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Abstract: The HWS Alcohol Education Project:**Continuation and Dissemination of A Model Prevention Program**

Misperception of peer norms has been shown by HWS researchers as well as others to dramatically affect levels of alcohol use and harm. The HWS Alcohol Education Project initiated a comprehensive campaign to reduce harmful misperceptions about student drinking norms and reduce actual alcohol abuse on this undergraduate residential campus with the development of innovative social marketing strategies as well as new strategies for teaching about alcohol, other drugs, and violence in the academic curriculum. Major activities included: 1) a print, poster and electronic mass-media campaign based on local survey data to reduce myths, 2) an interdisciplinary course on alcohol abuse that explores the relationship between social norms and public prevention policy and involves students and faculty in prevention programming about social norms, 3) a faculty and student-teacher training initiative for curriculum infusion across academic programs and for community coalition building, and 4) presentations on social marketing to the joint Dean's staff and athletic staff to ensure a consistent programming message across all prevention efforts. The primary objective was to produce a new and more integrated academic and social climate, where students have a more realistic awareness of peer disapproval of alcohol abuse and a more responsible level of public conversation about alcohol norms. The synergistic connection of each of these highly replicable components has led to significant reductions in exaggerated misperceptions of permissive peer norms, reduction in heavy binge drinking behavior, and substantial reductions in related harm during the first 18 months of intervention. The Project initiatives will be continued over the one year grant period and enhanced through improved multimedia video production, creation of more online programs communicating accurate peer norms, and through the collection of broader evaluation data. Dissemination of this model program nationally will take place through national meeting presentations, expansion of the Project web site information, and consulting visits hosted at HWS as well as through travel to other colleges and universities.

I. SIGNIFICANCE

There can be little doubt that heavy alcohol consumption on college campuses and its many negative effects such as poor academic performance, personal injury, deaths from overdose, automobile crashes, property damage, sexual assault and other forms of violence constitute the most pervasive and entrenched problem facing most institutions of higher education. Indeed, national news headlines and extensive research (Berkowitz and Perkins, 1986; Presley, et al. 1996; Wechsler, et al. 1994) both confirm this claim. What spurs on this problem of collegiate alcohol abuse is, of course, not a simple question. Moreover, most prevention strategies have not had much positive effect or have not been able to demonstrate a significant positive impact with sufficient program evaluation. One approach--the reduction of misperceptions about peer drinking norms-- has shown particular promise, however, in addressing collegiate alcohol abuse. It is now recognized that pervasive misperceptions exist on most college campuses. Students typically believe that campus drug norms are more permissive than is really the case among peers, even when actual levels of use are quite high. These exaggerated perceptions contribute significantly to the problem of alcohol and other drug use on campus and to students' tolerance of violence that is frequently a product of this drug use. Prevention strategies that attempt to reduce misperceptions to the more accurate levels of actual peer norms hold promise for prevention. Thus, there is a significant need for the development of effective programs to reduce misperceptions in the larger context of prevention programs in higher education.

Initial research and theory on this topic were actually developed at Hobart and William Smith Colleges several years ago (Perkins and Berkowitz, 1986). Research on this student population demonstrated a pervasive and continuing pattern of misperceptions about alcohol and other drug norms among student peers. Even though actual patterns of use were quite high due to social and demographic characteristics of the student population and the institution (e.g. private Northeastern school, rural environment, undergraduate population only, traditional age, fraternities on campus, relatively few students from conservative religious faiths), the misperceptions still far outpaced the actual norms and

reinforced the heavy drinking that did occur. Perkins (1997) subsequently developed a comprehensive theory of the causes and consequences of this phenomenon in college contexts based on attribution theory, social conversation mechanisms and peer conformity. Following this research similar misperceptions of alcohol and other drug norms were found at diverse institutions (Baer, Stacy and Larimer, 1991, Prentice and Miller, 1993, Haines and Spear, 1996). Most recently, a nationwide study has demonstrated that in every one of 100 colleges and universities examined, most students perceived substantially more use of alcohol and other drugs among their peers than really occurred at their school (Perkins, et. al., 1999). This pattern was the result at each particular institution, regardless of the actual level of use. Thus, exaggerated misperceptions of alcohol and other drug norms are commonly entrenched at schools across the country, in private and public schools of every size and in every region. Misperceptions are likely to have substantial consequences on personal use as students conform to erroneously perceived expectations of peers (Perkins and Wechsler, 1996) and the potential benefit of students acquiring more accurate views of their peer norms is a promising prevention principle that can be disseminated and applied with innovative strategies at virtually all institutions (Perkins, 1997).

In the late fall of 1996 the Hobart and William Smith Colleges Alcohol Education Project (henceforth referred to as the HWS Project) launched a major new initiative within the institution under the direction of H. Wesley Perkins, professor of sociology, and David W. Craig, professor of biochemistry, with support of an institution-wide U.S. Department of Education DVPPHE grant. This project initiated a comprehensive campaign to reduce harmful misperceptions about student drinking norms and reduce actual alcohol abuse on this undergraduate residential campus with the development of innovative social marketing strategies as well as new strategies for teaching about alcohol, other drugs, and violence in the academic curriculum. Major activities included: 1) a mass-media campaign based on local survey data to reduce myths, 2) an interdisciplinary course on alcohol abuse that explores the relationship between social norms and public prevention policy and involves students and faculty in prevention programming about social norms, and 3) a faculty and student-teacher training initiative for curriculum infusion across academic programs and for community coalition building. The primary

objective was to produce a new and more integrated academic and social climate, where students have a more realistic awareness of peer disapproval of alcohol abuse and where a more responsible level of public conversation about alcohol and other drugs (AOD).

