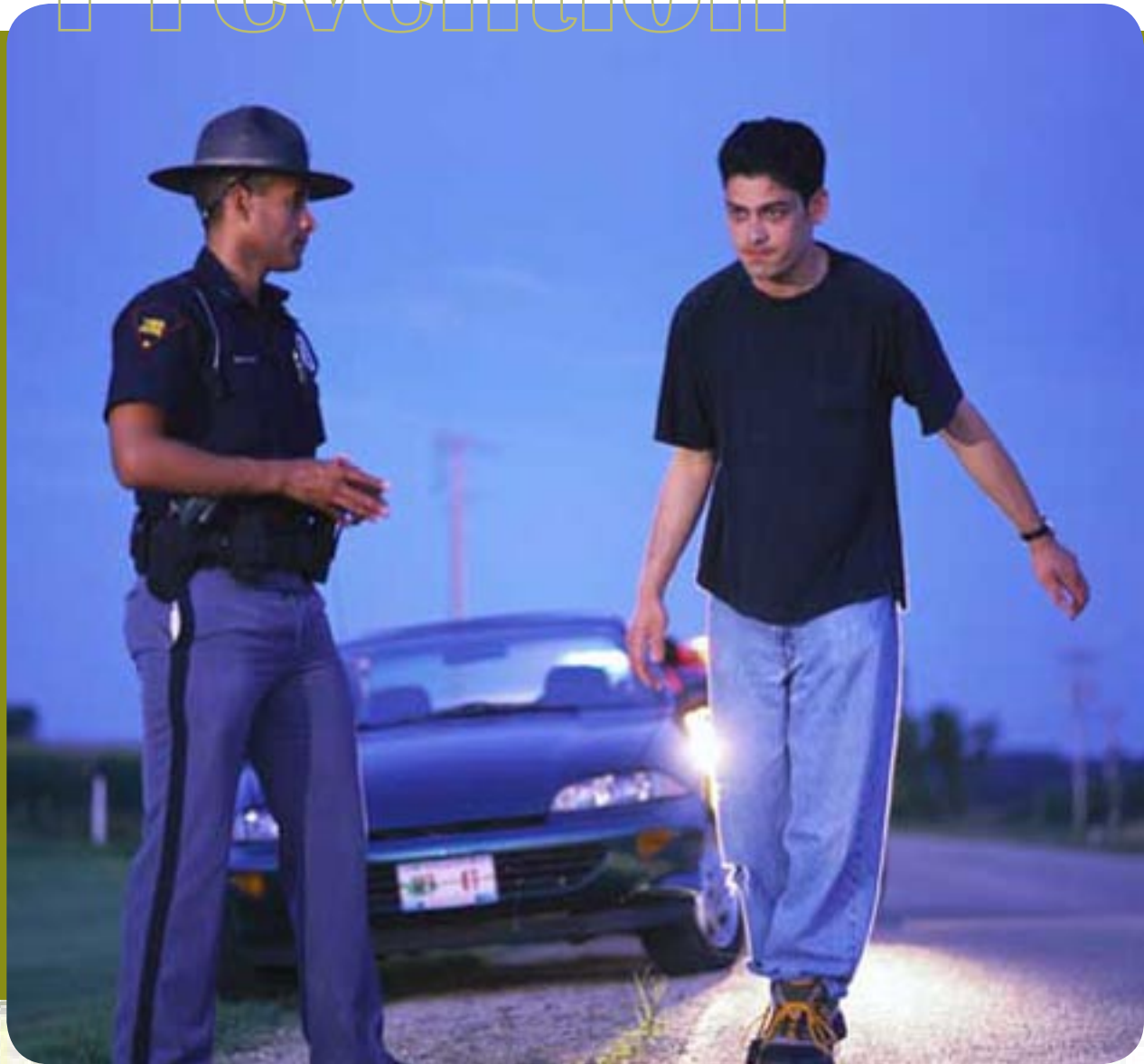


Environmental Prevention

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Technical Assistance Research Publication

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Introduction

The purpose of this publication is to provide an introduction to the use of environmental prevention strategies in the reduction of alcohol-related problems. Environmental prevention is a systems approach designed to change structures and community norms that facilitate underage and hazardous drinking. This paper provides an overview of research on environmental prevention, discusses the key elements of an environmental prevention model, and provides information on planning and additional resources to apply these strategies at the community level.

Background: Underage and Binge Drinking in the United States

Alcohol is by far the most widely used psychoactive substance in the United States. This is true for both adults and adolescents, even though the minimum legal age for drinking is 21 in all states (Institute of Medicine, 2002:319).

The Substance Abuse and Mental Health Services Administration (SAMHSA) estimates that 21.6 million Americans in 2003 were classified with substance dependence or abuse (9.1 percent of the total population aged 12 or older). Of these, 14.8 million were dependent on or abused alcohol and an additional 3.1 million were dependent on or abused both alcohol and illicit drugs.

The 2003 National Survey on Drug Use and Health (NSDUH) reports that in the 30 days prior to the survey, 50.1 percent of persons aged 12 or older or 119 million individuals were current¹ drinkers, 22.6% or 54 million were binge² drinkers, and 6.8% or 16.1 million heavy³ drinkers. About 10.9 million persons aged 12 to 20 reported drinking alcohol in the month prior to the survey interview (29.0 percent of this age group). Nearly 7.2 million (19.2 percent) were binge drinkers and 2.3 million (6.1 percent) were heavy drinkers. The highest prevalence of binge and heavy drinking in 2003 was for young adults aged 18 to 25, with the peak rate of both measures occurring at age 21. The rate of binge drinking was 41.6 percent for young adults aged 18 to 25 and 47.8 percent at age 21. Heavy alcohol use was reported by 15.1 percent of persons aged 18 to 25 and by 18.7 percent of persons aged 21 (Office of Applied Studies, 2004).

