

Effective Strategies to Reduce High Risk Drinking Among College Students and Residents in an Urban Environment

Marsha Brinkley, Project Director, GT Smart, Georgia Institute of Technology

Donald W. Zeigler, Planning Director/Strategic Analysis, American Medical Association

Abstract:

An urban American university, Georgia Institute of Technology, established a campus-community coalition to reduce high risk drinking, its harms and second-hand effects among university students and residents of the Atlanta community. The Atlanta-based institution was part of a ten-year, ten-university project, A Matter of Degree (AMOD), administered by the American Medical Association with funding from the Robert Wood Johnson Foundation and evaluation by the Harvard School of Public Health. The Georgia Tech program, GT Smart, sought to change campus and community policies that affect the alcohol “wet” environment that passively permits or actively encourages high-risk drinking. Unlike the other nine AMOD coalitions, Georgia Tech had an additional challenge of residing in a major urban environment. However, the coalition systematically and effectively addressed campus issues and undertook change in both local neighborhoods and municipal policy alcohol-control measures. The projects successful comprehensive strategies of civic engagement and confronting political barriers provide important lessons for other urban communities and university environments.

I. Introduction. Background on American college student alcohol use

In 2002 more than 1 in 10 young American adults aged 18 to 24 years were heavy drinkers (i.e., consuming five or more drinks on the same occasion on each of 5 or more days in the past 30 days); almost 2 in 5 were binge drinkers, i.e., five or more drinks for men, four or more for women on a single occasion at least once in the past 30 days at the same time or within a few hours (Office Applied Studies). Full-time college students had significantly higher rates of past-year alcohol dependence (25%) than non-students (20%). The national Harvard College Alcohol Study found that 44% of students at four-year colleges reported drinking heavily during the two weeks prior to the survey (Wechsler, Lee, Kuo, et.al.2000). The 2004 Monitoring the Future survey found that college students and young adult non-students have similar prevalence rates of lifetime or annual alcohol use, but college students have significantly higher monthly use rates than non-students (68% versus 59%) and higher binge drinking in the past two weeks (42% versus 34%), but significantly lower rates of daily drinking (3.7% versus 5.8%) (Johnston, O’Malley, Bachman, et al. 2005)

Recent US data on college students indicate a major public health problem: 1,700 college student deaths aged 18-24 from alcohol-related unintentional injuries; 500,000 students aged 18-24 are unintentionally injured under the influence of alcohol; over 70,000 students aged 18-24 are victims of alcohol-related sexual assault or date rape; 400,000 students aged 18-24 had unprotected sex of which over 100,000 were too intoxicated to know whether they consented to having sex; 2.1 million students aged 18-24 drove a car while under the influence of alcohol;

11% of college drinkers report damaging property while under influence of alcohol; and over 600,000 (ages 18 to 24) assaulted by another student who was drinking. (NIAAA Call to Action)

In order to address these problems, most college prevention programs are primarily aimed at students through education about the dangers of heavy drinking; focus on changing individual behavior or changing misperceptions (social norms, drink responsibly); and presume the underlying dynamic is “personal responsibility versus peer pressure”. According to evidence-based practices, however, educational strategies are relatively ineffective (Babor, Caetano, Caswell, et al. 2003; NIAAA 2002)

II. A Matter of Degree (AMOD)

Based on the Harvard research in the early 1990s demonstrating the high rate of high risk drinking among American college students, the Robert Wood Johnson Foundation (RWJF)-funded “A Matter of Degree Program” (AMOD) program. The decade long project, from 1996-2008, sought to test the efficacy of a different approach to reducing college high risk drinking and its consequences. The AMOD strategy was to complement campus education and policies with concerted efforts to change the environment which enables, promotes and profits from high risk drinking. Environmental change strategies having worked with other public health problems, the project called for campus/community coalitions to bring about policy change and enforcement at the population level. RWJF called on the American Medical Association (AMA) to serve as the national program office in order to involve the medical community to address the number one public health problem among college youth. The Harvard School of Public Health provided evaluation and employed a long-term quasi-experimental evaluation the AMOD “environmental approach” to alcohol problems or changing the community and policy environment to reduce drinking and its health and social problems.(Waagenar, Toomey, Lenk 2004; NIAAA 2002; Weitzman, Nelson, Lee, 2004; Mitchell, Toomey, Erickson 2005)