Significantly, the mass communications campaign combines traditional print media with unique electronic media approaches to expand the exposure of normative information to the campus community. Electronic media with modern computer networks can be produced and distributed very rapidly all over campus, can deliver multimedia sound and video content, and can be assessed in real time through the analysis of computer log files. In addition, students in the model interdisciplinary course learn about how social norms, among other factors, affect alcohol consumption in youth and how this information can shape the design of prevention strategies and policy that is informed by scientific knowledge. They use this knowledge in the course to contribute to the HWS Project through 1) helping design and carry out campus surveys about alcohol norms, 2) monitoring student BAC levels and publicizing normative BAC data at campus social events, 3) producing of posters informing the campus community of their research, and 4) producing of video segments communicating important information to the college community through the electronic means discussed above. The presence of alcohol issues in the formal curriculum is further expanded through a curriculum infusion initiative that includes college faculty workshops and student-teacher/partner teacher workshops. Nearly 10% of the HWS faculty have participated in the workshops and are integrating alcohol issues into their departmental and program courses.

Thus, the HWS Project enlists constituencies in active prevention efforts that have traditionally been silent in the past without diverting those constituencies from the academic work that is their primary concern. Specifically, students in the model course participate in prevention activities as part of their normal academic coursework. College faculty integrate issues about alcohol in the courses that they already teach as illustrative examples and applications of concepts and principles important to the subject. Student teachers in the teacher training program learn about cutting-edge prevention theory to prepare them for the work that they will engage in while they learn more about peers and partner with school districts in the design of prevention programs in the field. It is notable here as well that senior

administrators have attended the workshops and have served as important leaders in supporting these efforts.

By combining traditional print media and social events with electronic media and curriculum infusion the HWS Project succeeds in a synergistic exposure of the college community to social norms education beyond any program implemented elsewhere. The level and intensity of this social norms education project maximizes the capacity of this strategy to reduce alcohol use and the harm to students, faculty, and staff. Careful evaluation of the effects of this program have shown that after only 18 months of programming, students' perceptions of peers were significantly altered and a 21% reduction in the frequent heavy drinking rate had occurred. As predicted, many reports of students problems associated with alcohol use also declined, some far exceeding project expectations with rate reductions of 25% to 40% (see part III of this proposal).

The presentation of some of these results at recent meetings has led to great interest in this project with many institutions have expressed interest in replicating aspects of the HWS Project. Importantly, the strategies developed in this project are not at all restricted to small schools or residential institutions. Indeed, the media campaign and curricular infusion strategies are highly transportable to quite different settings. Explorations of ways to replicate the HWS Project are under way with representatives from several institutions, most recently, Virginia Tech and Corning Community College. Great interest has been shown with the electronic media and the ability to distribute information rapidly across a very large institution inexpensively. The labor costs in poster production and placement, the publication costs and limited time exposure of newspaper ads, and the slow speed with which printed information can be updated, make electronic social norms marketing very attractive to schools like Virginia Tech. Corning Community College, with its largely commuter population, is very interested in implementing the curriculum infusion initiative and the electronic media since it is so difficult to otherwise reach their mobile student population. The dissemination plan that has grown out of this project includes a web site that documents most initiatives at www.hws.edu/~alcohol, presentation of the project at national

meetings, faculty research publications on the theory and practice of social norms strategies for prevention, and consulting services for colleges and universities across the country.

To summarize, the key features of the current HWS Alcohol Education Project that highlight its strengths and significance as a model alcohol prevention program are listed below:

1. Misperception of peer norms has been shown by HWS researchers as well as others to dramatically affect levels of alcohol use and harm and the HWS Project addresses the need for novel strategies that integrate a social norms approach.
2. Components of the HWS Project are highly replicable elsewhere and other institutions' prevention specialists have shown keen interest in the dissemination of this Project's initiatives.
3. Components of the HWS Project can be synergistically connected.
4. The HWS Project engages the broadest of campus constituencies in a social marketing program that includes commonly under represented groups in prevention efforts -- students, teaching faculty, and senior administrators and community constituencies such as secondary school students and administrators.
5. The HWS Project has achieved dramatic reductions in alcohol use and related harm in a short period of time. These reductions have been demonstrated by careful analysis of representative data systematically gathered at multiple time points.

II. PROGRAM DESIGN

NEED AND INSTITUTIONAL CONTEXT

Hobart and William Smith Colleges is an undergraduate liberal arts institution of higher education with approximately 135 faculty and 1,800 students. Hobart, for men, and William Smith, for women, exist in a coordinate structure sharing a single faculty, campus grounds, academic classes and facilities, Provost and President of the institution. Male and female students maintain separate student

governments and athletic programs, and are supervised by separate dean's offices. Over 95% of students who attend this institution are single, of traditional college age (between 17 and 24), and have moved away from their families to attend college. About three-quarters of the student population live in campus housing which includes small and large single sex and coeducational residence halls, small cooperatives and special theme houses, and fraternities (no sororities exist on this campus).