The Monitoring the Future Survey (MTF) tracks youth substance use through an annual survey conducted in schools. Findings from the 2003 survey show that substantial numbers of youth not only use alcohol but also binge drink, even in their early teens.

¹ Current use—At least one drink in the past 30 days (includes binge and heavy use).

² Binge use—Five or more drinks on the same occasion at least once in the past 30 days (includes heavy use).

³ Heavy use—Five or more drinks on the same occasion on at least five different days in the past 30 days.



One-fifth of 8th graders, 35% of 10th graders, and 48% of 12th graders used alcohol in the last 30 days; 12% of 8th graders, 22% of 10th graders, and 28% of 12th graders reported engaging in binge/ episodic heavy drinking, that is five plus drinks per occasion in the last two weeks before the survey (Johnston et al., 2004).

The Centers for Disease Control, Morbidity and Mortality Weekly Report (September 24, 2004) states that in 2001, excessive alcohol consumption was responsible for over 75,000 preventable deaths, making it the third leading preventable cause of death in the United States. The report's authors defined alcohol-attributed injury death, using a higher BAC level (≥ 0.10) than that used by the National Institute on Alcohol Abuse and Alcoholism (NIAAA) to define binge drinking (≥ 0.08) with the result that all of the injury deaths could be attributed to binge drinking. Over half of the alcohol-attributable deaths (AAD) resulted from acute conditions, approximately one-third of those from motor vehicle accidents.

The 2003 NSDUH reports an estimated 13.6 percent of persons aged 12 or older drove under the influence of alcohol at least once in the 12 months prior to the interview. This percentage represents 32.3 million persons (Office of Applied Studies, 2004). Alcohol consumption has other adverse consequences for individuals including injuries and accidents, unplanned or unprotected sex or other risky sexual behavior, fights, sexual assault, or date rape, and other violence. Alcohol contributes to homicides and suicides. Youth particularly experience damage to their physical, cognitive, and social development.

Alcohol problems are not limited to the individual but have an enormous impact on the community. The latest government report estimates that the cost of alcohol abuse to the nation is \$184.6 billion (Harwood, 1998:5). These costs include health care costs due to alcohol-related illnesses, loss of productivity, prevention and treatment costs, criminal justice costs, and social welfare costs as well as losses due to alcohol-related crime, fires, and motor vehicle accidents. The role of alcohol in contributing to increased crime, vandalism and property damage, trash and noise complaints translates into increased demands on police, medical/emergency, and other community services.

The Institute of Medicine report on underage drinking notes that alcohol use patterns have stabilized in the last several years and progress in reducing youth drinking, particularly heavy drinking and DUI, has not improved. Citing the high cost and prevalence of alcohol abuse and subsequent alcohol-related problems, the report suggests that policy regulatory approaches are more likely to produce substantive changes in both youth and adult drinking patterns (IOM, 2002:30).

The California Department of Alcohol and Drug Programs (ADP) Strategic Planning Goal

Develop and maintain a comprehensive statewide prevention system to prevent and reduce ATOD, and to improve the health and safety of the citizens of California by:

1. Modifying social and economic norms, conditions, and adverse consequences resulting from ATOD availability, manufacturing, distribution, promotion, sales, and use; and
2. Effectively addressing at-risk and underserved populations and their environments.



The Environmental Approach to Preventing Underage and Binge Drinking

Since ancient times, societies have attempted to control alcohol manufacture, distribution, and consumption. Modern efforts date back to prohibition legislation in the early twentieth century. Though prohibition was repealed, the federal government and states continued to regulate alcohol, albeit less severely (Babor et al., 2003:4).

Meanwhile, the prevention field emphasized changing individual substance use behavior through public awareness campaigns, school health education, counseling, and treatment. The focus was on the individual accountability rather than shared community responsibility. However, these efforts were not sufficient or effective in addressing the social and cultural conditions in the community that facilitated or even encouraged unhealthy and unsafe behavior.

Environmental prevention concentrates on changing those community conditions that increase the risk for underage and binge drinking. These conditions fall into four basic categories:

- Price. Low taxes, price discounts on drinks, and sales all keep the price of alcohol low, encouraging heavy drinking and making alcohol easier for young people to afford.
- Access and availability. Underage drinkers report that alcohol is easy to get, whether they purchase it or an adult provides it to them. Alcohol is available in a wide variety of places in the community. Certain areas have a high density of off-sale and on-sale alcohol outlets (often in low income or ethnic minority neighborhoods or college areas). Off-sale outlets, where alcohol is consumed off the premises, include supermarkets, convenience stores, and gas stations. On-sale establishments refer to those places where alcohol is sold and consumed on the premises such as restaurants, bars, and nightclubs. Alcohol may also be sold and consumed at sports stadiums, concert and other entertainment venues, fairs, parades, festivals, recreational settings, and many other places – even laundromats in some communities. The time at which alcohol may be sold also affects availability; thus, some communities have determined whether to allow alcohol sales on Sundays and holidays or after certain hours.
- Advertising and promotion. Alcohol advertising is widespread through a wide variety of broadcast and print media. The Center on Alcohol Marketing and Youth (CAMY) reported that 298,054 alcohol ads aired on television alone in 2003. This number is nearly 90,000 more than two years earlier, partly due to increased airing of distilled liquor ads on cable television (2004). In addition, marketing practices target specific populations through magazine, television, radio and other media that appeal to them. CAMY reports that throughout 2003, alcohol companies placed 2,608 ads on the top 15 teen shows, which included shows such as *Fear Factor*, *Friends*, *Smallville* and *According to Jim* at a total cost of more than \$30 million.



