

The San Diego State University Collegiate Alcohol Prevention Partnership (C-CAPP):

A Comprehensive, Science-Based Environmental Prevention Program

This proposal details a plan to enhance, further evaluate and disseminate San Diego State University's successful Community/Collegiate Alcohol Prevention Partnership (C-CAPP). Originally funded by the U.S. Department of Education in 1997, C-CAPP has developed and implemented a science-based, data driven alcohol prevention program that strategically works to change environmental conditions related to alcohol use and misuse within the college student population residing in San Diego. C-CAPP uses a town/gown coalition of students, community leaders, law enforcement representatives, business representatives (including bar owners), and researchers to develop, implement and evaluate environmental prevention strategies. The project meets the **Absolute Priority** for the Model Program Competition:

- 1) C-CAPP has been implemented for three full years.
- 2) C-CAPP has significantly reduced the frequency of heavy alcohol consumption at SDSU. In addition, the project has change several environmental factors related to alcohol use.
- 3) C-CAPP is a highly structured, innovative and carefully evaluated program. This proposal outlines a plan to enhance the project and further evaluate aspects of the program.
- 4) This proposal also outlines a plan to disseminate the C-CAPP prevention system to other IHEs through the development of a web page, reference manuals and scholarly journal articles.

(1) Significance: The C-CAPP Model (25 points)

A. Extent to Which Program is Innovative

C-CAPP is, to our knowledge, the only environmental alcohol prevention program targeting college students that is data driven, science-based and being rigorously evaluated. Drawing on research from community alcohol prevention trials (Holder et al., 1997), college

alcohol epidemiology (Wechsler et al., 2000, Presley et al., 2000; Johnson et al., 1998), and college alcohol prevention (DeJong et al., 1998; Perkins, 1997), C-CAPP developed a theoretically-based data collection system to guide the development of environmental prevention strategies. Based on research concerning the implementation of alcohol prevention efforts within a community setting (Treno and Holder, 1997) and organizational research concerning environmental complexity (Senge, 1990), we developed a town/gown coalition to help develop and implement environmental prevention strategies based on the extant scientific literature *and* the local data collected by our research team. As such, C-CAPP advances the college alcohol prevention field by: 1) using scientifically-based data and theory to guide and evaluate prevention efforts, 2) developing and testing environmental prevention strategies aimed at reducing alcohol problems among college students.

For the past three decades, the predominant mode of AOD prevention targeting young adults has been at the individual-level. As Treno and Holder (1997) noted such efforts typically included education, skills training, normative campaigns, or some combination of these strategies. Unfortunately, these approaches have not resulted in large reductions of AOD problems (Treno and Holder, 1997). Given the limited success of individually oriented prevention efforts, initial attempts have been made to expand the focus beyond the individual to include the environment. Such environmental approaches are based on community simulations studies (Holder and Blose, 1986), conceptual work (Holder and Giesbrecht, 1990), and more recently, community-based drunk driving prevention trials (Holder, Saltz, Grube, Voas, Gruenwald, and Treno, 1997).

Underlying this work are some common assumptions. First, the environmental approach to alcohol problems views the etiology of alcohol use as being complex and dynamic (Wallack and Holder 1987; Holder and Giesbrecht, 1990). That is, alcohol use is influenced by environmental conditions. In turn, alcohol use influences environmental conditions. Alcohol-related problems, similarly, have a reciprocal relationship with myriad environmental conditions

including the availability of alcohol, social norms, contexts of alcohol use, enforcement of formal laws regulating alcohol and the like.

Second, given the complexity of alcohol use and its attendant problems, preventive efforts must not focus solely on individuals. Although programs aimed at educating or training individuals can be part of a comprehensive prevention strategy, alone, they are insufficient. Given that environments are dynamic, incorporating numerous subsystems (e.g., legal system, health care system, alcohol industry, etc.), preventive efforts must be comprehensive and ongoing. Further, environmental alcohol problem prevention efforts must involve community members and representatives from specific sectors in the community. Such involvement helps provide support to preventive strategies like policy change, while helping to guard against the unintentional displacement of alcohol problems from one community sector to another.

Third, preventive efforts focusing on alcohol should be guided by current, reliable and valid epidemiological data. The interaction of multivariate problems with dynamic environments necessitates flexible prevention systems. Current organizational theory stresses the importance of environmental scanning, organizational flexibility, and information management for organizations to remain responsive to complex environmental conditions (Senge, 1990; Watkins and Marsick, 1993; Clapp, 1998).