AMOD proposed testing the environmental model at ten universities, one of which was the Georgia Institute of Technology (Georgia Tech) which was recruited from among 140 schools in the Harvard College Alcohol Survey. The AMOD 10 schools were among the 42 highest drinking schools. Criteria for participation in AMOD included a high student binge rate, a history of addressing alcohol issues, willingness to discuss problems publicly (“stick their necks out”), a willingness to collaborate with community partners, and assure active participation and support

of the university president and city mayor. Each school typically received a planning grant and up to two four-year grants to cover staff and project costs with a small match from the universities. Nine of the ten schools were major flag-ship public universities. The tenth was a small private university.

Georgia Tech's GT SMART Project

Georgia Tech (GT) is a major public university in Atlanta, Georgia and the most urban of the ten AMOD sites. Atlanta had a population of 470,688 in 2005 (InfoPlease). GT has an expected 2007-08 enrollment of 12, 597 of which 3,317 are freshmen (i.e., first year). According to Georgia State law, no one under 21 years of age is allowed to possess alcohol unless at home when the parent or guardian gives it to his/her child or ward and the parent or guardian is present (supervising). It's illegal to drive a motor vehicle with a BAC of .02 or higher if under the age of 21. Anyone 21 years of age or older may not drive if they have a BAC of .08 or higher. Financial incentives create de facto federal purchase age of 21. The National Minimum Drinking Age Act of 1984 states that revenue will be withheld from states that allow the purchase of alcohol to anyone under the age of 21. (NIAAA State Profile).

The project at GT was named GT SMART (Students Managing Alcohol Risk at Tech). Consistent with AMOD goals, GT formed a campus-community coalition with a mission to change the alcohol environment on campus and in the Atlanta community by focusing its efforts on creating strategies to change the environment that passively permits or actively encourages high-risk drinking. Project goals are to work with the campus community to develop and implement data driven interventions to reduce high risk consumption of alcohol; develop a comprehensive outreach program for parents of Georgia Tech students; and work with civic and business leaders and elected officials to identify and implement environmental changes that enhance the quality of life within the Atlanta community.

A. Campus-based Projects and Policies

A campus-wide alcohol task force sought to expose suspected redundancy in some programs and lack of necessary programming consistent with a comprehensive plan. The review led to a newly created position in the Health Office of Program Coordinator to monitor existing activities and assist in identifying and developing new programs. The task force identified all

alcohol programming on campus, determined gaps in prevention and education programming, and developed a strategic plan to create a comprehensive campus alcohol model.

Several campus-wide alcohol policies were adopted in 2003 and are under review in 2007: alcohol use in campus buildings and spaces was limited and must be pre-approved by the Provost, tailgating with alcohol at sporting events was limited to three hours prior to and following the event, no alcohol advertisements are permitted in the school newspaper or at athletic or social events, and enforcement of current policies was enhanced.

GT established an on-line interactive alcohol education program for Freshmen which also served to replace the data collection of the Harvard College Alcohol Survey instrument that had ended with the original grant. The new program provided a baseline 2006 and will be employed with the new freshmen class of 2007-08. Even though the goal was to provide education and reduce high risk drinking, and assess intervention needs for students, evaluation of the 2006 data revealed that a high majority (82%) of students felt that the educational video had no impact on their views of alcohol and they had not learned (77%) from the on-line program. This raised concerns and led to the development of the Parental Outreach Program.

GT SMART's campus arm plans to host a screening of the documentary movie, "Death by Alcohol, the Sam Spady Story" in the fall of 2007 since student deaths generate significant attention. This documentary looks at the tragic consequences of binge drinking on one family and how understanding the signs of alcohol poisoning can save lives.

Moreover, GT SMART distributed widely several educational fliers to students and the local communities. "Off-campus living" teaches students how to be good neighbors and what, as renters, they can expect from landlords. Important phone numbers for campus and city services are included. Fliers entitled "So you're thinking of going to a party..." and "So you are having a party..." addressed safety concerns by providing information on symptoms of alcohol poisoning, emergency numbers, taxi information, campus sanctions and municipal laws. Wallet cards with emergency campus safety, police, medical services and taxi contacts were also provided.