Hobart and William Smith Colleges has previously provided and continues to provide traditional services to combat drug problems. Prior to the introduction of the HWS Project, for example, all of the following were available: 1) support groups and group counseling for students with personal drug problems or drug problems associated with family members and friends; 2) individual counseling treatment services; 3) an Employee Assistance Program for staff; 4) substance-free housing and social space options for students; 5) residence hall and athletic team workshops on drug abuse; 6) exercise and wellness programs and rape awareness programs that give attention to alcohol and other drug abuse as related concerns; 7) occasional speakers and alumni/ae addressing alcohol and other drug issues; and 8) a drug policy review board consisting of administrators, faculty, health educators, the head of security, medical services staff and students. Even with these efforts, however, alcohol and other drug use, violence on campus, and other associated problems among students remained disturbingly high. For example, a representative campus-wide survey in 1995 revealed that 89% of students typically drank alcohol during the average week and that 55% of students were frequent binge drinkers (often drinking 5 or more drinks in a row). Over one-quarter of respondents noted that someone else's drinking had interfered with their study, sleep or other aspects of their lives almost every week. As a direct result of their own drinking during the academic year, 25% of students experienced injuries to themselves, 9% had injured another person, 6% admitted attempting sexual contact unwanted by another person, 17% engaged in unprotected sexual activity, 21% reported some form of fighting, and 19% had committed property damage. Thus, new prevention program initiatives were clearly needed introducing a social norms marketing campaign with expanded faculty and administration involvement that could be integrated with the traditional programming noted above.

THE HWS ALCOHOL EDUCATION PROJECT COMPONENTS

The HWS Project integrates a comprehensive initiative to reduce harmful misperceptions about student alcohol norms on this undergraduate residential campus with the development of strategies for teaching about alcohol use and violence in the academic curriculum. The objective was to produce a new and more integrated academic and social climate, where students have a more realistic awareness of peer disapproval of alcohol use and abuse and where a more responsible level of conversation about drinking exists. Thus the expectation was that, as perceptions of drinking norms became more realistic and responsible discussion of alcohol became increasingly integrated in the curriculum, a significant reduction in student alcohol abuse would be the result. Project components are described below.

Data Collection

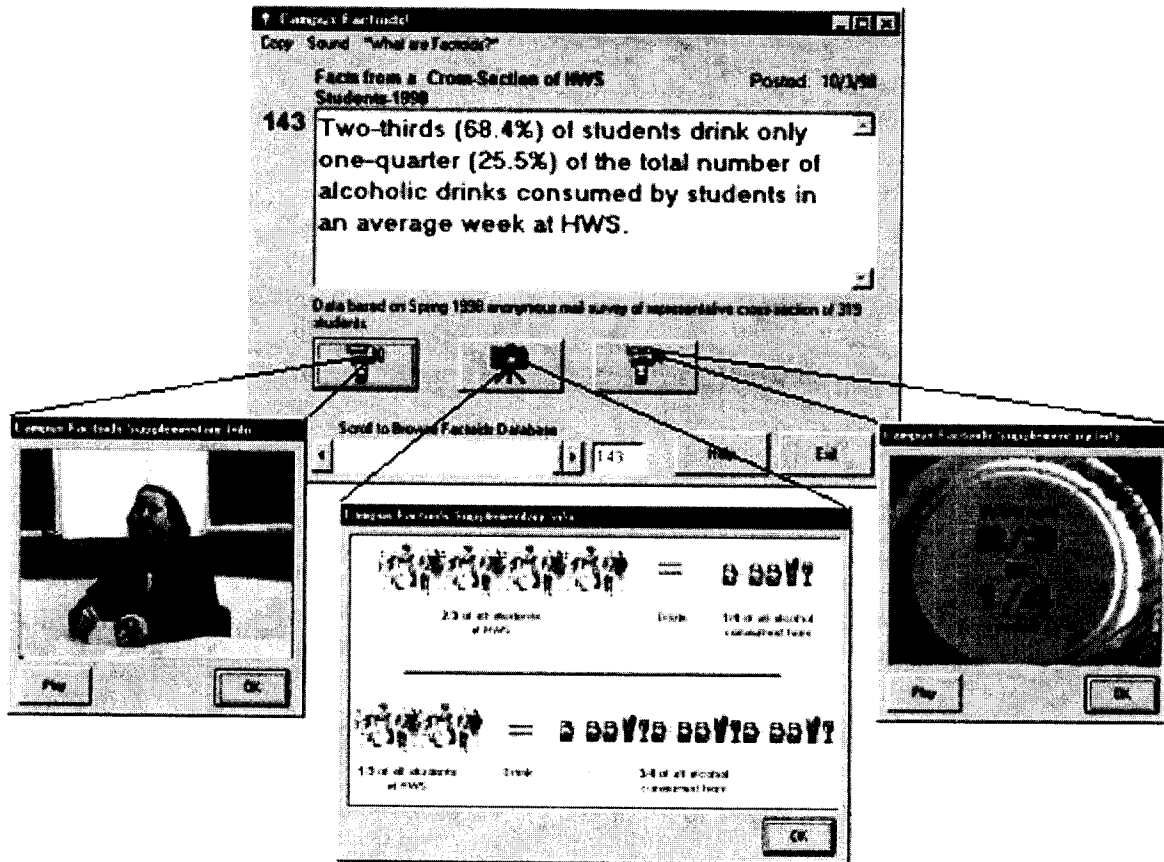
Collection of representative survey data on AOD attitudes, behaviors, problems, and perceived norms is a crucial element of the project in providing pretest or baseline assessments (for later post-test evaluation comparisons) and for determining actual norms to communicate to students with credible research. Sources of survey data being used in this project are the annual CIRP Freshman Survey administered to the entire incoming class at orientation every year (where AOD norm questions are added to the nationwide instrument), fall term surveys of entire introductory social science and science classes, exit surveys of all graduating seniors at graduation time, and periodic campus-wide mail surveys of a random cross-sectional sample during the spring term. Data from all of these surveys have been analyzed and used in orientation programs, in the media campaign to reduce misperceptions and in course material. Some of these survey data also provide for program evaluation (see section III).

Social Norms Media Campaign

Communication of accurate norms to the community has been accomplished through several different forms of media to expand the exposure beyond what any one medium can do. The HWS Project campaigns using print media, electronic media, and novelty media items are described below.