Similar to the conceptualization of alcohol use and problems, organizations (and programs) must be conceptualized as complex systems that are both influenced by, and influence, their external environments (Senge, 1990). Given this reciprocal relationship, organizations must continually monitor their efforts as well as changes in their external environment. Such environmental scanning facilitates modification of programmatic activities, making them responsive to changing conditions. This is consistent with Saltz's (1988) suggestion that program planning should be integrated with program evaluation to create data-driven AOD prevention programs. As such, evaluation data is both formative and summative. That is, environmental indicators help shape program activities and they can be used to assess programmatic impacts.

This approach to alcohol prevention is especially promising when the complexity of student drinking is considered.

B. Extent to Which Program is Replicable

C-CAPP addresses each of these assumptions in a systematic way. We integrate science, state of the art program planning, and community collaboration in a highly adaptive and effective program model. One key aspect of the C-CAPP model is that it can be readily adapted to other IHEs. Moreover, because C-CAPP is a prevention system rather than a prevention strategy, it will meet the unique environmental alcohol context of any IHE in which the system is implemented (see section 2 below).

C. Extent to Which Program Results & Information Will be Disseminated

Information concerning C-CAPP is currently disseminated in several ways. First, we have published several papers using data collected in our ongoing research (Clapp, Shillington and Segars, 2000; Clapp and McDonnell, 2000; Clapp, Shillington and Heidt, 2000; Clapp and Shillington, in-press; Shillington and Clapp, in-press). We have also published a conceptual paper outlining the C-CAPP program model (Clapp, Segars, and Voas, in-press). In addition, our project staff make several presentations to professional audiences each year concerning the project. Should we be funded, we will continue and expand these efforts in the following ways:

- Continued publication of research papers documenting the efficacy of C-CAPP strategies.
- Develop a web-site that will allow other IHEs to download technical information and “how to” advice based on our C-CAPP Model.
- Develop and disseminate a comprehensive manual that will instruct IHEs how to implement the C-CAPP model in their own campus community. (This dissemination plan comprises about 15% of our requested budget. See budget narrative).

Each of these strategies is detailed in section 2D, below.

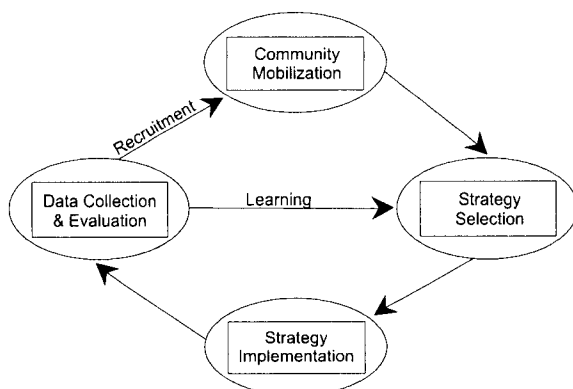
(2) Quality of Program Design (40 points)

To effectively identify and monitor key indicators in the social environment, programs must specify a coherent and conceptually sound model of community alcohol problems. Such models must cut across all the spheres of influence noted above (Holder and Blose, 1986; Holder and Giesbrecht, 1990; Giesbrecht et al., 1993; Segars, 1990). Given that students seldom drink solely on campus, alcohol consumption and alcohol problems can occur in a variety of contexts including campus environments and community settings. Each of these settings may vary in the level of control IHE officials can assert over students. The C-CAPP model identifies subsystems of interest within the IHE context that contribute to alcohol-related problems and is grounded in literature exploring the etiology and epidemiology of community alcohol problems and provide conceptual approaches for addressing such problems. The subsystems within our model include: norms, formal regulation and control, retail sales and availability, alcohol promotion and high-risk contexts of use (See figure 1). Within the C-CAPP model, these aspects of the alcohol-related environment are monitored at regular intervals using systematic research methodologies. This ongoing process helps insure program strategies are responsive to environmental conditions and student needs that are dynamic. Each sector is detailed below.

A. Extent Model Reflects Current Knowledge

Norms: Within this model, social norms are conceptualized as the “acceptable” drinking patterns and behaviors within the population (Perkins, 1997). Perkins and Wechsler suggested “that perceiving a permissive environment encourages students to drink more heavily than they otherwise would based on their personal attitudes” (1996, p.961). Thus, norms are seen as developing from the variety of formal messages that are given to students concerning what is acceptable. Misperceptions of alcohol consumption norms in which students over-estimate the actual norm are positively associated with consumption (Perkins and Wechsler, 1996). Perceptions of norms are commonly measured through student self-report of “typical” student drinking behavior (Perkins, 1997; Haines and Spear, 1996). However, what is considered

Figure 1. Learning System Program Model



acceptable drinking behavior can be measured through a variety of indirect sources. Other indicators of permissiveness of the environment might include formal messages such as discussions and findings of campus units such as student council or administrative committee agendas, student newspaper articles, or student organization activities.