GT Smart also developed a web page with general information and pages dedicated to individual groups, i.e., parents, faculty and students, and the monthly electronic GT Smart Newsletter updates of project accomplishments, articles and other publications and announcements.

B. Parental Involvement

In fall, 2000, GT became one of the first institutions in the U.S. to implement a parental notification policy. This provided a tool for the Dean of Students to involve parents early and has proven to be a valuable deterrent in reducing the incidence of high risk consumption by underage students. Parents of students under the age of twenty-one may be notified by the institution when any of the following occurs: 1) violation of the GT Student Policy on Alcohol and Other Drugs; 2) Students endanger themselves or others while under the influence of alcohol or other substances; 3) the Dean of Students determines that any future violations of the Institute's policy will most likely result in suspension from Georgia Tech; and 4) a judicial hearing officer of the school determines that any future violations of GT policy will likely result in removal from student housing.

GT SMART provided an On-line Parents Program and Parent's Webpage. The internet resource provides data to give parents a realistic picture of campus drinking and the importance of and "how to" talk to sons and daughters about making responsible decisions related to drinking.

B. Community Coalition

GT's major contribution to the AMOD national project has been its success with community policies and having an impact on a large urban area. The project accomplished this by developing a broad coalition representing campus and community leadership.

Figure 1 Coalition Groups

Establishing & Building Key Campus and Community Partnerships

Campus and community partners who work together to make GT SMART goals a reality are:

- Georgia Tech Administrators
- Georgia Tech Students
- Georgia Tech Parents
- Local Government Officials
- Atlanta Police Department
- Business Leaders
- Community Leaders
- Neighborhood Planning Units
- Bar and Restaurant Owners
- Faith Based Groups
- Substance Abuse Professionals
- Local and State Organizations with a focus on issues related to alcohol

It employed a process of intentional outreach: 1) to recognize and prioritize what needs were required to effect change; 2) establish goals and timelines which assisted in recruiting and keeping members on task; 3) existing legislation and government departments; 4) identifying a wide range of funding needs and resources to affect change, i.e. police overtime pay, T-shirts for advocacy rallies; 5) develop interventions on how to use data for change; and 6) plan media advocacy by determining who will be spokesperson's and keeping the message consistent.

The project developed key partnerships to achieve its mission. One notable example was with the Atlanta Police Department (APD) to foster police involvement and to develop a partnership plan. Primarily the goal was to reduce opportunities for underage and high risk drinking through increased enforcement of ordinances, monitoring of alcohol licensees, community awareness and participation, and encouraging more citizen calls to 911 (the community emergency phone number) To accomplish this, GT SMART anticipated needs of the APD that would prevent its cooperation. The project identified a grant that enabled the police department to add patrol officers on evening shifts. Extra staff facilitated a 38% increase in alcohol violation citations from 2004 to 2006. The APD also initiated a Deputy Program that trained civilian employees to augment sworn officers in the field in conducting alcohol compliance checks on alcohol licensed businesses and issuing citations to businesses in violation of the code.

Other collaborations led to passage of state and municipal alcohol control legislation. GT SMART supported the statewide Georgia Alcohol Policy Partnership in successfully advocating for passage of legislation to require registration of beer kegs whereby alcohol vendors are more easily held responsible for selling kegs to underage patrons. A record of each keg purchaser is kept to expedite the process of tracking the sources of underage drinking. Georgia law requires anyone buying a keg to sign an affidavit listing the location where the keg is to be consumed and acknowledging that it is illegal to furnish beer to minors. (Georgia Tech, December 2004)

In partnership with community leaders and city officials, GT SMART assisted in drafting eleven separate pieces of legislation that were adopted by the Atlanta City Council, including reduction of beverage sales hours, zoning changes limiting the density of alcohol sales outlets, increased enforcement, and a revised alcohol sales permit application process.