- The entertainment media enhance social acceptability of alcohol and tobacco use, and frequently portray their use as more extensive than in reality. One study (ONDCP, 1999) which reviewed substance use in 200 of the most popular home video movie rentals reported that alcohol use appeared in 93% of the movies and tobacco in 89%; alcohol was used in 76 percent of G or PG movies, and in virtually all PG-13 (97 percent) and R-rated movies (94 percent).
- Sponsorship of sports, community festivals, and arts events is another vehicle for reaching various audiences. Advertising content glamorizes drinking and reinforces the concept of alcohol as intrinsic to social interaction. Advertisers use product placement in movies and television and music videos to promote their products by paying or offering products free of charge to be displayed. In the ONDCP media study, alcohol brand names were identified in 43 percent of the movies in which alcohol appeared, excluding movies set in the distant past; Budweiser was identified five times more often than any other brand.
- Community norms. Weak and/or unenforced laws and social norms that promote high consumption and minimize the risks associated with underage and abusive drinking treat youth drinking as a rite of passage, place a lower priority on enforcing alcohol policies, and equate socializing with alcohol consumption, often to excess. These are mixed messages and can severely undermine prevention efforts.

It should be clear that those who have a stake in the status quo already use public policy to protect their interests. For example, the beer industry opposes attempts to raise taxes on beer and even advocates for lower taxes. Advertisers use the First Amendment to resist controls on placement and content of ads as a violation of free speech. Alcohol industry lobbyists in California waged a successful campaign to allow alcohol to be sold in gas stations.

The community has the power to change these conditions through public policy. Environmental strategies focus on enactment and enforcement of laws, regulations, and policies to address these risk factors and change community conditions and norms. Examples of such policies include restricting or banning price discounts; licensing alcohol outlets; requiring server and retailer training; limiting placement of alcohol advertising near schools, churches, and day care centers; increasing the number of alcohol-free settings, events, and activities; community advocacy for stronger enforcement; and making prevention of hazardous drinking a high priority.

Despite perceptions that the public resists adding new laws or restrictions, there is a great deal of public support for alcohol policy strategies. The University of Minnesota's Alcohol Epidemiology Program conducted public opinion polls in 1997 and again in 2001 concerning public attitudes towards alcohol policies. They found that 29 out of the 33 policies included in the survey received high levels of support (over 50%). Respondents gave the most support (85% or more) to policies restricting public drinking, requiring training for servers (90%) and bar owners (89%), using tip lines to report illegal use and sales (88%), and penalizing adult providers (87%). Respondents also favored requiring alcohol servers to be of legal age (78%).

These findings are consistent with a 1997 Center for Science in the Public Interest (CSPI) poll regarding public attitudes concerning youth access to alcohol. This survey also found that the public gave high support to laws requiring beverage service training for owners (88%) and employees (89%), supported penalties for older persons who



gave alcohol to minors (83%), and using compliance checks to monitor sales to youth (66%).

Overview of Research on Policy Strategies

Over the years, there have been several studies attempting to summarize the state of research on the effectiveness of various strategies to control alcohol and reduce alcohol-related problems: studies on underage drinking (IOM, 2002), college binge drinking (NIAAA, 2002), and policy (Alcohol Epidemiology Program, 2000; Babor et al, 2003; SAMSHA, 1999). The reviews consistently report that the most effective strategies are alcohol taxes, the minimum legal drinking age, graduated licensing for novice drivers, zero tolerance laws for underage drinking and driving, and visible and vigorous enforcement of alcohol policies.

The most recent study (Babor et al, 2003:264-273) provides a “consumer’s guide” to policy strategies and interventions with ratings on scientific evidence of effectiveness, breadth of research, cross-cultural studies, and relative cost to implement and sustain. They also include the impact on three target groups: the general population, high-risk drinkers (e.g., adolescents or pregnant women), and harmful drinkers (those already beginning to experience alcohol-related problems). The review identifies ten policy options as “best practices.”

Table A. Alcohol: No Ordinary Commodity: Effective Policy Strategies

1. Minimum legal purchase age
2. Government monopoly of retail sales
3. Restrictions on hours or days of sale
4. Outlet density restrictions
5. Alcohol taxes
6. Sobriety check points
7. Lowered blood alcohol concentration (BAC) limits
8. Administrative license suspension
9. Graduated licensing for novice drivers
10. Brief interventions for hazardous drinkers



In sum, the strongest strategies that demonstrate reductions at the population level are availability restrictions, taxation, and enforcement. Conversely, the least effective strategies or interventions are education and public service messages which have been shown to have little impact on the population and though often easy to implement have a low "value-for-money" (Babor et al, 2003:270).

Treatment strategies have medium effectiveness and limited impact on drinking problem rates of the general population. Similarly, in terms of impact, Babor and his co-authors contend that on-premise policy strategies such as responsible beverage service have more limited public health impact because most drinking in developed countries does not occur in bars and restaurants. They also point out that effectiveness is dependent upon enforcement. Strategies with a low effectiveness rating include college student education, warning labels, voluntary codes of bar practice, promoting alcohol-free activities and events, and designated drivers and ride services (Ibid.270-271).

More research needs to be done on many of the policy options such as social host and server liability laws, advertising restrictions, designated driver programs, and the integration of multiple strategies. Babor et al note that alcohol policies rarely operate in isolation; local communities are more likely to succeed by restructuring the drinking environment through a comprehensive, community-based approach, which uses multiple strategies (2003:271).

Research on community mobilization to reduce underage drinking indicates that this can be an effective strategy, especially for communities that target community-level policies and practices.

Community-based prevention research points to the importance of broad efforts to reshape the physical, social, economic, and legal environment affecting alcohol use. Promising evidence suggests that coalitions can effectively address youth access to alcohol and high-risk behaviors associated with alcohol consumption (IOM, 2002:217).

