late 1997 by the Center for Science in the Public Interest, "Had Enough!" is being piloted at Cornell University, the University of Arkansas at Little Rock, and the University of North Carolina at Chapel Hill. The campaign targets the many students who are tired of having the quality of their education and their safety compromised by the high-risk drinking of others, with the hope that they will channel their anger into advocacy.

"Had Enough!" uses newspaper advertisements, posters and flyers to draw students to a website (HadEnough.org), which then urges them to "get involved" in fighting "binge drinking" on their campus. Each advertisement presents a multiple-choice drinking quiz, such as the following:

You're driving your trashed friend back from a party when she declares she's going to hurl. To assist, you: a) Tell her to stick her head out the window and let it rip. b) Quickly swerve over and open the door so she doesn't get any in your car. c) With one hand on the wheel, hold her hair back while she barfs in her purse. d) NONE OF THE ABOVE.

The last alternative is marked with an asterisk, which draws attention to the key line of copy. In this example, it reads: "You didn't come to college to baby-sit a binge drinker. To really be helpful, advocate for change. Visit www.HadEnough.org."

The website is designed to reinforce the visitor's negative opinion about high-risk drinking and provide a resource for students who want to "do something about it." Under the banner "Binge Drinking Blows," the home page begins, "Had enough on your campus? Haven't we all about had enough of the effects binge drinking has on the quality of campus life? Well, join the club. There are plenty of us that are sick and tired of drunken nuisances. And with good reason." It offers general advice to students on how to address the problem, such as organizing alcohol-free activities during orientation or joining a local coalition on alcohol issues, and provides a basic primer on the importance of institutional and government policy for addressing the problem. At the three pilot sites students are linked to activities, programs, and advocacy efforts specific to their campuses. Evaluation of the campaign is still underway.

The University of Delaware recently launched an eclectic poster campaign under the slogan, "University of Delaware. Party School?" One series of posters includes elements similar to "Had Enough!" but without providing sources for additional information. For example, one poster shows a disarrayed dormitory room. Under the headline "Wasted," the copy reads: "Your room. Someone threw up in the wastebasket; cans and bottles are everywhere. And, who's that guy passed out on your bed?" "Haven't we had enough?" At the bottom appears the standard line, "University of Delaware. Party School?" Unfortunately, judging from the photograph of the dorm room, the answer appears to be "Yes."

Another series of posters seeks to communicate a positive image in contrast to the university's "party school" reputation. For example, under the headline "Trashed," one poster shows a group of student workers for the university's recycling program and another shows Greek organization volunteers participating in a roadside cleanup program. A third, headlined "Party Animal," shows the university mascot and students participating in a fundraiser for the March of Dimes. The references to high-risk drinking are unfortunate, as they may subtly reinforce the university's drinking school image and undermine the central message. Also, showing that certain students are not part of the high-risk drinking scene fails to communicate clearly what the real norms on campus are.

A more traditional series of posters highlights the negative consequences of high-risk drinking: (1) "Wasted. All that time spent partying instead of hitting the books. Failed classes equal wasted time, wasted money, wasted effort." (2) "Mug Night. It was a great party, wasn't it? Maybe he didn't know a police record will prevent him from entering law school." (3) "Attitude Adjustment. He seemed like such a nice guy...until he had a few drinks. Then, his attitude changed: He got abusive and you got scared." Each poster concludes with the line, "Haven't we had enough?" Unfortunately, the posters do not refer students to an additional source of information.

Lessons from Past Public Health Campaigns

Given these modest efforts, it is helpful to explore how the mass media might be used more effectively to address the issue of college student drinking. Decades of work on public service campaigns have taught public health advocates a great deal about how to harness the power of the mass media. An overview of key lessons is presented here, organized as a set of guidelines that can be used to stimulate ideas, manage the process of campaign development and implementation, and evaluate campaign results. These guidelines have their origins in two major traditions: (1) commercial marketing, advertising and public relations and (2) public health practice.