However, police alone are unable to undercover all illegal activities without citizen cooperation. Accordingly, in October, 2004, GT SMART, in a partnership with the APD, established an Anonymous Tip Line at the University for the Public to provide information about Atlanta bars, restaurants and package or convenience stores suspected of selling or serving alcohol to underage or intoxicated persons. (Georgia Tech, October 2004). Announced at several press conferences covered by local press and National Public Radio, the Anonymous Tip Hotline became a safe and effective method for concerned citizens to report suspected alcohol license violations to law enforcement agencies. Refrigerator magnets with the Tip Line phone number were distributed at community meetings, neighborhood events and by mail to residents of Atlanta.

Responsible Alcohol Sales and Server (RASS) Training. In May, 2004, GT SMART and Chair of the Atlanta City Council Public Safety Committee announced a free online training program for managers and servers of alcohol in Atlanta to help them reduce underage drinking and sales to intoxicated patrons before they get behind the wheel. (Georgia Tech, July 2004) Adapted from another AMOD project at the University of Nebraska-Lincoln, RASS was the first of its kind in Georgia. The interactive, web-based training program is available at no charge to anyone who owns or works for an establishment licensed to sell liquor in Georgia. Restaurant, bar and store managers and employees take an estimated 2 hour on-line course and receive a certificate upon completion which is renewable every two years with verification available to future employers. RASS was designed to familiarize owners and employees of alcohol-licensed

establishments with state liquor laws, teach how to recognize fake driver's licenses and IDs, recognize when bar patrons have had too much to drink, stop serving intoxicated customers without incident, and empower servers to do their jobs well.

Assessing the efficacy of RASS training, GT SMART administered an anonymous online survey in June, 2005 and in January, 2006 to graduates. A nine-question survey was e-mailed to 454 participants who had completed the RASS training program and who provided an email address. Among the 454 emails, 50 were returned as ineligible resulting in a 10% response rate. The number of completed surveys calculated the response rate with reporting groups divided by the number of eligible reporting groups in the sample. Caution is urged when interpreting these data due to the low response rate and recognition that any subsequent non-response bias may affect survey results. Recent research, however, shows that a low response rate need not affect the validity of data collected.

As a result of the RASS training, the majority of respondents (85%) reported being more familiar with Georgia liquor laws, and in their skills to stop serving disorderly, intoxicated customers. Nearly as many (83%) said they were better able to recognize fake driver's licenses and ID's, and more confident in their ability to recognize whether a customer has had too much to drink. Nearly three-fourths (71%) would support legislation in Georgia mandating or promoting training programs for establishment managers. More than two-thirds (67%) said they would support legislation mandating or promoting training programs for alcohol servers. The vast majority (83%) rated the RASS training overall as excellent or good. As a result of the RASS training, nearly two-thirds (62%) of survey respondents said that their perception of the establishment for which they work had been positively affected. And, over half (57%) said they had a greater knowledge of the Georgia Dram Shop Law.

Despite acknowledged limitations, GT SMART concluded that the RASS training had probably positively affected participants in the training. Findings show that the course educates servers about liquor laws and the State dram shop law. It teaches participants on how to recognize and refuse service to customers with fake ID's and discontinue alcohol service to underage and/or intoxicated customers. Data suggest that a RASS training program has the potential to reduce the negative affects associated with alcohol use, curb underage drinking, and enhance the overall quality of community life. Further research is needed to measure the impact of RASS training and the behavior of alcohol servers. As of August 24, 2007, RASS involved

178 businesses from 15 Counties within the State of Georgia, and a total of 2,019 servers enrolled in the training. (GT SMART RASS summary, August, 2007)

The coalition was constantly attuned to public attitudes and concerns. In an effort to better understand the environment, GT SMART contracted with an opinion research firm to conduct a telephone survey of City of Atlanta residents in February, 2004 and repeated in February 2006. The goals of the survey were to assess whether high-risk drinking and the second-hand effects of high-risk drinking are impacting the quality of life in neighborhoods where respondents live and in the City of Atlanta; and to determine if there was support among respondents surveyed for potential policy changes. In both years, a total of 600 City of Atlanta residents, 49-51 from each of the 12 City Council Districts, participated in the survey. The following summarizes the results from the 2006 survey which confirmed that the community felt quality of life was an issue.