Social norms influence formal regulation and control. Conceptually, permissive norms are associated with less regulation and control. Permissive norms also are positively related to alcohol consumption. Conversely, restrictive norms are related with less consumption (Perkins and Wechsler, 1996) and greater formal regulation and control. We measure social norms via student surveys.

Formal Regulation and Control: Formal regulation and control encompass regulations, policies and enforcement related to campus alcohol sales and consumption (Mosher and Jernigan, 1989). This sector represents the legal methods used to control behavior.

Formal regulations and their implementation are observed in the actual legal regulations incorporated in various official records. Indicators of enforcement can be found in quantitative and qualitative measures of incidents and their adjudication. Sanctions imposed represent an

indicator of the implementation of these regulations. At SDSU, we collect alcohol incident data from resident halls and campus police each semester.

As noted above, this subsystem is influenced by and influences social norms. The impact of policies, their enforcement, and responsiveness to changes in the environment are all of interest within this sector.

Alcohol Promotion: Alcohol promotion is defined as alcohol-related promotions and advertising occurring on campus or specifically targeting college students. Breed, Wallack, and Grube (1990) and Ryan and Mosher (1991) have documented such promotion. For instance, in a national study, Breed and associates found that alcohol advertising was much more prevalent in college papers than advertising for books or soft drinks. Local, on-sale establishments (i.e., bars and restaurants) accounted for a large proportion of such advertising. Other forms of promotion included sponsorship of university events by the alcohol industry, flyers and handbills promoting alcohol-related events and parties (both private and bar sponsored), alcohol ads on billboards on or near campus, and the like (Ryan and Mosher, 1991). Although the causal relationship between advertising and drinking behavior is not firmly established, relational studies (Atkin, Neuendorf, McDermott, 1983; Grube and Wallack, 1994) have found that exposure to advertising is related to some high-risk drinking behaviors and intentions to drink. Within our model, alcohol promotion is viewed as being a positive correlate to alcohol consumption and permissive social norms regarding alcohol use.

Alcohol promotion can be measured in several ways. The C-CAPP model uses content analyses of student newspapers and public access bulletin boards to assess alcohol promotion on campus. Such content analyses focus on the price of alcohol being advertised, high-risk promotions (e.g., wet t-shirt contests, bladder busters, etc.), stories about alcohol incidents, as well as stories concerning prevention programs. At the institutional level, the amount of money received annually by the university from the alcohol industry is also a key indicator.

Retail Sales and Availability: Retail sales and availability encompasses the number and density of alcohol outlets on the campus, in the campus area, and in other geographic areas frequented by students. Myriad policies and regulations including ABC laws, university regulations, state and federal laws, and in some cases, international laws (Voas, Lange, Lauer, 1998) influence this subsystem. Retail sales and availability influence alcohol consumption. That is, alcohol consumption is related to the sales and availability of alcohol, net of other theoretical predictors (Gruenewald, Ponicki, Holder, 1993). Chaloupka and Wechsler (1996) found that self-reported availability was strongly related to underage drinking and binge drinking among both sexes. Interestingly, “greater sales of alcohol stimulate more alcohol outlets per capita” (Gruenewald, Madden, and Janes, 1992). Thus, sales and availability are portrayed in the model as influencing, and being influenced by, alcohol consumption.

The price of beverages is also of interest within the retail sales and availability subsystem. Research by Coate and Grossman (1988) found that price controls tend to have the biggest effects on young heavy drinkers. In a study using a national data set of college students, Chaloupka and Wechsler (1996) found that increases in beer prices resulted in lower rates of binge drinking and underage drinking among women but not men. Thus, price promotions that discount alcoholic beverages are of particular interest within the C-CAPP model, as are price controls. Finally, in this subsystem alcohol service practices in on sale outlets are of concern. Serving intoxicated patrons, failing to provide food with alcohol, serving alcohol to minors, overcrowding, and allowing intoxicated patrons to drive home all can be conceptualized as unsafe serving practices (Saltz, 1989). As such, these practices are conceptualized as contributing to heavy alcohol consumption and/or high-risk contexts of use.

To measure of retail sales and availability C-CAPP monitors the number and type of alcohol outlets near the campus (or in areas that students frequent), the price of alcohol at establishments targeting college students, and the number of ABC violations on or near campus.

In addition, we regularly conduct responsible beverage risk assessments can be conducted regularly at campus bars (Novak, 1998).