SAMHSA has identified model programs that meet the following criteria: evidence-based, consistently produce positive outcomes, strongly implemented and evaluated, available for dissemination and will provide technical assistance. Model programs that use a community mobilization and environmental change strategy are *Border Binge Drinking Reduction Program*, *Communities Mobilizing for Change on Alcohol*, and *Community Trials Intervention to Reduce High Risk Drinking*. *Project Northland* uses a combination of environmental and individual-focused strategies (for more information, see www.modelprograms.samhsa.gov)

Components of an Environmental Prevention Model

The environmental prevention model is a systems approach that provides a framework for communities to create effective and sustainable change. Key elements of the environmental prevention model are community organizing, data collection and application, policy, media advocacy, and enforcement. This section provides information on how to use this model in program development and implementation.



Data

This component of the environmental prevention model focuses on the strategic use of data to identify the problem, develop strategy, plan and implement interventions, and monitor progress. Data collection and analysis should be ongoing throughout the project. Initial collection of data to establish baseline will be invaluable in measuring outcomes later, but as the project unfolds, you can use data to fine tune strategy, craft media messages, and support the rationale for policy options. Appendix A contains data customarily used in prevention planning and implementation. Depending on time and resources, other data that program developers can create or compile include:

- Key informant interview/focus group data. Local colleges, universities, or prevention professionals may be able to help with survey/interview design and analysis and conducting focus groups. Conducting key informant interviews is a good activity for coalition members. This helps build knowledge about the community and issues related to alcohol beverage service and provides insight into potential barriers. It is also a means to recruit key stakeholders.
- Media coverage of alcohol problems and solutions in the community. Assess the extent and quality of coverage relating to beverage sales and service practices. This information is important to collect as baseline. One of the outcomes is to change community norms regarding alcohol prevention and control strategies. Change in content as well as quantity of media coverage is a good indicator of community norms change.
- POLD (Place of Last Drink). The POLD is a questionnaire used in drinking driver programs to identify where the driver had his/her last drink before being arrested. An agency in your community may already collect these data—a good source may be a local hospitality council or substance abuse prevention agency. If they do not already collect POLD, they may be willing to help you collect this information.
- Public opinion polls. Polls are useful in assessing the public's perception of problems and support for various solutions. In addition to national polling, check whether other organizations in your community have conducted polls; for example, the Institute for Public Strategies has conducted a number of alcohol policy polls in San Diego County. Higher education institutions, especially social science departments or social research are also sources for polling data and assistance. See the Reference section for other sources of polling on alcohol policy issues that can be used to support your goals. While people tend to prefer local poll data, costs to collect it may be prohibitive. Good quality national polls can serve the same purpose in showing the extent of public support for various policies.

Community Organizing

The goal of community organizing is to develop capacity among the target population and community based organizations to effect positive change in their communities. Research studies show that community coalitions can be effective in addressing substance abuse. Coalitions serve several functions in bringing about community change. They increase credibility by involving key stakeholders and community opinion leaders. Coalition members bring different perspectives, skills, and access to various



community sectors and individuals who can help create change. Furthermore, having a broad-based community coalition counters concerns that a special interest group, one that does not truly represent the community, desires change. Community coalitions facilitate the adoption of changes in community norms.

In addition to enhancing credibility and access, community coalitions provide a wealth of talent and expertise that is invaluable in policy advocacy. Typically, coalition members include prevention and public health and medical professionals, youth, community-based organization members, public officials and law enforcement officers, members of the business, education, and faith communities, fire fighters, school and university faculty, staff and students, and military officials (in those communities with a military presence). It is imperative to ensure that the coalition reflects the ethnic and racial diversity in the community, is sensitive to cultural differences, and uses culturally appropriate communication strategies.

Policy Change

Policy development is the heart of environmental prevention. Policy covers a wide range of actions communities can take to control conditions of alcohol use. Policies may be government mandated or voluntary policies. Research shows that enforcing policies and holding people accountable are critical to ensuring that policies are effective. This section summarizes the variety of policy options available to communities.

Government or public policies

The degree to which communities can enact regulations or laws to control the distribution, sales, and consumption of alcohol varies from state to state. Some states expressly prohibit (preempt) local jurisdictions from regulating alcohol or imposing controls stricter than the state; e.g., licensing alcohol outlets or taxing alcoholic beverages. In these circumstances, many communities have turned to land use or zoning regulations as a means of local control over price, availability, and advertising of alcohol.

As noted above, price affects alcohol consumption. The premise is that lower alcohol prices encourage people to drink more and make alcohol more affordable to young people. Conversely, increasing the price of alcohol would discourage heavy and underage drinking. Clearly, policies to change price involve reversing practices that keep the price low by raising excise taxes, eliminating the tax exemption for advertising, and restricting or banning price promotions and discounts. Other strategies that increase the price of alcohol include establishing or increasing licensing fees for retailers and increasing infraction penalties for violations of alcohol laws and regulations.

Access and availability refer to the extent alcohol is readily available in the community and the ease with which adults and underage youth can obtain it either through commercial or social sources. To decrease access and availability, communities have enacted social host ordinances, beer keg registration, teen party ordinances, policies restricting alcohol in public places, regulated alcohol outlet density, and enforcement of the minimum legal drinking age (MLDA) and sales to minors laws, among others.

To control advertising and promotion, communities have implemented advertising bans on billboards, particularly near schools and churches; restricted the number of billboards in minority neighborhoods; banned ads on public transportation vehicles, in



public parks, sports arenas, festivals, and other events; implemented school bans on clothes with alcohol advertising; and required health-warning labels on all advertising (see Alcohol Epidemiology Project website).

See Appendix B for additional policy strategies that address price, availability, and advertising.

Voluntary Policies

In addition to government or public policy, there are several policy options that various community sectors or institutions (e.g., business, education, faith and social organizations, public agencies, media outlets) can use to change the conditions of alcohol consumption and reduce alcohol-related problems. These policies are voluntary and may be formal or informal. While voluntary policies have not proven to be as effective as mandatory policies, they contribute to community norms by setting standards for acceptable behavior regarding alcohol promotion, sales, and consumption.

