BEYOND BROCHURES:
PREVENTING ALCOHOL-RELATED VIOLENCE AND INJURIES

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As the connection between injury prevention and alcohol becomes better understood, the value of collaboration between these two fields is proving to be critical. In both fields, the prevention-oriented leadership recognizes that a comprehensive approach is necessary to reduce the frequency and severity of injuries associated with alcohol. This paper describes a methodology in current practice in the injury field that can be effective at preventing alcohol-related injuries (both "intentional," i.e. violent and "unintentional," such as motor vehicle collisions, falls, burns, and drowning). The "Spectrum of Prevention" methodology emphasizes an environmental approach, one that places responsibility not only on the individual or family, but also focuses on the role of community norms, institutional practices, and laws.

For many people, when they begin their plans to prevent injuries they think only of education and individual behavior change. Alcohol and other drug abuse prevention is no different. Historically, alcoholics and drug addicts were blamed for their condition. More recently, greater understanding has led to the redefinition of these problems as illnesses. But while the *treatment* modality may appropriately focus on the individual and family, it is crucial that *prevention* must be conceptualized more broadly. As mental health expert George Albee stated, "...no mass disorder afflicting mankind is ever brought under control or eliminated by attempts at treating the individual or by attempts at producing large numbers of individual practitioners."[1]

Like other critical health and social issues -- cancer, HIV, and teen pregnancy -- resources for drug and alcohol prevention are scarce. In the long run, attempts to prevent these systemic problems with only medical interventions, counseling, or educational materials can be expensive and ineffective. What these problems have in common is that they are complex, interconnected, and can only be resolved using a comprehensive preventive approach.

The "Spectrum of Prevention" methodology enables providers and policy leaders to move beyond an educational approach to achieve broad community goals. Each of the Spectrum's six levels is a means for intervening in or resolving a problem. However, it is when these methods are used in combination that the Spectrum becomes a transformative force for individual, community and societal health.

The Environment of Alcohol and Injuries

Looking at the total environment in which injuries and alcohol use occur reveals how much they are related. "Drinking and driving" is clearly linked to injuries. In 1994, about

one-third of all traffic fatalities was attributed to crashes in which at least one of the drivers[1], or the pedestrian, had a blood-alcohol concentration of .10 or greater. Alcohol is also involved in an estimated 69% of boat-related drownings and a Minnesota study found that 41% of deaths resulting from falls involved alcohol.

Alcohol is also implicated in a large proportion of violent events, including between 50% and 66% of all homicides and serious assaults,[ii,iii,iv,v] in 20 to 36% of suicides, [vi,vii] and 37% of trauma cases.[viii] Alcohol is also widely associated with rape and battering.[ix,x] In 217 rape cases reported to the Winnipeg, Canada police department between 1966 and 1975, 72.4% were considered alcohol-related.[xi]

A study of alcohol availability in a Santa Clara County (California) found that the highest numbers of crimes and requests for police services took place in the same census tracts as the ones with the highest concentration of alcohol outlets.[xii]

There is also an insidious connection between advertising, consumption and violence. Billboards, point of sale displays, and television advertisements that portray women as sexually available in conjunction with beer and other types of alcohol encourage men to drink and to sexually abuse women. There are eight times as many men as women among the heaviest drinkers, and young people aged 18 to 29, while they represent only 27% of the population, account for 45% of all adult drinking.[xiii]

Although this article is about alcohol and injuries, not illicit drugs, it may be worth noting that the relationship of other drug use to injuries has not been thoroughly studied. While the association between violence and alcohol use has been widely documented, the relationship between injuries and drugs use is not always clear -- despite the tremendous resources invested in the U.S. government's "War on Drugs." The research points to a few clear links between drugs and injuries, one of which is the definitive finding that violence is a byproduct of the illegal trade in drugs.[xiv]

What all of these facts indicate is that the risk of injury is clearly compounded by alcohol; that is, the problems of alcohol and injury are connected. What they have in common are psychological, family, and environmental factors. As reported in the state of Alaska's epidemiology bulletin:

"Efforts to reduce risk behavior need to address social, cultural, and environmental circumstances that influence these behaviors. Success in reducing high risk behaviors requires a focused, sustained, concerted campaign that integrates the efforts of parents, families, schools, health and social service agencies, religious organizations, media and young people themselves."[xv]

Prevention is More Than Education

A proliferation of videos, brochures, and newsletters flood physician waiting rooms. On-line computer services, radio, television and the mail deliver even more information on health problems and a myriad of opportunities for individuals to get support for changing

their behavior. These materials encourage individuals to quit drinking, exercise, "eat right," conduct self-exams, seek help for drug addiction, and to wear seatbelts. All of these products, along with physician consultations, re-enforce the commonly held misconception that health education equals prevention. When asked to define prevention, students and health practitioners respond consistently that it is "education" or "health education." And asked again what they mean by health education, the list of experts and multimedia is recounted: videos, brochures, teachers, a doctor's advice, newspapers, etc.