Launch a strategic planning process

Public service campaign planning often begins with the wish to "do something" about a problem using the mass media. What often ensues is a review of how other campaigns have used the media, with the assumption that their methods can be imitated or adapted for the new campaign. For example, the value of television public service announcements seems to be regarded as self-evident, leading even small organizations with limited means to spend valuable time and resources in developing them and then pushing them in front of media gatekeepers, who have an

ever-shrinking store of free advertising slots to dispense (Hammond et al., 1987).

The problem is that campaign planners are thinking about which media technique to use without first having a clear strategic objective in mind. Ideally, the objective should be one that applies to the sponsoring organization's entire programmatic effort, not just the media campaign alone. Furthermore, the nature and scope of the media campaign should be outlined in tandem with the organization's other activities. This is the only way to guarantee that the media campaign will be consistent with and support the larger goals and objectives of the organization.

Select a strategic objective

The first step in designing a public health campaign is to select a strategic objective for the entire program, of which the media campaign is one part. Campaign planners can then consider how the mass media might best be used to advance that objective. Thinking about media options in the absence of an overall strategy is shortsighted and very likely to lead to disappointing campaign results.

A consideration of strategic options is well informed by a social ecological framework, which recognizes that health behavior change is affected by multiple levels of influence: individual factors, interpersonal and social processes, institutional factors, community factors and public policy (Stokols, 1996). Accordingly, broad objectives for the overall program could include: (1) individual behavior change, (2) changes in interpersonal and social processes, (3) support for institutional or community-based interventions or (4) promotion of public action for environmental change (DeJong et al., 1998). The most profound decision to be made by campaign planners is which of these areas should be the focus of their strategy.

Selection of a strategic objective should be informed by a thorough analysis of the problem at issue, its causes and the full range of possible solutions. The ultimate decision should be based on a determination of which option will provide the greatest leverage for generating change. In some cases, it will be clear that an issue is not yet on the public agenda, and a basic informational campaign will be needed, directed either to the public at large or to policy-makers and principal opinion leaders. Or there may be a lack of knowledge, erroneous beliefs or skill deficits that must be addressed before further progress is possible. There may be social or interpersonal factors at work in the community that can provide a strategic opportunity. In some cases, it will be clear that the key to producing behavior change is to alter institutional or community factors that are driving the problem. Or it may be that broad changes in laws or regulations are most needed.

There is no easy formula. In the end, the decision must rest on informed judgment, grounded in a systematic analy-

sis and consideration of the problem. Campaign planners often assume that their campaign message should be designed to educate people about their individual behavior. That may sometimes be appropriate, but often it will be more important to use the media to stimulate action in support of institutional, community or policy change. This can be done through advertising messages or by influencing how news reporters cover the story (Wallack and DeJong, 1995).

Select the target audience

In general, campaign messages should be directed to a well-defined target audience specified in terms of its geographic, demographic, psychological and problem-relevant characteristics (Lefebvre and Flora, 1998). With a focus on stimulating action in support of institutional, community or policy change, the audience should be defined as critical decision makers, who can be reached either directly or through mobilized public opinion. Determining the type of audience that should be targeted for a public service campaign or how narrowly or broadly that audience should be defined depends heavily on the nature of the problem, lessons learned from past work to address it and the availability of resources. Ideally, members of a target audience should share similar knowledge, concerns and motivations that affect their behavior, and they should be reachable through similar media, organizational or interpersonal channels.

Develop a staged approach

Very few mass communication campaigns can be expected to stimulate an immediate change in people's health-related behavior. Hence, rather than focusing on immediate behavior change, it is often more realistic to concentrate on achieving intermediate objectives that will contribute to behavior change in the long term using a staged approach. Campaigns to promote change in interpersonal and social processes or build support for policy change can also benefit from this type of structure.