Print Media Campaign. AOD issues concerning student values and perceived norms have been introduced in print media using several approaches. Some of the strategies included letters to the editor of the campus newspaper by students in the model course, proactive social marketing posters and displays including locally produced "Silent Numbers" and "Reality Check" poster campaigns covering the entire campus (see the web site for some examples of posters introduced sequentially over several weeks), all designed to reduce misperceptions. In addition, a regular column entitled "Campus Factoids" was launched in the campus newspaper beginning January, 1997 that reported reliable facts about the student body on many issues and characteristics. Each release always included one or more AOD items about actual peer norms. Finally, nine large wall display cases were designed, purchased and installed throughout academic, student services, athletic and residential buildings on campus to specifically display campaign materials continuously in high exposure areas.

Electronic Media Campaign. The "Campus Factoids" initiative (initially introduced in the campus newspaper as described above) is preserved and continually updated in one large data base that students, faculty, and staff can access electronically through the campus computing and e-mail network. Thus, students can return to the information on student alcohol norms at any point while doing research, writing, or browsing on the micro computers on campus. Moreover, if they are browsing the factoid items they inevitably encounter AOD items (approximately one out of seven). This form of media campaign was further enhanced by building in graphic presentations and video clips in conjunction with many of the factoids. A static screen image of text, still picture, and video components is shown below and additional examples are available on the World Wide Web at <http://www.hws.edu/~alcohol/dvpphe>. Students in the Alcohol Use and Abuse course generated AOD information and created short video tape presentations with themselves as speakers. These "infolinks" were integrated into the online factoids throughout the term using computer and video technology provided, in part, by grant support. These online factoids were subsequently used in a multimedia orientation program presented for all of the new incoming students in Fall 1997 and 1998. Even greater attention and engagement with "Campus Factoids" was subsequently created by giving the user the capability of commenting on the factoids and



participating in an online campus discussion of the issues raised in "Campus Factoids". These strategies have added to the attention that this campaign receives among students. The exposure rate among students has already been substantial as reported in section III. (A prototype CD version of the multimedia version of Campus Factoids has been developed for demonstrations outside the Hobart and William Smith campus and for local site presentations in circumstances where a direct link to the campus computing network can not be made.)

The online "Campus Factoids" program requires the user to click on the icon to bring up the program and campus normative information. In order to further expand exposure to those not adventurous enough to click on the program icon, a screen saver has been designed that randomly broadcasts "Factoids" every 20 seconds to the screen after the computer has remained idle for a short period of time. This screen saver is now part of the standard software load that all campus laboratory and

office computers receive. Campus laboratories running this software are located in academic buildings across campus and in the library, many of which are available to students 24 hours a day.

The HWS Project Web site has been designed to serve two purposes. One purpose is to communicate to prevention specialists the content of the project program for dissemination. The other is to make resources broadly accessible for students and faculty, both locally and nationally, for learning more about alcohol related issues and to correct misperceptions about alcohol. An extensive annotated list of web sites that can serve as research or information sources are readily accessible. An extensive bibliography of books, journals and films that we have in the college library on alcohol and related topics are easily accessible. Poster media campaigns are also available so that students and faculty can see them again. Slides to various public social norms presentations can be viewed so that students and others can refer to the information presented in lectures delivered throughout the year.

Novelty Media Items. A number of items that contain short social normative slogans and that promote the program to correct misperceptions have been produced. Importantly, these are not items with singular messages for one event, but are support items for a number of Project activities. For example, mouse pads have been produced for campus computers to promote online "Campus Factoids." Footballs with the slogan "Four or Fewer" communicating the fact that the majority of seniors consume four or fewer drinks at social gatherings have been produced as prizes for the BAC booths that the students run. Frisbees with the slogan, " $2/3 = 1/4$," communicate the fact that $2/3$ of students consume only $1/4$ of the alcohol on campus. These items have been given as prizes or distributed during social activities and festivals. These were particularly successful in filling the air with accurate normative information. "Reality Check" posters have been reproduced on coffee mugs and distributed about campus. These items have been distributed to classes and as prizes at the BAC booths. Sport Cups reporting campus improvements reflected in declining drinking problems were produced and distributed free in the campus dining facility. Finally, fluorescent markers distributed after students completed surveys were printed with the phrase, "Thanks for taking the time to think about alcohol" to reinforce student awareness that subsequently reported data was actually based on them.

Curriculum Infusion

Model Interdisciplinary Course. "Alcohol Use and Abuse: Causes and Consequences," an interdisciplinary course taught by the project directors from social science and natural science perspectives, has been enhanced and continued through the HWS Project. This course examines the causes and consequences of alcohol use from the viewpoint that alcohol is a very potent drug both in terms of its chemical and social construction. This course brings students together for interdisciplinary study of this phenomenon by incorporating a variety of academic perspectives including biology, chemistry, social psychology, epidemiology, and sociology and by making extensive use of multimedia resources. It explores the effect of family, genetics, peers, ethnicity, and gender on drinking behavior along with the chemical properties and physiological effects of alcohol on the human body. Throughout the course actual and perceived drinking norms on campus and nationally are considered along with policy implications in student discussion.

Educational programs have been developed to share the course outcomes with the larger community. Among these, students participate in survey research of alcohol norms on campus, produce poster and video educational materials for the media campaign described below, and communicate key information from their research to the larger community by a mechanism of their own design. Students in the course have measured student BAC levels at campus social events and asked questions at the same time about participants' perceptions of BAC levels among student peers at that event. Free novelty media items were offered displaying accurate social norms information to any whose BAC registered below 0.08. The information collected at these events has been used in the media campaign and in the course to further reduce misperceptions of student alcohol use in social situations.