Contexts of Use: Closely related to retail sales and availability and formal regulation and control are high-risk contexts of alcohol use. High-risk contexts of use can be defined in several ways (see Jessor, 1982). In the C-CAPP model drinking contexts represent social, temporal and physical characteristics of drinking events including, group composition, duration, location, protective factors and risk factors (Clapp, Shillington, and Segars, 2000; Clapp and Shillington, in-press). Increased sales and availability can lead to high-risk contexts. Similarly, increased enforcement of alcohol laws and regulations might be associated with unintended increases in high-risk contexts (e.g., shifting drinking from controlled to uncontrolled settings) or intended decreases in high-risk contexts (e.g., reducing drinking at the beach, etc.). In turn, high-risk contexts lead to heavy consumption and alcohol-related problems (Clapp et al., 2000).

Protective factors associated with drinking contexts include the availability of food at drinking events, and having roommates or close friends present. Risk factors include having illicit drugs available and playing drinking games (for males) (Clapp et al. 2000).

To assess contexts, C-CAPP queries students, via random telephone interviews, about their typical contexts or their last drinking occasion. Several survey studies have used this approach (Hilton, 1989, Harford, 1979, Clapp et al., 2000). Besides surveys, high-risk drinking contexts can be identified through social indicators such as arrest data and campus incidents reports.

Alcohol Consumption & Alcohol-Related Problems: These two subsystems are closely related. Within our model, consumption drives problems. In this model, heavier consumption is associated with higher problem levels. Consumption can be conceptualized in terms of quantity-frequency and quantity-frequency-variability typologies. In addition, heavy episodic drinking can be conceptualized as a form of consumption. As noted in Figure 1, several subsystems directly and indirectly influence consumption.

Alcohol-related problems are conceptualized as heavy episodic drinking (binge drinking), self-reported problems, alcohol-related arrests and incidents, intoxication and the like.

We measure alcohol use among our college students through random telephone interviews and BAC sidewalk surveys (see section 3). As noted above, our survey data has been published in several scholarly journals (Clapp, Shillington and Segars, 2000; Clapp and Shillington, in-press; Shillington and Clapp, in-press; Clapp, Shillington and Heidt, 2000; Clapp and McDonnell, 2000).

Health and Human Services

Within our model, the health and human services subsystem is viewed as being impacted by alcohol consumption and alcohol problems. This subsystem also influences such problems by coordinating and implementing the efforts described in the other subsystems.

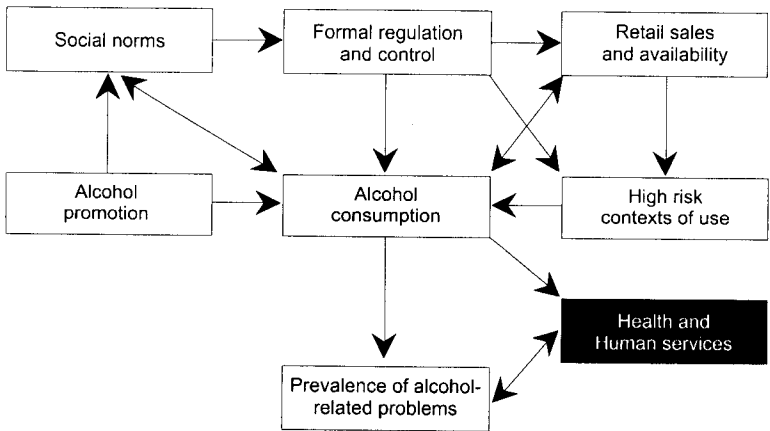
From Data to Action

Similar to the need to monitor the social environment, the complexity of college alcohol problems necessitates working with key stakeholders in the greater community. Coalitions have become the intervention of choice to reduce community risk factors associated with alcohol and other drug problems. By the early 1990s, there were some 2000 community-based coalitions in the United States with the goal of preventing AOD problems (Hawkins, Catalano, & associates, 1992; Falco, 1992). As Fawcett and associates (1997, p.813) note, “Coalitions are catalysts: They attempt to change the programs, policies, and practices of sectors of the community that contribute to the abuse of alcohol, tobacco and other drugs.” As such, coalitions are a key environmental strategy in any comprehensive effort to impact AOD problems at the community level (DeJong et al., 1998).

C-CAPP has developed a comprehensive coalition of key stakeholders to help formulate and implement environmental alcohol prevention strategies. C-CAPP members represent every major university in San Diego, local and state law enforcement and regulatory agencies, student groups, community groups, businesses (including bars), student affairs personnel among others.

In our regular (bi-monthly meetings), C-CAPP staff present data to the coalition members and leadership in a user friendly format. In addition, we present empirically supported prevention strategies to address the issues identified in the data. C-CAPP coalition members then help select and implement strategies (see figure 2 and table 1).