According to models of the behavior change process, change results when people are led through the following steps (Roberts and Maccoby, 1985):

1. *Awareness.* A media campaign needs to raise consciousness of the problem, prompt reevaluation of personal risk and encourage consideration of individual or collective action (Dearing and Rogers, 1996).
2. *Knowledge and beliefs.* The campaign must bring about a change in beliefs and attitudes about the behavior being promoted. It is critical to anticipate and address the audience's points of resistance.
3. *Behavioral skills.* Behavior change often requires the development of new skills (e.g., self-monitoring, refusal behaviors),

which can be taught using media by modeling or step-by-step instruction (Bandura, 1986).

4. *Self-efficacy.* The conviction that one can execute a particular behavior (called self-efficacy) is predictive of subsequent behavior change (Bandura, 1986). Observing others' experience is an important way of developing efficacy expectations.
5. *Supports for sustaining change.* Learning and maintaining a new pattern of behavior requires that people know how to monitor their behavior; apply self-reinforcement strategies; and anticipate, eliminate or cope with stimuli that trigger unwanted or competing behaviors (DeJong, 1994). Mass communications can be used to teach these self-management techniques.

To apply the behavior change model, campaign planners should establish where in the behavior change process the target audience can presently be found. The campaign should try to move the audience sequentially through the remaining steps, noting that it is possible for a set of messages to move an audience through several stages at once, depending on the difficulty of the behavioral objective.

Define the key promise

In general, campaign messages are more likely to be effective if they call on the target audience to take some kind of specific action. The selected action should be one that serves to work in tandem with other program elements and advance the broader strategic objective. For instance, community residents might be encouraged to call a telephone hotline to receive information about a public health problem. At the policy level, targeted government officials might be urged to pass a budget that will allow for stricter law enforcement. Once the desired action is identified, ways to motivate the target audience must be identified.

Commercial advertisers think in terms of a key promise—that is, the single most important benefit that the audience will receive if they do what the campaign message is asking of them. Personal concerns or barriers that might deter the audience from taking action must also be considered. To “sell” the key promise, the campaign message must provide support statements that explain why the promised benefit serves the target audience's interests and why the advantages of taking this action outweigh any disadvantages. The key promise and support statements are brought together to create a net impression, which can be thought of as a summary of what members of the target audience should say to themselves after seeing or hearing the message.

Identifying the key promise is a critical step. Commercial advertisers understand that people are more likely to attend to and remember messages that meet their needs or support their values. Hence, commercial advertising often plays on people's insecurities, desires and aspirations and then “positions” the advertised product or service as a means of meeting those needs immediately. In contrast, public health advocates tend to think more narrowly in terms of

promised health benefits. In fact, those benefits may not be primary motivators for the target audience, which may have other, more immediate concerns. When crafting a campaign message, consideration should be given to a broader range of benefits that might appeal to the target audience (DeJong and Winsten, 1998).

Avoid fear appeals

There is continuing controversy about the use of fear appeals or scare tactics. Their use is based on a firmly held belief that people can be motivated to stop life-threatening or otherwise dysfunctional behaviors through an emotionally charged portrayal of that behavior's negative consequences. Most experts have concluded that fear campaigns are extremely difficult to execute, rarely succeed and should be used only under limited circumstances (Job, 1988). Indeed, they argue that there is a real risk that fear appeals will backfire, making the problem behavior even more resistant to change (DeJong and Winsten, 1998).

Despite these considerations, fear appeals continue to have strong intuitive appeal and are frequently used by advertising professionals in public service campaigns. One reason is that focus group participants usually rate emotional or arousing fear appeals as highly motivating and effective, but this is true even when subsequent experimental studies show those appeals to be ineffective (Job, 1988). The reason for the continuing allure of fear-based messages is clear: In general, the threat of punishment is relied on to control behavior when its causes are insufficiently understood or those causes are difficult to change (Bandura, 1986).