Policies range from bans on alcohol company sponsorships, media bans/restrictions of alcohol advertising, prohibiting the use of alcohol as prizes or bonuses, banning sales/consumption of alcohol on community/school/company premises or at events, and alcohol retailers requiring staff to check age identification, to police policies to conduct compliance checks or walk through alcohol outlets (Toomey and Wagenaar, 1999:102-107).

Media Advocacy

A valuable tool in creating environmental change, media advocacy is the strategic use of media to gain public and policymaker support for policy goals and changing community norms. The integration of community organizing and media advocacy activities helps communities overcome institutional or system barriers to change. Media advocacy serves several functions. Media advocacy brings public attention to the problems created by intoxication and underage drinking. More important, though, media advocacy sets the public agenda and advances policy-based solutions; it creates public support and demand for system changes that will enable the community to achieve project goals. Media advocacy frames issues to emphasize that problems are a shared community responsibility, and as such are amenable to change. Finally, media advocacy empowers community members to take control of conditions affecting public health (Wallack and Dorfman, 1996).

Techniques for media advocacy include:

- Write a Letter to the Editor to communicate ideas to the public and policymakers and show support for an issue.
- Submit an Op Ed, an opinion piece appearing in the editorial section of the paper.
- Attend an Editorial Board Meeting and present your group's perspective on a problem, the proposed solution and its rationale.
- Hold a Media Conference/event to draw public attention to an issue.



- Testify at public meetings to draw attention to an issue, provide more information, or support policy initiatives.
- Participate in Talk shows/Call-in shows. Radio talk shows are good opportunities to reach different audiences.
- Use the Internet as a mass communication medium, a source of information, and a mechanism for advocacy activities.
- Use Paid Media to control how your message is presented and timing, target a specific audience, and reinforce other advocacy activities.

Be strategic in using media advocacy. Do not do media for the sake of getting media attention. Develop a communications plan that coordinates media advocacy activities with the strategic policy plan to ensure that media activities are designed to achieve policy goals.

The IOM report (2002) cites examples of successful media advocacy efforts to support policy changes in alcohol availability, advertising, sales and service, alcohol sponsorships of ethnic events, and increased enforcement of alcohol laws. Wallack et al. (1999) provide an excellent guide to implementing media advocacy in the community.

Enforcement

Enforcement of policy is key to changing community norms and making long-lasting change. Advocates can use media advocacy to encourage and support vigorous enforcement activities. Media stories reporting enforcement and penalties applied can confirm the expectation that violators will experience consequences and at the same time reinforce community norms and values regarding public health policy. In the Community Trials Project, researchers documented media coverage of alcohol-related issues, particularly drinking and driving. They found that media advocacy increased news generated by community members, in both print and broadcast media, and increased coverage of DUI enforcement, changing the public perception of likelihood of arrest for drinking and driving (Holder and Treno, 1997).

Enforcement's role in deterrence is a critical element in environmental change strategies, especially if the public is not only aware of enforcement but also perceives that punishment is sure and swift (PIRE, 1999:57). Equally important is obtaining judicial system support for penalizing violators.

In a review of regulatory strategies, OJJDP (PIRE,1999: 57-58) recommended the following, in order of importance, as priorities for policy and enforcement:

1. Routine, ongoing compliance checks
2. Teen parties in both public and private settings
3. Adult suppliers of teen parties
4. Zero-tolerance laws
5. Commercial licensing restrictions



6. False identification manufacturers
7. Shoulder-tap programs

Based on the scientific literature, they prioritized those activities that address high-risk settings or activities associated with serious harm, the probability that the policy will be effective if enforced (deterrence), and efficiency of enforcement.

Case Study— Reducing binge and underage drinking in a college town

The University of Iowa and Iowa City's *Stepping Up Project* illustrates the use of the environmental prevention model in a campus-community partnership to reduce binge drinking. Iowa City's downtown area, a pedestrian mall, is adjacent to the University of Iowa (UI) campus. This area has a high number of bars that serve primarily the student population. Though Iowa has a minimum legal drinking age of 21, minors are permitted in the bars. Conditions of crowding, poor lighting, and lack of monitoring sales, service, and consumption of alcohol make it very easy for underage students to obtain alcohol. Exacerbating this problem is the intensely competitive atmosphere among the bars. As new bars open up, they discount drinks to build business and the older outlets lower the price of their drinks to compete. Bars advertise their price specials extensively in the university student newspaper. Cheap drinks encourage the students to binge. Thus, large crowds of intoxicated young people mill about in the pedestrian mall in the late evening hours resulting in problems with fights, vandalism, vomit, urine, and trash.

***Stepping Up's* strategy integrated all components of the environmental model.**

With funding from the Robert Wood Johnson Foundation and assistance from the American Medical Association, the University of Iowa established a partnership with Iowa City. The executive committee, led by the Iowa City mayor and UI president, recruited key stakeholders – students, law enforcement, university and city officials, and business owners.

The project surveyed the community regarding attitudes concerning alcohol problems and policy solutions. Results showed that few community members held outlet (on and off premise) owners responsible for underage and binge drinking, or were concerned about low prices, sales and service practices or numbers of bars in the downtown area. A few respondents supported registering beer kegs, police "sting" operations, establishing alcohol free areas near the stadium, lowering the blood alcohol concentration (BAC) for drunk driving, and prohibiting underage patrons from remaining in the bars after 10 p.m. There was little public support for restricting alcohol-related advertising or price discounts.