The course can be applied for course credit in Sociology and Public Policy majors and minors and is part of the American Commitments Program of the Association of American Colleges and Universities. It has been recognized nationally as a model for courses about substance use and abuse (syllabus on the world wide web at www.hws.edu/~alcohol/bd295).

Faculty Development Workshop. Faculty development workshops have been conducted to expand the introduction of alcohol issues in the curriculum beyond the model interdisciplinary course. To date, approximately 10% of the HWS faculty have participated and have introduced alcohol issues as examples and illustrations of concepts in their departmental and program courses. A detailed report of these activities can be found on the Project web site. Most recently, an alcohol module has been introduced into the college's evening research seminar series that will continue by popular demand.

Teacher Education Workshop. New York State requires alcohol and other drug training for secondary teacher certification. Given this curricular interest and the large number of students in the teacher certification program, a workshop has been offered to student teachers and their teacher partners and other interested secondary school staff on the biochemical, pharmacological, and sociological aspects of alcohol use among youth. These perspectives are integrated together in the final session of the workshop with a particular emphasis on norms misperception and its relationship to prevention programming and policy. For example, students frequently misperceive their peers' attitudes about school and government alcohol policies. These misperceptions may lead to a reduction in the effectiveness of policies in school settings. A participant list and detailed program is described in the Project web site.

Project Coalition Building Activities

One of the objectives of the HWS Project is to broaden the constituencies that are involved in prevention programming on campus beyond the traditional participants to enhance the potential of the social norms model.

Student Coalitions in college alcohol prevention programs. Students have been enlisted, in particular, in collecting data and in creating prevention programming content through their involvement in the model course as described above. Partnerships with other interested students have resulted in the establishment of a residential theme house, "Proof Positive," that devotes its programming efforts to supporting positive healthy lifestyles and responsible, respectful, and legal alcohol consumption. Finally,

the students in the model course have made presentations to residential groups on their research findings. These presentations are designed to correct misperceptions and myths concerning alcohol use and its consequences and in so doing increase the numbers of students that can speak correctly about campus alcohol norms.

Coalition with Other Programming Professionals. It is very important in a social norms program that consistent proactive messages be conveyed to students. Toward this end, the project directors have been invited to make social norms education presentations to the joint Deans staff, to the Athletic coaching staff that holds its own alcohol prevention seminars and workshops, and to parent association leaders. The project directors have presented the social norms model to these groups to assist them in their programming. In cooperation with the residential education staff, the project directors have also presented social norms information to residential groups in the evenings and over dinner as part of the residential education program. The most recent programming outcome from conversations with the joint Deans staff is an orientation program that presents the orientation survey results to the entering class during the orientation session to counter their expectations and misperceptions of college life, especially those concerning alcohol use.

County Wide Task Force Coalition. Most recently a partnership with the Seneca County Substance Abuse Task Force has been established. This multi-agency group is developing a county-wide coordinated youth alcohol prevention program. The project directors have been asked by this group to work with the four school districts in the county to implement a misperceptions reduction campaign at the high school and middle school levels modeled after the HWS Project. Students from the model course, student teachers in the school districts, and interns will participate in the development of these programs. Meetings with all of the school superintendents have occurred and they have each agreed to participate. This is a project that will be implemented as part of the improvement plan described below.

Dissemination of the HWS Project

Reports and resources from the HWS Project are already being disseminated within the higher

education community to inform and assist prevention professionals, faculty and students at other schools. An extensive set of resources related to this project has been placed on the World Wide Web (www.hws.edu/~alcohol). The web site log has recorded over 4100 visits since August of 1997. Some of the misperception reduction campaign materials developed to date have been demonstrated in workshops at National meetings devoted to higher education and prevention. Overviews of the interdisciplinary course on alcohol use and abuse and the Project's curricular infusion initiatives have also been presented at symposia over the last two years. (Power Point slide shows of these presentations are available on the web site). Project personnel are currently preparing a comprehensive paper describing Project activities supported by previous grant funds.

The project directors are serving as consultants to other colleges and universities as these institutions develop their own social norm projects (A list of conference presentations and consulting activities emanating from the HWS Project are provided at the Project web site). In addition, a growing number of institutions have expressed interest in visiting the HWS campus to see the project in operation. Most recently, a representative from Virginia Tech visited Hobart and William Smith Colleges to view the electronic media approach developed here.

PLAN TO MAINTAIN, IMPROVE, AND FURTHER EVALUATE THE PROGRAM

This proposal presents plans to continue the programming described above and to enhance and further evaluate the effectiveness of each of the HWS Project initiatives described below. Dr. Perkins and Dr. Craig will continue in their current roles as Project Director and Project Co-Director, respectively. Their professional time devoted to the project during the academic term and to teach the course on alcohol use and abuse will be provided by Hobart and William Smith Colleges. Some summer and workshop activity by the directors and the assistance by a one-half time technical assistant would be supported by the proposed grant. The Provost, Deans, and Athletic Directors are committed to continue administrative involvement supporting these initiatives.

Data Collection and Evaluation Improvements

Fall and spring survey administrations will be continued as described above and in section III. Survey questions to carefully assess exposure to content about alcohol norms among students that have participated in alcohol issue infused courses will be designed to better assess the degree to which curriculum infusion directly contributes to the correction of misperceived alcohol norms. In addition, funds from this project will make possible the systematic coding of security and residence hall data on alcohol and violence reports that have been delayed by limitations on staff time. Concerning the electronic media, record-keeping log files will also be enhanced to record more details about students logging into “Campus Factoids,” the web site, and other new electronic communications planned for development. New information will include items accessed, location accessed from, and time of day. These data will help us identify the periods and places of greatest use so that new materials can be introduced in a timely way to maximize their effectiveness across campus.