Lack of clarity about what constitutes a fear appeal compounds the confusion. In their zeal to promote alternative approaches, some experts extend their concerns about fear appeals to any message that focuses on negative consequences of certain behaviors. In fact, however, people need to be made aware of threats to their health if this is new information for them, and they need occasional reminders of those facts, especially when the audience has low anxiety about a problem (DeJong and Winsten, 1998). Also, it is legitimate to use public policy to create new threats, such as stricter law enforcement, about which the public then needs to be informed (DeJong and Atkin, 1995). The threat of punishment, primarily through legal sanctions, is a basic instrument of social policy—one frequently used to achieve public health objectives.

On the other hand, once people are already aware of a problem or have been notified about changes in policy, other means of influencing their behavior must be found, such as modeling appropriate skills, demonstrating the benefits of alternative behaviors, promoting participation in community-based programs or encouraging active support for further policy changes. Unfortunately, most public ser-

vice campaigns never get past the stage of reinforcing people's awareness of the problem and stay stuck in a negative approach.

Select the right message source

The choice of the named campaign sponsor is fundamental. The persuasiveness of the message will depend on the trustworthiness and credibility of its source, as perceived by the target audience. In some cases, this can create a dilemma for the agency supporting the campaign. Its leadership may want the public (or its funders) to know of their sponsorship, but at the same time being prominently named might serve to undermine the target audience's receptivity to the message.

The use of celebrities should be approached cautiously for several reasons (DeJong and Winsten, 1998). First, the message may be overwhelmed by the celebrity's presence and ultimately forgotten. Second, celebrities can lose their luster; among adolescent fans in particular, perceptions of entertainment and sports stars change very quickly and unpredictably. Third, celebrities can suddenly become newsworthy in ways that directly undermine the campaign or are otherwise inappropriate. In the case of alcohol and other drug prevention messages, there is a fourth consideration: Adolescents often view celebrity messages skeptically because they suspect the celebrity was paid to deliver the message or they believe that many stars are substance users (Harvard Business School, 1987).

A celebrity should be selected whose public image fits the underlying strategy of the campaign, not just because he or she is available. Data on the celebrity's popularity among different demographic groups should be examined, and formative research should be undertaken to test the target audience's perceptions of the celebrity's credibility, trustworthiness and attractiveness. Most important, people who know the celebrity, and whose judgment can be trusted, should be consulted for their advice whenever possible.

Select a mix of media channels

A tenet of commercial marketing and advertising is to use a variety of media channels to provide a clear and consistent message (DeJong and Winsten, 1998). They should be selected according to the target audience's media preferences, the objectives of the campaign and cost. Audience rating systems and formative research can be used to help identify which specific stations, programs, print venues, websites or other media are the best vehicles for reaching the target audience at the lowest cost per contact.

It is sometimes assumed that a campaign must use television to be effective, but that is mistaken. In general, television is excellent for providing short, uncomplicated messages, evoking emotional reactions, establishing evi-

dence of new social norms, and modeling behaviors that can be easily taught. Radio shares many of television's advantages and is much less expensive, both in terms of production costs and advertising rates; this allows greater repetition of the messages. Moreover, the variety of radio stations on the air facilitates the targeting of messages to very narrowly defined groups.

The print media are less able to command attention than the broadcast media, but they can be used to reach narrowly defined target groups, especially policy-makers and community opinion leaders. In addition, because print advertisements, brochures and feature articles can be reread and invite reflection, they are better suited for presenting rational arguments or detailed information. For college students, campus newspapers can be an ideal medium for campaign materials.

The Internet and the web are becoming another consequential medium for public service campaigns, especially for college students. While the private sector, including alcohol and tobacco companies, have aggressively developed home pages on the web (Williams et al., 1997), public service groups have only recently begun to explore the medium's possibilities. Those organizations that have made the greatest progress in developing this resource have had extensive government or foundation support (e.g., the National Clearinghouse for Alcohol and Other Drug Information). Recently, it has become feasible to use websites to make video and audio materials widely available to the public, which opens up a whole new world of possibilities for public health advocates.