Based on this information, *Stepping Up* set initial goals to increase public awareness of the problem of underage and binge drinking and the environmental factors that contributed to it, and create support for policy solutions. In addition to the community survey, they collected data on student drinking patterns, outlet density and crime patterns, and information from the Iowa City police department on the number of citations for underage possession of alcohol and violations by alcohol licensees. The



project also compiled data on the numbers of bar ads in the student vs. city newspapers, finding most of the alcohol discount ads in student newspapers.

The project established policy objectives to eliminate discounting practices, ban minors from bars, and strengthen enforcement and civil penalties on bars for selling to underage or intoxicated drinkers. The media strategy was to change public awareness and attitudes by focusing on alcohol-related problems and their impact on the community, including economic development and public health issues.

Stepping Up members spoke to civic groups, wrote editorials and op eds, organized news events, conducted a radio call-in show, pitched news stories, and testified before City Council to support an ordinance to eliminate price discounts. The university published an article on student drinking and the project's efforts in a newsletter for parents of UI students. Parents and other concerned community members called City Council members and wrote letters to the editor urging action. Because of the project's outreach to the Iowa State Alcoholic Beverages Division (ABD), the ABD held a public forum in Iowa City on binge drinking on college campuses.

Strengthening enforcement was an integral strategy from the outset of the project. Police conducted compliance checks, citing underage youth for possession and alcohol licensees for illegal sales. They acknowledged that support from the project, parents of UI students, and media coverage were important factors in these efforts.

Stepping Up succeeded in raising public awareness and support for policy measures. They tracked changes in media coverage of underage and binge drinking and related problems throughout the project. Virtually nonexistent at the beginning of the project, media coverage increased exponentially and favorably toward the project's policy solutions.

Because of all these efforts, the City Council passed an ordinance to restrict drink specials and imposed civil penalties, ranging from fines to license revocation, for selling to underage or intoxicated drinkers. The police increased enforcement of underage possession and service laws in the downtown area and the project publicized these efforts. The Iowa ABD issued a white paper on college and university issues. In addition, the project in cooperation with a neighborhood association conducted a media advocacy campaign, which prevented a drugstore from being converted to a liquor store. The project also worked with a local arts group to persuade city council to restore an old downtown theater for live musical and theatrical performances rather than sell it to someone who planned to convert it to another bar. The City Council eventually voted to require a minimum age of 19 for admittance to bars.

The *Stepping Up* project included several other strategies: parental notification, alcohol free tailgate areas, mini-grants to student groups to fund alcohol-free social events, increased enforcement of university alcohol policies, and outreach to parents, particularly during orientation. See the American Medical Association website (www.alcoholpolicysolutions.net) for a detailed case study on Iowa and three other campus-community partnerships to reduce binge drinking.

Planning and Evaluation

Integral to a successful program is sound planning, which includes establishing goals and measurable objectives, setting priorities, developing logic models for the program



and its activities, and providing for evaluation. CSAP's *Achieving Outcomes*, a guide for practitioners, cites the following as essential elements of a *program logic model* for achieving prevention outcomes (2002: ix-xi):

- Assess needs, underlying conditions, and assets.
- Build organizational capacity.
- Select a best-fit science-based program.
- Implement the program(s) using action plans and feedback.
- Evaluate program outcomes along the way.

Data collection activities described previously will help program planners in the assessment of needs and community conditions and establish baseline data to monitor program progress. Program developers may use a community readiness tool to assess staff and coalition capacity to engage in environmental prevention. For example, the Institute for Public Strategies has developed a tool specifically to assess stages of readiness to implement environmental prevention strategies (www.publicstrategies.org).

Environmental prevention strategies include a broad array of policy options and other strategies, which can be overwhelming. Therefore, it is important for program developers and coalition members to determine priorities. Several factors are considered when setting priorities, the most noteworthy being impact and feasibility. Which policies will have the greatest impact on the problem and how difficult are they to achieve? Few of us would want to waste resources on something that is very difficult to do and will have little impact on the problem. Whether or not a particular strategy is feasible depends on program resources (e.g., funding and staff), coalition capacity (e.g., skills and readiness to participate in policy change), jurisdictional issues (e.g., preemption), among others. As noted above, OJJDP used criteria of effectiveness and efficiency as well as impact for enforcement priorities.

Other factors relate to coalition processes or conditions. For example, opting for a "quick win" in the early stages of coalition development to motivate coalition members; or using a strategy that is more effective in mobilizing the community and building their capacity to work subsequently on other, more effective policy strategies. Timing and the broader regional or national context are particularly important factors. Interventions thought impossible a few years ago have become standard; for example, increase in state cigarette taxes, clean indoor air, seat belt, and drinking and driving policies.

The use of logic models in program planning and implementation helps to define the rationale, based in science, for a particular approach. Logic models represent theoretical constructs underlying a program or initiative and its activities. Logic models are a means of assessing what is working or not and why, and as such are crucial to quality program monitoring.

There are many gaps in research on policy strategies. While it is important to use evidence-based strategies, we would be remiss if we ignored those strategies for which there has been little research. Using a logic model also helps to establish those interventions that though unproven are promising. Establishing good evaluation and



practitioner-researcher partnerships is critical for designing a program that will test policy strategies and help to advance the state of prevention knowledge and practice.

Evaluation is not a task that should be left to the end of the project. Plan for evaluation from the beginning of the project. Be specific about what project outcomes are desired and how they can be measured. Determine indicators of change and monitor progress regularly to ensure the project is on the right track. This allows project staff and coalition members to adjust or change strategies that are not working well.