Unfortunately, effective prevention is not that simple. Successful prevention must start with an assessment that takes into account the community and societal influences that mitigate health. In addition to providing information, the architects of effective prevention programs look at the common threads that underlie injury and alcohol problems and the resiliency factors that contribute to solving them. Analyzing the systems, or environment, within which injuries and diseases occur is the first step toward the development of a comprehensive prevention strategy.

One reason that the Spectrum shifts attention from the individual and health education to a "systems approach" is because the community, not the individual, is the unit of analysis for effective prevention. While a population-based approach has long been accepted practice for vaccinations against some diseases, much of current-day prevention still focuses on personal motivation and health education. The adoption of a prevention methodology that goes "beyond brochures" is extremely important, especially when dealing with the complexity of alcohol-related injuries.

Six Levels Form the Spectrum of Prevention

The Spectrum identifies six methods or levels for promoting prevention; beginning with individual and community education and ultimately, focusing on changes in organizational policy and legislation. The six methods are complementary, and when used together in a prevention strategy, produce a "synergistic" effect.

1. Strengthening Individual Knowledge and Skills	Enhancing an individual's capability of preventing injury or crime and promoting safety
2. Promoting Community Education	Reaching groups of people with information and resources to promote health and safety
3. Educating Providers	Informing providers who will transmit skills and knowledge to others
4. Fostering Coalitions and Networks	Bringing together groups and individuals for broader goals and greater impact
5. Changing Organizational Practices	Adopting regulations and norms to improve health and safety and creating new models
6. Influencing Policy Legislation	Developing strategies to change laws and policies to influence outcomes

The Value of a Comprehensive Approach

Early drowning prevention relied upon brochures, presentations, and CPR training. But a child can drown in minutes, even with an attentive caretaker nearby who knows that a swimming pool can be dangerous. Each year, approximately 1,200 children ages 14 and under drown; and an estimated 5,000 are hospitalized for near-drowning injuries.[xvi] Forty-six percent of young pool drowning victims were missing for five minutes or less.[xvii] A fence around a pool or spa is an effective safeguard that helps prevent such tragedies. Homeowners who understand the risks of drowning may voluntarily erect a fence and keep it safely locked. Architects and, designers may change their organizational practices and priorities by promoting 4-sided fencing. However, to lower drowning rates in a community may require passage of a pool fencing ordinance. Zoning changes, such as a fencing ordinance, are more likely to be implemented with a comprehensive approach. When the community is well-educated, it is more effective and more likely to support such changes. A coalition of paramedics, relatives of drowning victims, real estate agents, firefighters, and child safety advocates can mobilize political support to ensure the passage of a fencing ordinance.

Using the Spectrum of Prevention to Prevent Alcohol-Related Injuries

In this section, the authors define the six levels of the Spectrum, beginning with a description of each methodology and followed by prevention examples from three fields: unintentional injury, violence and alcohol. Each segment concludes with another example, one that shows how that particular level works "synergistically" with other levels of the Spectrum, and a useful "tip" about implementation.

1) Strengthening Individual Knowledge and Skills

Strengthening individual knowledge and skills involves transferring information and know-how such that an individual's resources and capacity for preventing injury or disease are enhanced. Physician advice, for example, has been associated with reductions in morbidity, mortality, risk behaviors, and risk factors and an increase in healthy behaviors.[xviii] Such advice has also been shown to decrease alcohol use and increase health care utilization among problem drinkers,[xix] increase the likelihood of bicycle helmet ownership among parents for their children,[xx] and contribute to increased smoking cessation among hospitalized smokers.[xxi]

For many organizations and community agencies, individual counseling and treatment are the focus of programs designed to help individuals learn health-enhancing behaviors and change unhealthy habits. Practitioners have learned that recommendations they make about prevention in the course of providing other services can have a significant influence on client behavior.

During check-ups, pediatricians should ask children and their parents whether they use bicycle helmets. The doctor or staff can also share information about the risk of head injuries. Similarly, bicycle sales people could demonstrate how to properly fit a helmet for optimum safety whenever they make a bicycle sale. This example shows that the responsibility for strengthening individual knowledge and skills need not be limited to physicians and human service professionals.

Peer counselors and gang intervention specialists train youth in leadership and violence prevention skills. The youth explore the root causes of violence, cultural differences, and practice resolving conflict without resorting to violence. In the business sector, many 24-hour stores train their employees to de-escalate tense or conflict-laden situations--skills that can be used at work or home.