Maximize media exposure

What constitutes adequate exposure has not been extensively studied in public service campaigns because, historically, those campaigns have relied on public service time or have had small budgets. Two broad generalizations can be provided for guidance (DeJong and Winsten, 1998). First, repetition helps draw attention to the message, facilitates learning and increases liking for the message. However, repetition can be counterproductive if it is excessive. Second, airing spots in high-frequency bursts (or "flights") is superior to having the same number of messages drawn out over a longer period. Precise recommendations cannot be made, however, because the right amount of exposure depends on multiple variables, including the nature of the target group, the precise objective, the complexity and entertainment value of the message, the nature and extent of competing messages and the context in which the campaign is conducted.

Conduct formative research

Formative research with the target audience is essential at each step of the campaign development process: defin-

ing the campaign's goals and objectives, selecting the most promising audience segment, identifying appropriate media channels for delivering messages, designing educational materials, tracking audience exposure and reaction, and refining the campaign (DeJong and Winsten, 1998). In essence, creating an effective campaign requires entering into a dialogue with the audience (Garcia, 1990).

It is surprising how often campaigns are developed without careful formative research. Funding is usually not the issue, as pretesting expenses can be kept relatively modest. More often, not enough time has been allowed to do the research. At a minimum, focus groups should be conducted to test preliminary executions, such as scripts, storyboards, and mock-ups of print advertisements. Tests of finished products are generally less critical, although in some isolated cases, this type of testing is absolutely essential (Wallack and Barrows, 1982-1983).

Representatives of the target audience are an excellent source of information at this stage, but not everything they say should be accepted at face value. For example, focus groups almost always endorse fear messages; but, as discussed above, research suggests that fear-based messages work under only extremely limited circumstances (Job, 1988). Therefore, it is essential that formative research include consultation with experts who can provide an experience-based and analytical perspective.

Conduct process and outcome evaluations

Few public service campaigns have been rigorously evaluated. Campaigns involving academic researchers tend to be low-budget, short-term and localized efforts. Full-scale national campaigns are rarely evaluated due to both expense and the difficulty of setting up a research design that permits meaningful inferences about a campaign's impact. The common failure to evaluate these campaigns prevents planners from assessing the need for making midcourse corrections and impedes progress in learning what types of campaign strategies work best. Hence, whenever possible, early program planning should incorporate both process and outcome evaluation activities to monitor progress and demonstrate project impact.

There are three types of evaluation strategies that have been used to assess the impact of mass media campaigns: (1) community studies, which assess the impact of local or regional campaigns by comparing "treatment" and "control" (no campaign) communities; (2) exposure studies, which compare the knowledge, attitudes and behaviors of people who have been exposed to the campaign versus those who have not; and (3) time-series studies, which involve the examination of data for an extended period of time, both before and after the introduction of the media campaign.

Most campaign evaluations have failed to capture the diversity and complexity of mass media effects. Measure-

ment systems should be designed to capture the full range of expected effects. For example, if a campaign's objective is to move an issue to the top of the public agenda, the project's success can be established by tracking the number of news stories before and during the campaign, the number of legislative proposals submitted and passed, the growth of grassroots advocacy groups and so forth (Roberts and Maccoby, 1985).

Conclusion

Learning from both the successes and failures of past mass communication campaigns, public service groups are working now with a renewed enthusiasm for using the mass media to promote their causes. Studies have demonstrated that when long-term mass communication campaigns are designed and executed according to sound principles, they can play a meaningful role in changing behavior, either directly or by helping bring about environmental change at the institutional, community or policy level. Many failed campaigns are understood to have been seriously flawed in design and execution due to poor planning and inadequate formative research.