Curriculum Infusion Improvements

The model interdisciplinary course will be offered again in the spring term involving students in higher quality video production about social norms. In addition, a college faculty workshop will be offered during the December break. Armed now with evaluation data demonstrating significant project effects, the workshop leaders can provide an even greater emphasis on the development of strategies to reduce misperceptions in target courses. These strategies can be subsequently introduced in winter and spring term courses following the December workshop.

County-Wide School Coalition Development

A student teacher workshop will also be offered during the December break. One of the previous objectives of this Project initiative has been to involve college students and faculty in the teacher certification program in the collaborative development of a social norms program in local secondary schools. This workshop will train teams from each of the four Seneca County school districts composed

of a school administrator, faculty, and student along with HWS student teachers and/or interns working in that school. A college web-administered survey will be developed and used by college faculty and students for program assessment purposes and peer norms education in the schools. Implementation of the misperceptions program will commence during the Spring term in each of the schools and activities will be reported to students on campus to produce greater interest and student conversation at HWS about alcohol norms.

Electronic Media Improvements

A New multimedia program that showcases and organizes all of the project's electronic media thematically around particular alcohol issues (e.g., date rape, family violence, alcohol metabolism, etc), automated self-administered electronic surveys of alcohol norms, and communication of college peer norms will be developed while continuing with the intensive print and poster media campaigns. New multimedia clips will be produced and network data strategies developed for the new program during the academic year. In addition, we will develop text screens of "infolink" videos that can be displayed on demand by the hearing impaired so that they can read the spoken words as they view video presentations. Similarly, a "Campus Factoids" audiotape available in the library will be produced for the visually impaired. Development of these enhancements will take place throughout the year with final refinements and integration of new video materials will be completed over the summer.

In addition, the HWS Project web site will be restructured so that it is more user friendly. Resources will be updated and real-time demonstrations of the electronic media software we use in the social norms campaign will be produced for the web site.. The newly revised web site will support the model interdisciplinary course in the spring, provide web access to social norms information across campus, and serve as a mechanism of dissemination for the Project.

Project Dissemination Improvements.

While continuing with the dissemination activities described above the Project directors will 1)

deliver presentations of the Project at two national meetings such as the National Meeting on Alcohol and Other Drug and Violence Prevention in Higher Education and the National Meeting of the American College Health Association, 2) make three site visits to other colleges and universities from among several that have expressed interest in the project but could not afford a visit without grant support, and 3) host, at no cost, visitors from other institutions interested in observing the HWS Project in operation.

III. PROJECT EVALUATION AND EFFECTIVENESS

Although no one evaluation strategy for prevention programs in college populations can provide absolute definitive proof of specific program impact, the strongest evidence is likely to include: a) the use of multiple evaluation techniques, b) inclusion of longitudinal assessment strategies with pre- and post- intervention data, c) consistency in method of data collection over time (both measurement items and sampling techniques), d) selection of demographically representative samples reflecting target populations, e) reliable response rates in addition to sufficient sample sizes when surveying a target population, and f) rigorous statistical analyses that incorporate significance tests of sample differences and controls for demographic variation in comparison groups. All of these criteria are crucial components in the evaluation of the program effectiveness for the HWS project.

Three types supporting of data are presented here. First, data are presented from a cross-sectional mail survey of a sample representing the entire student body conducted in the Spring academic term before and again after intervention took place. Second, data are provided by a Fall term survey administered to students in introductory courses beginning before the introduction of Project initiatives and repeated each subsequent year. Third, data are drawn from senior exit surveys and from electronic login records used to monitor student exposure to Project media campaigns.

SPRING TERM CROSS-SECTIONAL SURVEYS

In the middle of Spring term 1995 an extensive survey of alcohol use was devised and conducted

by Project staff in collaboration with students in a course on alcohol use and abuse. The survey contained items devised by the Project Director and other national researchers that had been used in previous campus surveys at HWS and elsewhere along with questions developed by students in the course (see appendix). A random sample stratified for gender and class year was computer generated from the list of all students enrolled at HWS. Surveys were sent out and returned anonymously through campus mail. In addition, in order to cost-effectively enlarge the sample size and to engender greater interest in the survey among students in the course, students in the course distributed a survey (also returned anonymously with a separate response card) to a quota sample. Each student distributed surveys to students who had not received the survey in the random mail sample, one male and one female representing each class year. The data from the mail sample and the quota sample, when initially analyzed separately, revealed no significant differences on any of the measures of concern. Thus, for the purpose of evaluation these samples were pooled for a total of 232 cases that were highly representative of the student body as a whole in terms of academic and demographic characteristics.

The HWS Project formally began intervention activities in the late fall of 1996 as previously described. It is important to note that in the interim between the initial survey and the beginning of new Project interventions, no new alcohol education or prevention initiatives were undertaken by any campus constituency. Moreover, at the end of Spring term 1995 the Coordinator of Alcohol Prevention, whose formal administrative role was to coordinate ongoing alcohol prevention initiatives and develop new programs, left HWS to relocate in another area of the country. This position was not replaced at the time given the reorientation of program initiatives and strategies that were being planned through what ultimately began in late 1996 as the HWS project. Thus, the historical circumstance was the perfect time to test and evaluate a new strategy with minimal confounding effects of any other new program activities related to alcohol on campus. Any significant improvement with regard to campus alcohol use in subsequent years after the Project was initiated could be strongly linked to Project interventions.