Examples of progress indicators include:

- Public awareness and support for policy goals/strategies (opinion polling, letters to the editor, calls/letters to public officials)
- Media support (quantitative: number of media hits; qualitative: editorial support, feature articles supporting or at least reporting the proposed solution)
- Policy change (number and quality of policies introduced and enacted)
- Law enforcement activities (compliance checks, shoulder taps, DUI checkpoints, enforcement of new policies)
- Reductions in alcohol-related problems (track crime rates, vandalism, etc)
- Drinking behavior/attitudes have changed positively (surveys, self report, observational)
- Key informants' understanding of and support for policy change (interviews, actions taken)
- Coalition membership (numbers of new members and sectors they represent, participation in project activities, training, ability to get and retain funding)
- Juvenile arrests for criminal offenses such as DUI, violation of alcohol laws or other offenses commonly associated with alcohol use such as disturbing the peace, disorderly conduct, and vandalism (California Governor's Interagency Coordinating Council for the Prevention of Alcohol and Other Drug Problems strategic plan).

Outcome measures for prevention include:

- Age of onset of alcohol use
- Frequency of use in the past 30 days, two weeks, or other period
- Perception of risk or harm
- Quantity of alcohol consumed on one occasion (binge drinking)
- Perception of disapproval of use by peers and adults

However, depending on the period for the project and its goals, policy enactment and reduction of alcohol-related problems may also be outcome measures.



Finally, careful evaluation will contribute to the body of literature on environmental strategies and provide more information on those factors that enhance successful implementation.

Conclusion

Using environmental prevention strategies can be challenging for those who do not have the experience, knowledge, or motivation to work in policy advocacy. Environmental prevention work requires skills in community organizing, media, and public policy, skills not typically a part of prevention education and training. However, prevention professionals and community members can learn these skills. Furthermore, engaging coalition members who have experience in advocacy, media, and the political process can compensate for some of these deficiencies. Individuals who are effective leaders in certain areas may not have the desire or temperament to do policy work. It is critical to recruit project leaders who understand how to use the environmental model and who are committed and able to direct a policy advocacy campaign. The American Medical Association Office of Alcohol has produced a case study that details the challenges four campus-community collaborations faced in attempting to implement an advocacy initiative to reduce binge drinking (2003).

The environmental prevention model described above is consistent with national and state strategic prevention goals to implement science-based and effective prevention programs. Integral to achieving this goal is building the capacity of communities to apply prevention principles and strategies. Community members and public health advocates have much to gain by learning and applying environmental strategies to substance abuse prevention. They will not only be able to effect positive change in their communities, but they will increase their capacity to apply these strategies and techniques to a broad range of public health and social issues.

California Alcohol and Drug Programs – Guiding Principles for Prevention

1. Prevention fosters safe and healthy environments for individuals, families, and communities.
2. The entire community shares responsibility for prevention.
3. Prevention engages individuals, organizations, and groups at all levels of the prevention system.
4. Prevention utilizes the full range of cultural and ethnic wealth within communities.
5. **Effective prevention programs are thoughtfully planned and delivered.**

There are many resources available to help prevention professionals and community members who would like to implement environmental prevention in their communities. Web sites listed at the end of this document offer a wealth of information on this topic and associated implementation strategies.

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Department of Alcohol and Drug Programs and administered by the Center for Applied Research Solutions. CPI offers the Prevention Extension Workshop Series, which aims to make state-of-the-art research and practices in the field of alcohol and other drug (AOD) prevention more accessible to communities throughout California. The series addresses emerging issues and proven practices in the AOD prevention field. Take advantage of these workshops and the on-site technical assistance provided at no cost through CPI. You may specifically request training in how to implement environmental strategies in your community at www.ca-cpi.org.



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Websites

APIS Alcohol Policy Information System. NIAAA.

<http://alcoholpolicy.niaaa.nih.gov/>

Updates on state legislated alcohol policies. Beverage Service Training and Related Practices. State policies, mandated and voluntary.

Alcohol Policy Solutions.

<http://www.alcoholpolicysolutions.net/>

Website for the Robert Wood Johnson Foundation-American Medical Association national projects, A Matter of Degree: Reducing High Risk Drinking among College Students and Reducing Underage Drinking through Coalitions. Policy and media advocacy materials and tools; college binge drinking case study, media kits; public opinion polls; policy papers.

Berkeley Media Studies Group

www.bmsg.org

Media advocacy case studies, training, issue briefs, framing memos, content analyses of TV and newspaper coverage of various public health topics, including alcohol, youth and violence, and children's health.

Center for Applied Research Solutions

www.cars-rp.org

Home of the Community Prevention Institute and other no-cost technical assistance and training projects, including Safe and Drug Free Schools and Communities, Mentoring and the State Incentive Grant.

California Department of Alcohol and Drug Programs

www.adp.ca.gov/

Prevention Services Division strategic plan, community indicators, prevention resources, grant information, and fact sheets.

Center for Alcohol Marketing and Youth

www.camy.org/

Reports and data on alcohol advertising, news releases, fact sheets, and action alerts.

Center for Science in the Public Interest (CSPI). Alcohol Policy Project.

www.cspinet.org/

Action alerts, public opinion polls, fact sheets, publications, and special projects (e.g., college binge drinking, taxes).

Centers for the Application of Prevention Technologies (CAPT)

www.captus.org/

A program of the Center for Substance Abuse Prevention (CSAP). Provides resources and technical assistance regarding the translation of substance abuse prevention research to practice. Contains planning and best practices tools.



Higher Education Center for Alcohol and Other Drug Prevention

www.edc.org/hec

Environmental Risk Assessment Guide. Publications, statistics, case studies on reducing college binge drinking, and news clippings.

Institute for Public Strategies

www.publicstrategies.org/

Policy and media advocacy materials and tools, public opinion polls, fact sheets, and issue briefings on environmental prevention strategies and programs.

National Clearinghouse for Alcohol and Drug Information (NCADI)

www.health.org/

A variety of publications, statistics, and information about programs and government initiatives.

The National Survey on Drug Use and Health (formerly the National Household Survey on Drug Abuse)

www.DrugAbuseStatistics.samhsa.gov/

Pacific Institute for Research and Evaluation (PIRE). Underage Drinking Enforcement Training Center.

www.udetc.org

Training, publications, guides for communities working to reduce underage drinking through law enforcement environmental strategies. Established by the Office of Juvenile Justice and Delinquency Prevention.