Figure 2. Community Sectors Important to College Drinking



Coalition leadership includes a bar owner, a community resident and a university vice president. To facilitate the implementation of interventions, C-CAPP structured the coalition into three working task groups: a safe and responsible party task group, a bar task group, and a law enforcement task group. Each of these groups is staffed by C-CAPP personnel and chaired by a coalition member. These groups meet as needed to develop and implement specific interventions. On average, 42 coalition members attend our general meetings.

Environmental Interventions

One key use of data is to focus prevention efforts on specific high-risk environmental factors. An example is the collection of alcohol advertisements on campus and in school papers. Research assistants document bars advertising price promotions under \$2.00 a drink during their weekly content analyses. This information is forwarded to our project coordinator and a member of the C-CAPP coalition who works in the hospitality industry. Together, the coordinator and the coalition member contact the high-risk bar and ask them to modify their advertising practices.

Table 1. Environmental Sectors, Prevention Strategies and Empirical Support

Subsystem(s) Targeted	Strategy	Empirical Support	Key Measures
<ul style="list-style-type: none"> Alcohol promotion 	<ul style="list-style-type: none"> Media advocacy/ policy changes university newspaper and bulletin boards 	Grube & Wallack (1994); Saffer (1991)	<ul style="list-style-type: none"> Number of alcohol ads in student paper and college bulletin boards
<ul style="list-style-type: none"> Social norms 	<ul style="list-style-type: none"> Norms campaign 	Haines (1996); Perkins & Wechsler (1996)	<ul style="list-style-type: none"> Perceive peer versus self-consumption
<ul style="list-style-type: none"> Formal regulation and control 	<ul style="list-style-type: none"> Community-based policing enforcement targeting private parties: Noise policies, etc. Resident hall policy development and enforcement Increase DUI enforcement—random breath testing and patrols Underage drinking interdiction (Cops and Shops)/ Decoy/ABC 	U.S. Bureau of Justice (1993); DeJong & Langenbahn (1996); Homel (1988); Wittman (1990); Altman et al. (1989)	<ul style="list-style-type: none"> Resident hall incident reports Campus police reports Police Department DWI and AR arrests police/ABC sting reports
<ul style="list-style-type: none"> Retail sales and availability 	<ul style="list-style-type: none"> RBS/server training: Campus pub and student-oriented bars 	**Saltz (1989); Erenberg & Hacker (1997)	<ul style="list-style-type: none"> Alcohol pricing on campus Risk assessment of campus and student bars Student survey high risk reports
<ul style="list-style-type: none"> High-risk contexts of use; formal regulation and control 	<ul style="list-style-type: none"> Policy changes at campus stadium and arena (RSB and price Increases; tailgate enforcement) Responsible party training: fraternities, general student population Server intervention 	Coate & Grossman (1988); Clapp et al. (in-press); DeJong & Langenbahn (1996); Voas, Lange, & Kelley Baker, (1998)	<ul style="list-style-type: none"> Place of last drink reports from DWI arrests and student surveys

The establishment is offered free responsible beverage service (RBS) training and invited to participate in C-CAPP.

Within the first three years of the project this process resulted in changes at 30 high-risk bars. Even in cases where the bar owner is not amenable to changing his or her policies, our data system and coalition are able to take action. For instance, one bar refused to change its \$ 1.00 a drink (no time limit) special. This bar regularly posted flyers advertising this promotion all over local campuses. Given that the bar is located over 25 miles away from all of San Diego's major universities, our coalition members felt this price promotion would lead to students driving drunk when returning from the bar to their respective campus. Using survey data from clients attending San Diego's DUI offender program, we were able to confirm that this bar was the last establishment visited by 21 students arrested for drunk driving in the past year. These data and the content analysis data related to the bar's advertising practices were given to law enforcement officials working with our coalition. The bar is now under investigation for violating their liquor license, including serving alcohol to minors.

Data concerning students' drinking contexts are an important source of information concerning specific environments requiring intervention. Using the items presented in the Campus Risk Assessment Guide (Ryan, Colthurst and Segars, 1994) as starting point, we developed a series of questions to assess students' last drinking event (or event where alcohol was consumed if the student is an abstainer). Based on analyses of the context items, we have been able to identify risk and protective factors related to heavy episodic drinking and alcohol-related problems. One key finding from our analyses was that students drank almost equally in bars/restaurants and private parties. This finding suggested that preventive efforts should target both settings. Using these survey data and the content analysis data described above, we identified several bars that cater to college students throughout the San Diego region. Based on this information, during the first six months of the project our coordinator and selected members of the C-CAPP coalition trained **286** bartenders and alcohol servers working at **30** different bars

commonly frequented by college students. We are currently on pace to train **500** alcohol servers representing **50** bars and nightclubs this year. To evaluate this strategy we will monitor our context survey data (which asks students to name specific bars) and our research staff will monitor these bars on a regular basis.