An Outline for Future Mass Media Campaigns

To date, most mass media campaigns focused on college drinking have used a basic information approach. These campaigns have been driven by the widely shared conviction that the techniques of commercial advertising can be successfully applied to this problem. These campaigns are developed with the implicit conviction that people will naturally take steps to protect themselves if planners can find just the right messages to inform them about the problem and to motivate them (Wallack and DeJong, 1995). Like commercial advertising, this approach seeks to change individual behavior directly by providing information.

This approach is not congruent with the general thrust of work in public health, which has focused on identifying and controlling environmental factors that contribute to disease and other health-related problems. This environmental work (e.g., draining the swamps, providing clean water, building sanitation facilities) has been credited for the great gains in life expectancy seen in developed countries. Over time, attention shifted to public health problems that seem rooted in poor behavioral choices. To address these, public health specialists turned away from the tradition of environmental management and instead turned to health education, with its focus on altering individual behavior through changes in knowledge and attitude.

The health education approach is valuable, of course, if not essential. However, it is also limited in what it can accomplish. In recent years, public health experts have argued that a paradigm that addresses the physical, social,

legal and economic environment that encourages and sustains high-risk behavior is the most effective way to reduce behavioral health problems. Accordingly, public health media campaigns can make their greatest contribution by creating a climate of support for changing this environment (Wallack and DeJong, 1995).

The environmental management framework outlined by the Higher Education Center for Alcohol and Other Drug Prevention brings attention to the vital role of policy change at the institutional, community, state and federal level in preventing alcohol-related problems on campus (DeJong et al., 1998). Research has already shown that community-based coalitions can affect policy change to reduce alcohol consumption (Holder et al., 1997; Perry et al., 1996), and it is recommended that this general strategy be adapted to reduce alcohol-related problems in higher education (DeJong and Langford, this supplement). The following discussion addresses how the mass media can be used to create a climate of support for environmental change.

Policy change as a participatory process

A participatory process that includes all major sectors of the campus and community is key to developing and implementing new policies (DeJong et al., 1998). College presidents and other top administrators on many campuses have grappled with the problem of how to involve students as real partners in this process. Which student leaders should be involved? How should they be selected? What is a meaningful role for them to play? These are difficult questions. What is evident, however, is that the participation of any group of student leaders in this process will not be accepted by the student body at large in the absence of broad student support for policy change. The paramount question, then, is how such support can be generated through a mass media campaign.

It is important to remember that policy reforms cannot go too far beyond perceived social norms without provoking resistance or even open defiance. It follows that support for policy change will be less forthcoming if people have an exaggerated view of student norms regarding alcohol consumption. A critical step in building support for policy change, then, is to conduct a social norms marketing campaign that will correct that misperception. Once people realize that the majority of students are already practicing safe, moderate behaviors, college administrators can more easily enlist the support they need to advance a policy agenda that reinforces those positive trends. In short, another way to think about social norms marketing campaigns is that they put the college community in touch with the positive social norms that exist on campus.

Another type of information that can be used to build the case for policy change concerns the secondary effects of high-risk drinking—that is, the negative consequences

that students experience due to other students' misuse of alcohol. Various college alcohol surveys have found that a majority of students experience these consequences, which include interrupted study and sleep; having to take care of a drunken student; being insulted or humiliated; having a serious argument or quarrel; having property damaged; experiencing unwanted sexual advances; being pushed, hit or assaulted; and being a victim of sexual assault or date rape (Wechsler et al., 1996). The realization that secondhand smoke puts nonsmokers at risk gave new momentum to the antitobacco movement. Similarly, an increased awareness that high-risk drinking hurts students who are not at high risk themselves can increase support for campus alcohol control policies. Media can play a pivotal role in developing this new awareness.