Substance Abuse and Mental Health Services Administration (SAMHSA). Center for Substance Abuse Prevention (CSAP).

www.samhsa.gov

Information on model programs, prevention profiles, state data, fact sheets, training and technical assistance.

University of Michigan Institute for Social Research, Monitoring the Future (MTF), National Results on Adolescent Drug Use.

www.monitoringthefuture.org/

This report, tracking behavior and perceptions of 8th, 10th and 12th graders, appears annually in December. MTF has also collected data on college students.

University of Minnesota, Alcohol Epidemiology Program

www.epi.umn.edu/alcohol/

Alcohol policies in the US, research articles on RBS and training of alcohol outlet managers and servers, adolescent drinking, community organizing efforts, community prevention trials, alcohol-involved traffic crashes, natural experiments with changes in state and local alcohol policies, and public opinion surveys.



About the Author

Sandra A. Hoover, Ph.D., M.P.H

Sandra A. Hoover, Ph.D., M.P.H. has approximately twenty years of experience in the alcohol, tobacco and other drug (ATOD) prevention field including work in program design and strategic planning, policy change and advocacy, training and technical assistance for community-based programs, publications, and program management.

Since February 2003, Dr. Hoover has been consulting for national, state, and local organizations, including The Center for Applied Research Solutions in Folsom, California, Johnson, Bassin & Shaw, Inc, in Silver Spring, MD, as well as public and community agencies. Activities include participation in state assessment review teams on ATOD prevention systems, content research and preparation of prevention training courses, issue briefings, fact sheets, and other program materials, and training.

Dr. Hoover's experience includes working for the Institute for Public Strategies (IPS) where she has served as Director of Policy Development, working in the Border Project to Reduce Underage and Binge Drinking along the San Diego-Tijuana border, coordinating the Southern California Prevention Exchange, and the Technical Assistance and Training Project. Prior to returning to California, Dr. Hoover worked five years as Deputy Director for a Robert Wood Johnson Foundation-funded initiative, A Matter of Degree: Reducing Binge Drinking Among College Students (AMOD) in the American Medical Association's Office of Alcohol and Other Drug Abuse. Previous employment includes ten years at the Maine Bureau of Health as Director of the Community Health Promotion/Chronic Disease Prevention Unit and subsequently, Director of the Tobacco Prevention and Control Unit and Project Manager for the Americans Stop Smoking Intervention Study (ASSIST).

Dr. Hoover is co-author of *Binge Drinking Among College Students*, a chapter in *Principles of Addiction Medicine, Third Edition* (April 2003). Dr. Hoover has a doctoral degree in cultural anthropology from Indiana University and a Masters in Public Health from the University of Pittsburgh. She has also taught graduate and undergraduate courses in medical anthropology, applied anthropology, and African Studies at the University of Maine, Orono and Duquesne University (Pittsburgh).



APPENDIX A

Data	Source
Alcohol/Drug-Sensitive Information Planning System (ASIPS) or Geographic Information System (GIS). Preventionists and police departments use these data to identify location and clustering of outlets in a community that they can cross-tabulate with crime rates, accidents, noise complaints, etc.	Police departments. Researchers (e.g., Fried Wittman and Richard Scribner have published papers and worked with communities to apply this information and software)
Community demographic data, including ethnic/racial composition	US Census, county profile data, city and county government websites
Crime statistics, arrests, calls for service	Police departments
Driving Under the Influence (DUI), alcohol-involved motor vehicle injuries and deaths	Statewide Integrated Traffic Records System (SWITRS) —California Highway Patrol
Economic costs of alcohol abuse	NIH, NIAAA, NIDA for national data. Some state and county alcohol and drug control agencies have collected local data. See relevant agencies for estimates of other costs such as vandalism, police calls for service, trash pick up, costs to businesses.
Injuries and deaths due to alcohol or other drug use	Emergency Medical Services, Hospital Discharge Data, county profiles
Alcohol licensees, laws and regulations. Number of licensees, location, outlet density, serving and sales practices, local and state alcohol laws, complaints, and/or violations.	State or local liquor control authority
State or local survey data on underage and binge drinking. Some surveys have components that collect information on youth access to alcohol, including attitudes about ease of access and where youth obtain alcohol	Youth Risk Behavior Survey (YRBS). A survey administered to youth through the school system. In California, the YRBS is called the California Healthy Kids Survey.



APPENDIX B

Policy Strategies to Reduce Alcohol-Related Problems

Pricing Controls

- Raise excise taxes
- Restrict price promotion
- Restrict discounts
- Increase licensing fees
- Increase infraction penalties
- Eliminate tax exemption for advertising

Access Controls - General

- License outlets
- ABC laws
- Restrict hours, days, locations
- Local prohibition
- Restrict outlet types, number
- Restrict serving practices
- Require server and retailer training
- Server liability legislation:
 - for servers & retailers
 - for adults selling or providing alcohol to minors
- Eliminate sales/service at public events or locations

Access Controls - Youth

- Minimum drinking age
- Graduated licensing and "zero tolerance" legislation
- Enforcement of sales to minors laws

Access and Use Controls – Driving

- DUI laws & enforcement
- Open container laws
- Restrict hours of service
- Ban drive-in, home delivery and gas station sales
- Interlock devices

Advertising & Promotion Controls

- Control content and media
- Reduce point of sale merchandising
- Counter-advertising
- Reduce sponsorship of sports and musical events
- Health warning labels
- Ban advertising in or near schools and campuses
- School bans on wearing of clothes with advertising
- Educate community on costs of alcohol use and abuse
- Increase truth in advertising
- Advocacy, media events, education about the reality of alcohol use and promotion