Our bar task group also developed a strategy to address heavy drinking in private parties. Analyses of the drinking context data indicated that the presence of illicit drugs, playing drinking games, drinking beer, and having several people intoxicated were all environmental risk factors for alcohol problems (Clapp et al., 2000 and Clapp and Shillington, in-press). In contrast, having food and non-alcoholic beverages available were environmental factors that protected against alcohol problems and heavy episodic drinking. Using these data and student input, we developed a door hanger and other materials with tips on how to host a safe party that was distributed to students throughout the San Diego region (**20,000**). One side of the door hanger also informs students about laws related to underage drinking and a San Diego Police Department program that allows police to restrict addresses that have been named in two noise complaints (in a month) from having any parties. To help the police promote the program, C-CAPP student members developed a story that was published in three campus newspapers.

Other C-CAPP environmental interventions include:

- Passing a policy requiring all alcohol servers working at SDSU be trained in RBS.
- Campus pub has adopted RBS practices including a ban on drink specials and advertising.
- Increased enforcement of alcohol laws and policies on campus: **ten** minor in possession undercover operations this year, **two** DUI checkpoints this year, University review of all alcohol policies (conducted by a task force appointed by the SDSU President), increased promotion of the SDPD noise ordinance (CAPP) noted above; **27** houses CAPPED.

In summary, C-CAPP is an innovative program, based on scholarly literature concerning community prevention. Knowledge generated through the rigorous evaluation of C-CAPP will contribute to the college prevention field by documenting an effective environmental prevention system.

B. Extent to Which Project Goals are Measurable

Based on our comprehensive data collection efforts, we have set the following measurable goals and objectives for the project:

Project Goals and Objects:

- 1) By implementing the community systems model described above, C-CAPP will:
 - Reduce *alcohol promotion* on the San Diego State University (SDSU) campus
 - Increase the accuracy of student assessment of *social norms*
 - Extend and increase the enforcement of *formal regulations and controls*
 - Reduce *retail sales and availability of alcohol* to SDSU students
 - Reduce SDSU student drinking in *high-risk contexts*
- 2) As a result of the above, C-CAPP hopes to:
 - Reduce heavy episodic drinking by SDSU students
 - Reduce alcohol-related problems involving SDSU students

C. Extent to Which Program is Responsive to Needs

As noted above, these goals are guided by theory and evaluated by a scientifically reliable and valid data collection system (i.e., a comprehensive and **on-going needs assessment**). Also, as noted above, virtually all the major SDSU stakeholders (students, public safety, health services, counseling services, faculty) are active participants in C-CAPP. C-CAPP works closely with SDSU administrators on developing and enhancing alcohol-related policies. For instance, C-CAPP began an institutional review process to examine SDSU's alcohol-related needs, policies and programs in 1998. This process resulted in the development of a campus task force, appointed by SDSU President Stephen Weber, to develop and recommend changes in SDSU's

alcohol programming and policies. Dr. Clapp, Principal Investigator and Project Director of C-CAPP, is a member of this task force and chairs the research and evaluation sub-committee.

As of this writing, President Weber is reviewing the final recommendations and will take action before 2001. It is highly likely that President Weber will establish an alcohol and other drug prevention director for the campus. President Weber was also recently appointed to a CSU system advisory group to examine system-wide alcohol policies. Finally, President Weber is co-chair of a regional group of IHE administrators and executives that is charged with developing regional environmental alcohol policies.

In summary, SDSU has a strong commitment to alcohol prevention issues, including enforcement (we have an extremely active community policing team). The C-CAPP approach empowers community members, students, faculty and administrators to work collaboratively to address alcohol problems and their causes in a scientifically sound manner.

D. Plan to Further Evaluate & Enhance Program

C-CAPP is currently funded through 2004 through grants from the National Institute of Alcoholism and Alcohol Abuse and the U.S. Department of Education. In addition, the SDSU Center on Substance Abuse has institutionalized a coordinator position for C-CAPP. One recommendation presented to President Weber (see above) was to institutionalize C-CAPP.

Should we be selected as a model program, we hope to undertake the following activities to strengthen our interventions, further evaluate the project and disseminate our results:

1. We will hire a half-time research associate who will conduct pre and post RBS training risk assessments at high-risk college bars. We currently assess high-risk bars periodically, however, we do not have the resources to formally evaluate the RBS trainings we provide at the bar level. This position will greatly enhance our evaluative efforts and generate data that will be useful to the college alcohol prevention field in general and C-CAPP

specifically. We anticipate that this new staff member will conduct between **5-8** risk assessments each week.