In the middle of the Spring term 1998 (18 months after programming strategies began) another survey of alcohol use was devised (see appendix) and administered using all the same procedures as the

1995 survey. The content of the 1998 survey was again formulated with assistance of students in the Alcohol Use and Abuse course, retained all of the crucial items for comparison with 1995 data. Again a stratified random sample of the student body was selected to receive the anonymous survey and return it through campus mail. Again an additional quota sample was collected to match the procedures used in 1995. The 1998 survey produced 319 respondents that were academically and demographically representative of HWS students overall.

Comparing these methodologically comparable pre- and post-test data sets provides strong support for program impact. Students' perceptions of the norms for alcohol use had moved closer to the actual norms and problem drinking was significantly reduced over the time period. At the start of the program 84% of the student body expressed personal attitudes opposing frequent intoxication or intoxication that interfered with any responsibilities. Yet that normative attitude in opposition to drunkenness was correctly identified by only 48% of students. That is, 52% believed that support for frequent and problematic intoxication was the student norm. In the most recent survey, while the distribution of personal attitudes had not changed (most attitudes were not problematic to begin with and personal attitude change was not the focal target of the project), the percentage of students perceiving a permissive attitude as the norm among peers had dropped from 52% to 44% and perceptions of abstinence (i.e. students' estimates of the percentage who do not drink at all) doubled during the time period.

Most importantly, along with these lowered perceptions the frequent heavy drinking rate (5 or more drinks at a sitting within the week) dropped 12% from 56% to 44% -- and a 21% reduction in the rate of weekly "binge" drinkers. Students' estimates of the percentage of peers that binge drink at parties (the perceived norm) declined by 12% and their perceptions of binge drinking among close friends at parties declined by 11%. In turn, students' own binge drinking rates at parties declined by 9% since the beginning of the program. In short, more students started behaving in accordance with their already moderate attitudes and more of the highly permissive students started constraining their behavior in accordance with a more accurately perceived norm (i.e. a peer norm perceived as less permissive). Students' reports of drinking to get drunk declined 16% and drinking simply to break the ice in social

situations and to relieve anxieties declined by over 30% as perceptions became more moderate and took pressure off students to use alcohol for coping. The patterns of these statistically significant reductions hold in more detailed analyses controlling for gender and other demographic characteristics.

The intervention effects were even greater for several measures of students' reports of negative consequences due to drinking during the academic year. The pre/post rates of change in drinking problems (Table 1) are even larger reductions (all statistically significant at $p < .05$) than many of the other effects described above and can be understood as the result of the awareness of more moderate norms serving to socially constrain the most problematic drinkers who produce most of the damage.

Table 1.	Unprotected sexual activity	- 40%
	Property damage	- 36%
	Missing class	- 31%
	Inefficient in academic work	- 25%
	Memory loss from drinking	- 25%

FALL TERM INTRODUCTORY CLASS SURVEYS

Repeated administrations of The Campus Survey of Alcohol and Other Drug Norms provided a second source of evaluation data (see appendix). This instrument focuses heavily on students' perceived norms of peer alcohol use in a variety of circumstances and allows for extensive assessment of actual versus perceived alcohol use and attitudes. It was developed by the Core Institute with Dr. Perkins serving as the primary consultant in the design and pretesting phases. The proto types of the instrument had been pretested in HWS classes before using it to gather baseline and evaluation data.

The survey was administered in introductory courses in order to quickly achieve a very high response rate from students with diverse academic interests. Specifically, all introductory sociology and chemistry courses were selected because 1) they provided a broad spectrum of humanities, social science and natural science students, 2) each fall there were multiple sections of relatively large classes (large by small college standards), and 3) faculty cooperation was assured for access to every class in subsequent years. Although enrollment in the introductory courses predominantly represents first and second year students, this profile was of particular interest given that the first two years of college are a critical

juncture for the development of collegiate alcohol abuse and these initial years were heavily targeted in the programming implemented by the Project. (Also recall the spring term surveys already provided a cross-section of all four years.)

Surveys were administered during a one-month time span in the middle of the fall academic term. The first administration occurred in 1996 just before new Project initiatives at HWS were introduced. All of the students attending each of the selected classes responded to this voluntary and anonymous survey. Comparing the response (156 students) to enrollment lists indicated that in the five classes providing the baseline data (89% of students officially enrolled in the classes had been surveyed). In fall 1997 and 1998, students in all sections of the same courses were surveyed using the same instrument and procedures. Again all students in attendance participated (90% of the official enrollment) providing a total post-intervention sample of 274 respondents from nine classes over the two fall terms.

This fall term evaluation component in the post/intervention was an important complement to the spring cross-section data reports above because it served to indicate how quickly the misperceptions reduction campaign, when intensively delivered from the point of entering student orientation in 1997 onward, could begin to produce effects. (Recall that the survey was conducted in the first 4 to 8 weeks of the academic year and that most of the students were first and second year students.)

The resulting data showed differences between pre/post intervention samples as predicted with lowered perceptions of peer norm use of alcohol, less perception of permissive peer attitudes and less personal drinking behavior on virtually every survey item (see examples in Table 2).

These data, indeed, indicate that substantial and consistent reductions in average perceptions of peer drinking norms were produced in a fairly short time of program intervention for most students. Furthermore, declines in actual drinking behavior were associated with declines in perceptions. Even though (as theory predicts) perceived norms continue to be exaggerated relative to actual behavior, both have been moving in a more moderate direction as perceptions of drinking are scaled back.