Compared to 2004, 3% fewer respondents favored limiting the number of establishments licensed to sell or serve alcohol in 2006. Compared to 2004, there was a 5% drop in respondents favoring alcohol-related training for beverage servers. Compared to 2004, there was a slight drop in respondents favoring adding police to address alcohol-related issues. The Coalition attributed this shift to the interventions implemented, including increased police involvement which led to issuing citations to licensees. The RASS training and anonymous Tip Line were also factors. Subsequently, alcohol outlets were no longer the main or frequent topic at community meetings.

IV. Outcomes

Reductions have been observed in drinking-related harms and second-hand effects associated with student alcohol use. Among students surveyed, as illustrated in Table 1 below, less than one-fourth (22%) perceive that *alcohol use is a problem* on the Georgia Tech campus compared to nearly half (44%) of students surveyed six years ago. Compared to 50% of those surveyed in 1999, just over one-fourth (28%) of students surveyed in 2005 say they have *had their study or sleep interrupted* as a result of someone else's drinking.

When compared to 1999, significantly fewer students say they have had a *hangover* (62% - 46%), or been *insulted or humiliated* (30% -17%) as a result of other students' drinking. Because of their own drinking, fewer students report *forgetting where they were or what they did* (33% - 23%). In 2005, sixteen percent of students surveyed say they have had a *serious*

argument or quarrel because of someone else’s drinking compared to over one-fourth (27%) in 1999. (Wood 2005)

Figure 2 CAS Data Changes 1999-2005

Data comparison from the College Alcohol Study (CAS)

College Alcohol Study (CAS) Variable	1999	2005	% Point Decrease
Yes, <u>alcohol is a problem</u> for students on the Georgia Tech Campus.	44%	22%	22pp ↓
Since the <u>beginning of the school year</u> , I have had my studying or sleep interrupted because of other students' drinking?	50%	28%	22pp ↓
Since the <u>beginning of the school year</u> , my drinking has caused me to have a hangover?	62%	46%	16pp ↓
Since the <u>beginning of the school year</u> , I have been insulted or humiliated because of other students' drinking?	30%	17%	13pp ↓
Since the <u>beginning of the school year</u> , my drinking has caused me to forget where I was or what I did.	34%	23%	11pp ↓
Since the <u>beginning of the school year</u> , I have had a serious argument or quarrel because of other students' drinking?	27%	16%	11pp ↓

Moreover, students reported that it has become more difficult to obtain alcohol without an ID in off campus outlets. In 1999, 50% of students indicated they could get alcohol in bars or clubs. That fell to 40% in 2005. Similarly, the percent finding it possible from liquor or grocery stores fell from 39% to 36%. However, student fraternity houses remain a problem with 75% in 1999 and 74% in 2005 finding access to alcohol without an ID.

Georgia Tech was part of the Harvard School of Public Health AMOD interim evaluation 1997-2001 even though the project was the last two schools to become part of AMOD. Harvard compared patterns of drinking and harms from 10 AMOD schools to 32 non-AMOD colleges from the national Harvard College Alcohol Study (CAS). They divided 10 AMOD program colleges into 2 groups based on their level of program implementation (# and variety of interventions) as of 2001: high intervention and low intervention sites. The 5 schools that incorporated more of the AMOD-recommended environmental policies & programs had significant changes noted in drinking & related harms over time when compared to the non-AMOD colleges. However, reductions did not occur at the 5 universities that implemented few of these changes nor at the group of 32 comparison colleges.

V. Conclusion

Changing the environment which fosters college high risk drinking is incredibly difficult. However, there was significant attention in higher education and alcohol control circles when the AMOD interim evaluation was published in 2004. Accordingly to Dr. Ralph Hingson of the National Institute of Alcoholism and Alcohol Abuse, “[t]his careful and rigorous evaluation is the first to show positive benefits of interventions across entire college populations.” AMOD interventions, he continued, “if vigorously pursued, can reduce drinking problems specifically among college students... [&] can also reduce secondhand effects” (Hingson 2004). The Harvard evaluation of AMOD through 2005 is expected soon and early unpublished indications are that those coalitions, such as GT, which adopt comprehensive strategies, continue to reduce harms and secondhand effect from student high risk drinking. GT is to be commended for being able to carry this out in a major urban environment.

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