2. We will enhance our law enforcement intervention (formal regulation and control) to include **one** additional DUI checkpoint and **eight** undercover minor in possession operations. We will continue to publicize these operations in the school newspaper to increase the perception of risk associated with underage drinking. Dr. Clapp will oversee the implementation and tracking of these efforts.
3. A variety of different media will be used to disseminate the program. First, our web page will be updated and a link will be established to the Higher Education Center so it can get maximum exposure. Second a 150-200 page “how to manual” will be developed and distributed to IHEs across the country. Telephone and e-mail assistance will be offered. C-CAPP will also submit articles to scholarly journals as well as non-referred journals such as Prevention File and will present at national, state and local meetings.

The comprehensive, “Building Community-Building Consensus –The C-CAPP Way- An Environmental Prevention Manual “ will include the following components:

- A. Theories Behind C-CAPP
 - a. Community Systems Model
 - b. Program Learning Model
- B. The Development of Data Driven Interventions
 - a. The Development of a Research System
 - b. Student Polls-Using the C-CAPP Surveys
 - c. Environmental Scanning Instruments
 - d. Getting Through Human Subjects
 - e. Implementing and managing the data collection
- C. How the data are used
 - a. Analysis

- b. Planning Interventions based on data
 - c. Selecting Empirically-Based Strategies Based on Need
 - d. Evaluation and Modification of Interventions
- D. Developing a Collaborative-The Art and Science of Organizing
- a. The Theory Behind Consensus Organizing
 - b. Hiring the Right Staff
 - c. Recruiting Members and Key Stakeholders
 - d. How to Keep Members Engaged
 - e. Managing Conflict
 - f. Sharing Leadership
 - g. Managing Meetings
 - h. Coalition Structure—Task Forces and Subcommittees
- E. Implementing Environmental Interventions
- a. Responsible Beverage Service Training
 - b. Community Covenants Sponsored by the Responsible Hospitality Industry
 - c. Removal Of Binge Drinking Materials From Campus Outlets
 - d. Development of AOD Policies
 - i. Advertising in Campus Newspapers
 - ii. Signage on Campus
 - iii. Rules for On Campus Parties
 - iv. Tailgate and Other off campus university sponsored venues
 - e. Increased Law Enforcement
 - i. DUI Checkpoints
 - ii. Fake ID

- iii. Decoy Operations
- iv. Enforcement of City Ordinances. Noise Abatement;
No alcohol on beached or parks, no open containers,
etc.
- f. Social Marketing
 - i. Billboards, posters and the media
 - ii. Door hangers, community covenants and awards
 - iii. Handbooks, day timers and
 - iv. Getting the media involved
- F. Process Evaluation
 - a. Evaluation Methods
- G. Budgetary Concerns
- H. How To Reach Us
- I. Sample Forms

Table 2. Timeline and Responsibilities

Activity	Start Date	End Date	Responsible Staff
Pre and Post RBS Bar Assessments	10-00	10-01	Anzalone, Novak
DUI Check Point	11-00	11-00	SDSU Police
Undercover Minor in Possession Stings	10-00	10-01	SDSU Police, Clapp
Analysis of Risk Assessment Data	10-00	11-01	Clapp
Analysis of Minor in Possession Data	10-00	11-01	Clapp
Hire Webmaster	8-00	8-00	Clapp, Stanger
Develop Initial Website	8-00	10-00	Stanger, Clapp
Write Chapters 1 &2 "C-CAPP Manual"	9-00	9-00	Clapp, Stanger
Hire graphic artist	9-00	9-00	Stanger
Write research section of "C-CAPP Manual"	10-00	11-00	Clapp
Work with Graphic Artist on Graphics for manual and website	11-00	12-00	Stanger
Update website	12-00	1-00	Webmaster
Write intervention sections of C-CAPP Manual	1-01	3-01	Clapp, Stanger, Novak
Write Coalition Section of C-CAPP Manual	4-01	5-01	Clapp, Stanger, Novak
Upload new chapters to website	5-01	5-01	Webmaster
Finish Manual	6-01	7-01	Clapp, Stanger
Have manual Reviewed by experts	8-01	9-01	TBN
Print Manual & ship manual to IHES	10-01	10-01	Stanger
Continued scholarly Publications	8-00	10-01	Clapp

3. Quality of the Project Evaluation (35 points)

A. Extent to Which Evaluation is Appropriate

As stated above, C-CAPP engages in a comprehensive and ongoing environmental research program. Currently, C-CAPP's research and evaluation efforts include the following:

- A quasi-experimental time series evaluation design (New Mexico State University is the comparison school)
- Random telephone interviews with 800 SDSU each year
- Weekly content analysis of public access bulletin boards at SDSU
- Daily content analysis of the SDSU school paper
- Collection of social indicator data (arrests, resident hall incidents, etc.)
- Random side walk interviews and blood alcohol tests of 2880 SDSU students each year
- A comprehensive process evaluation (both qualitative and quantitative)
- Random side walk interviews and BAC tests at the US/Mexico border

Many of these activities are funded as part of our NIAAA project and are still in the preliminary stages of implementation and analysis (see Appendix A for survey and data collection instruments). We have, however, been conducting regular telephone surveys with randomly selected SDSU students each year beginning in the spring of 1998 (about two months after C-CAPP was originally funded by the DOE). We will use these data to provide evidence concerning the efficacy of our program. It should be noted, however, that stronger evidence based on the expanded data collection efforts noted above will be forthcoming as the project progresses.

Methods

A university-based social science research laboratory administered approximately 400 telephone interviews with randomly selected undergraduate students each semester. Given the size of the population at SDSU (N=24,000), this sample size allows for a 95% level of confidence ($\pm 5.0\%$) when estimating population parameters. Confirmed students refusing to participate in

the study (typically about 5.0% of all contacted students) are randomly replaced. The average interview takes about minutes to complete (sd=6.0 minutes).

Instrument

An original interview schedule was developed for this study. The instrument included several items from the short form of the Core Survey (Presely et al., 1995) including measures of AOD use and related problems. Presely and associates (1995) established the psychometric properties of the Core. In addition to the standard questions taken from the Core Survey, a series of questions concerning alcohol promotion were added to the survey. The interview protocol also included several items measuring contexts of student drinking (see Clapp, Shillington and Segars, 2000). Several of the context items were drawn from the College Alcohol Risk Assessment Guide (Ryan, Colthurst, and Segars, 1994), and were used in the study by Clapp et al. (2000). Finally, several original drinking context items were included in the interview schedule. The interview protocol was pilot tested and used in an earlier telephone survey in 1998.

Measures

Heavy episodic drinking: The dependent measure used in this study concerned whether a drinking event was a heavy episodic event. Consistent with Johnston, O'Malley and Bachman (1998) and Presley et al. (1995) we defined heavy episodic drinking as five or more drinks in a single setting. A drink was defined as one beer, one glass of wine, one mixed drink, or one shot of spirits.

B. Evidence of C-CAPP's Effectiveness

A one-way analysis of variance tests was computed to assess the changes across project years for the mean number of times students reported binge drinking in the past two weeks prior to being surveyed. Results of this analysis indicated a significant difference between project years ($F=4.3$, $df=2$, 798 , $p<.01$). A post hoc Bonferroni test determined that the mean number of times students who drank reported binge drinking significantly decreased between spring 1998

(m=1.3, sd=2.3) and spring 2000 (m=.90, sd=1.5). Thus, over the brief duration of our activities, we have decreased the frequency of heavy episodic drinking on our campus.

It is important to note that the prevalence rate for binge drinking at SDSU is already considerably under the national average. As illustrated in Table 3, in 1998 and 1999 the overall binge drinking prevalence rate for SDSU was approximately 27%. This rate decreased to about 25% in 2000. This rate is considerably lower than the national average of 44% prevalence of binge drinking (Wechsler et al. 2000). As C-CAPP continues its efforts, we expect to see a continued decrease in this rate.

Table 3. SDSU Self-Report Alcohol Use Trends:1998-2000

	1998 (n=403)	1999 (n=409)	2000 (n=401)	% Change 1998-2000
Binge Drinking (Two week population prevalence)	27.0 %	27.1%	24.9%	-2.1%
Binge Drinking (Two week drinker prevalence)	42.1%	40.7%	37.2%	-3.9%

Notes: 1998-2000 C-CAPP Telephone Survey Data

Summary

C-CAPP is an innovative, data-driven and science-based, environmental alcohol prevention program targeting college students. In its short history the program has made numerous environmental changes related to alcohol use in the San Diego region including increased law enforcement and responsible beverage training and service policy changes at numerous bars and nightclubs. These changes have led to a reduction in the frequency of heavy drinking at SDSU. In addition, they have helped SDSU maintain a binge drinking prevalence rate that is considerably lower than the national average.

C-CAPP represents a prevention model or system that is adaptable by other IHEs. Through professional presentations and scholarly publications, we have disseminated some of our data and programmatic approaches. Should we be funded, we will expand this dissemination through the development of a comprehensive “how to manual” and a website. In addition, we will enhance

the evaluation component of the project by doing pre and post RBS risk assessments with high-risk bars in the San Diego region.

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