Mass media campaigns can also be used to provide evidence of substantial support for new policies that are consonant with the actual values and norms shared on campus. The 1997 Harvard survey revealed that there is widespread support nationally for various measures to reduce high-risk drinking, including strict enforcement of the rules (65%), prohibiting kegs on campus (60%), "cracking down" on Greek organizations (60%) and banning on-campus advertisements from local outlets (52%) (Wechsler et al., 2000). Support for policies is also subject to misperception. Evidence from a study conducted on one Northeast campus showed that, just as students overestimate how much alcohol is being consumed on campus, they underestimate how much student support exists for reasonable policy reform (DeJong and Langford, this supplement). For example, 54.3% of students supported using stricter disciplinary sanctions for repeated violations of campus alcohol policies, but only 25.7% thought that other students supported this policy. Clearly, not all policy proposals will receive majority support, and the level of actual support for any particular policy will vary from campus to campus.

Campaign planners using this approach should determine where student support exists, correct misperceptions about this support and then move forward with a policy agenda that most students will endorse. This does not mean that presidents and other top administrators should never implement policies that are opposed by a majority of students, but that, whenever they can, they should find and build on student support. Over time, changes in policy, if enforced, hold the promise of further reducing high-risk drinking, which in turn can further alter the community's perceptions of its values and behavioral norms and thus set the stage for additional changes in policy.

Key steps in building support for policy change

This broad campaign outline suggests a sequence of specific steps that campus-based task forces can take to build

student support for environmentally focused policy changes using the mass media.

First, the task force should define the problem in a way that motivates behavior change. This means focusing on the secondary effects of high-risk drinking rather than the incidence of negative consequences experienced by the drinkers themselves. When describing the problem in this way, the task force should take care to avoid inadvertently reinforcing misperceptions of student drinking norms (DeJong and Linkenbach, 1999).

Second, the task force should collect and report survey data that will correct misperceptions of student drinking norms. This can have a positive effect on behavior, both directly and by helping build support for policy changes that reflect the health-protective values and behavioral norms of the majority.

Third, the task force should publicize positive trends to help reinforce further changes in behavioral norms. There are positive changes underway on many campuses, but a narrow focus on the severity of student alcohol-related problems can obscure them. Letting students know about "good news" can help strengthen the resolve of abstainers and moderate drinkers to stay that course, while also motivating other students to moderate their alcohol consumption.

Fourth, the task force should collect information on student opinions about various policy options. This information will be especially useful in efforts to give students a meaningful role in reviewing, developing and implementing campus policies. If a majority of students favor certain alcohol control measures, that fact should be publicized, providing an opportunity to correct misperceptions about the level of community support.

Fifth, when feasible, the task force should consider implementing a program of environmental change by starting with those policies that enjoy majority support and then moving on from there. When students know that new policies are consonant with the values and behavioral norms of the community, protests from opponents will be fewer and more easily contained.

At some schools, however, basing policies solely on the preferences of students would result in slow, evolutionary changes in student behavior and would not satisfy key constituencies, including administrators, faculty, parents, private donors and legislators. To build pressure for change, college presidents and other task force members must continue to voice their concerns about student alcohol consumption and its threat to their institution's capacity to achieve its educational mission (Presidents Leadership Group, 1997). At the same time, the task force should foster a campus environment where the large numbers of students who want reasonable policy reform and stricter enforcement of the rules are emboldened to speak out and can be heard.

Sixth, once new policies or programs are in place, students, faculty and others on campus must be informed. The mass media provide a superb vehicle for publicizing these changes, not just through news coverage, but also through special advertising and promotions. Research in drunk-driving prevention has shown, for example, that widespread publicity of "sobriety checkpoints" and other law enforcement measures is essential to their general effectiveness. In the absence of publicity, such policy changes have little or no discernible impact (Ross, 1992).

Conclusion

The strategy recommended here represents a structured integration of the three kinds of mass media campaigns that have been attempted to reduce student drinking: information, social norms marketing, and advocacy. The result is a sequenced and participatory campaign that would build the case for and otherwise support the type of environmentally focused prevention efforts now being implemented on many college and university campuses (DeJong and Langford, this supplement). Ultimately, this and other campaign ideas need to be tested experimentally to learn what will work best to reduce alcohol-related problems on campus.

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