Table 2.	Pre-test <u>1996</u>	Post-tests <u>1997-98</u>	Rate of <u>change</u>	<u>(p<)</u>
Perceived % of abstainers	14	23	+ 64%	(.001)
Perceived % of "binge" (5+) drinkers	70	55	- 21%	(.001)
Perceived Average student drinks at residence hall "get-together"	5.3	4.7	- 11%	(.10)
Perceived Friends' average drinks at party/bar	6.5	5.8	- 11%	(.05)
Perceived Males' average drinks at party/bar	8.5	7.7	- 8%	(.01)
Perceived Females' average drinks at party/bar	5.6	5.1	- 9%	(.01)
Perceived Athletes' average drinks at party/bar	6.6	5.8	- 12%	(.01)
Perceived Average drinks by all at party/bar	6.7	5.8	- 13%	(.001)
Actual Average drinks at residence hall "get-together"	3.9	3.2	- 18%	(.05)
Actual % drinking 5+ in a row weekly	47	39	- 17%	(.10)
Actual Average Drinks at party/bar	5.1	4.4	- 14%	(.05)

It is also important to note that these lowered perceptions and behaviors in the post-test sample can not be explained by some dramatic difference in entering cohorts of students between 1996 and 1998. The social background characteristics of students were quite similar across admission cohorts as revealed in analysis of CIRP survey data ("The Freshman Survey" administered nationally) collected from all entering students on the first day of arrival during orientation at this institution. Moreover, the response distribution on a survey item about personal attitudes in the fall introductory course surveys (where students were asked to indicate what level of drinking was appropriate from no consumption to frequent intoxication) were virtually identical in pre- and post-test cohorts. That the pre/post groups held the same attitudes about drinking, and thus suggesting the groups were not different in basic character is not counter to program impact. Recall that changing personal attitudes was not the fundamental goal of the approach because most students already are relatively moderate in their own attitudes. What was most problematic were the exaggerated perceptions of peer norms and the concomitant behaviors frequently associated with them. (In theory misperceptions push some students to drink in excess of their attitudes and allow other students with the most liberal attitudes to act out in accordance with those attitudes.) Students' perceptions of other students' attitudes based on the same response categories did reflect dramatic differences between the pre/post intervention samples. In 1996 45% of the sample erroneously

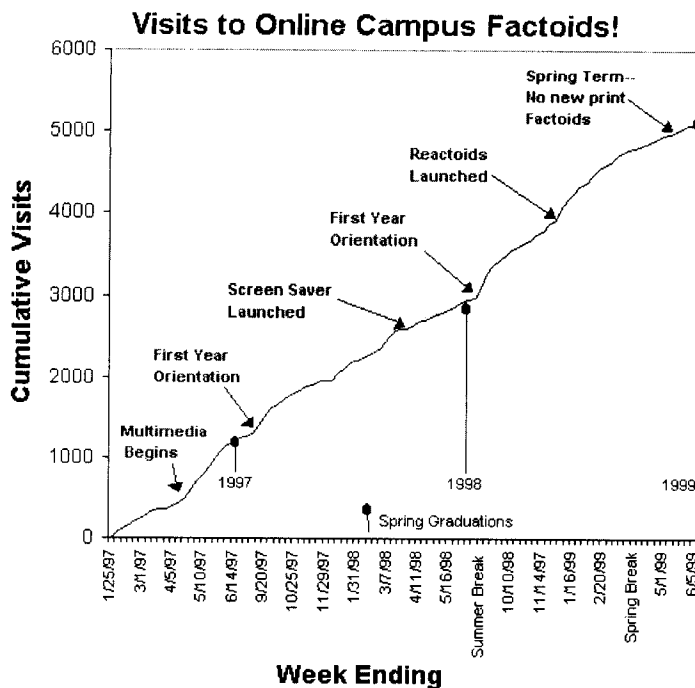
believed the most common attitudinal response of their peers in the survey would be that frequent intoxication and drinking affecting responsibilities was okay. (In reality, only 7% actually held this attitude personally in the pretest or post-test assessment.) In the 1997 and 1998 sample years, however, only 21% believed that other students would typically choose the most permissive attitude, thus representing reduction in the misperceived norm by more than half (significant at $p < .001$).

PROGRAM EXPOSURE DATA

Additional data were collected on student exposure to various project initiatives that further serve to support a connection between the program and perception/behavior change by showing that large numbers of students were being reached by Project initiatives during the intervention period when changes occurred. Monitoring of these data have also served to help shape the ongoing Project by informing Project staff about whether students are receiving certain forms of information and indicating when new initiatives might be valuable to promote student attention to the social norms campaign.

Each year since the Campus Factoids initiative was launched as a campus newspaper column and as an online electronic campaign, graduating seniors have been asked, as part of an exit survey administered to all seniors just before graduation, how often during their senior year they had read the column or logged into the electronic program. About three-quarters of the seniors had read Campus Factoids at least once in each class from 1997 through 1999 and about half had read it more than once during the immediate year. For the class of 1997 34% had logged into the online program during the last nine months. The figure grew to 44% for the next year's class of 1998 and to 61 % for the most recent class of 1999. About 25% of seniors over the last two years have used the online program multiple times within the year. The use of both print and electronic media served to both broaden and intensify exposure. For example, 80% of seniors in 1998 and 1999 had at least once read the column or logged online during their final year and 23% had done both multiple times during their final year.

By the end of Spring term 1999, Online Campus Factoids had been accessed and viewed a total of 5,096 times in the school with a population of approximately 1,800 students. A graph of the cumulative visits to Online Campus Factoids over the 2.5 years of its existence is shown in the figure. The effect of promotion activities and electronic program enhancements are reflected in the



boosted rate of which students accessed the online version of Campus Factoids. For example, in 1999 during the month immediately following an orientation presentation to entering students displaying the availability and example content of the Campus Factoids program, 401 visits were recorded.

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