One very well-known program designed to reduce alcohol-related injuries by strengthening individual knowledge and skills is the "Designated Driver" program which employs high school students as peer counselors. These young people teach fellow students to understand the risks of drinking and driving. They help other students to develop skills and commitment to designate drivers, to refuse to ride with people who have been drinking, and to abstain themselves when they will be driving. Promulgation and replication of this campaign can change individual behavior, thereby significantly reducing injuries.

SYNERGY: The effectiveness of the Designated Driver program has been enhanced by an extensive community education campaign, including billboards, newspaper articles and the placement of messages in sitcom dialogue on television. This campaign would not have been successful without a strong coalition pressuring media outlets to modify their programming and organizational practices to include the designated driver message.

TIP: Unfortunately, as treatment times are condensed, particularly in a managed care environment, opportunities for educating clients and patients are diminished. Even the physician's term "teachable moment" has come to be described as a "teachable instant." Nevertheless, in a trusting one-on-one relationship with a person who is perceived to have expertise or authority, even brief comments have a lasting impact, particularly when re-reinforced over several visits.

2) Promoting Community Education

A community education approach aims to reach groups of people with information and resources for improving health. Cumulative exposure to health messages in a variety of contexts has been shown to result in a reduction of alcohol consumption during pregnancy[xxii] and lower weekly smoking rates among adolescents.[xxiii] Mass media campaigns, such as community organizing for social and public policy change, have been shown to increase awareness, change attitudes, and provide a context in which other strategies can succeed.[xxiv] [xxv]

Effective community education not only alerts individuals to new information, but also builds a critical mass of support for healthier behavior, norms and policy change. This level of the Spectrum is distinguished from the first in several important ways. Because community education is more broadly targeted at groups or the population at large, the messages are more general and will usually have less direct impact than a one-to-one communication. Strengthened individual knowledge and skills (Level 1) have a greater likelihood of eliciting behavior modification as a result of personal attention.

In the United States and, increasingly, worldwide, the mass media is the primary vehicle for community education. Media coverage before, during and after events reinforces prevention and intervention messages to a larger audience. And, when communities employ media strategically, with the intention of creating change in institutions and policy, this type of effort is often called "media advocacy."

Effective prevention requires skillful use of the media, including the careful development of health messages and the use of focus groups or other sophisticated marketing techniques. It is also important to have skilled staff who can respond quickly to breaking news or negative messages, such as alcohol advertising aimed at young people. Ideally, a media advocacy strategy can be used by a community to organize and apply pressure for policy-level changes to benefit the community at-large. "There is no magic bullet that can singularly solve health problems," state media advocacy expert Larry Wallach and his colleagues. "This effort requires a diverse and complementary set of approaches, and media advocacy can play an important role."[xxvi]

The "Bike Days" program is an excellent example of a community education campaign from the field of unintentional injury. In conjunction with police, retailers, and a local health department, bicycle enthusiasts conduct a variety of activities in schools and surrounding communities to promote cycling and safety. Using posters and the mass media to promote the events, coordinators educate and involve the public. Bike Days events include performances by professional stunt bicyclists and "bike rodeos" to teach youngsters the rules of the road and check for correctly fitted helmets.

In a community education initiative, advocates at the San Francisco Trauma Foundation in northern California created a slide presentation called "Dangerous Promises." The slides highlight the way advertisements often depict women as scantily clad and seemingly libidinous whenever alcohol is present. In addition, this slide show points out the subtle and not-so-subtle ways that violence against women is encouraged by advertising.

Friday Night Live is a high-visibility program for high school-aged students that was established to reduce injuries and deaths from alcohol and other drug use. Friday Night Live programs are often coordinated by local alcohol prevention agencies with supplemental support from a state's department of education and private grants. Friday Night Live consists of in-school activities, leadership development, rallies, and "safe rides" programs. It also provides a place where teens can enjoy themselves in an alcohol and drug free environment. Instead of using a van, one Friday Night Live program

educates the community about the life and death consequences of drinking by using a hearse to shuttle youth leaders between program sites.

SYNERGY: Recently, in a classroom exercise, young students were asked what sound does a frog make? And, due to the pervasiveness in U.S. media of an advertisement featuring three frogs, the kids answered, "Bud..," "Weis..," "Er..," just as the frogs do in the commercial. This experience has been recounted and used in a training for educators to help them understand the powerful influence that mass media has on children. This example was also used to alert Anheuser Busch stockholders that the company's beer marketing tactics should be changed, starting a movement within the company to alter its advertising policies and practices.

TIP: Given the omnipresence of media, community education events should be designed with press coverage in mind. Rather than simply sending press releases, it is important to conceptualize the message and to consider how best to gain attention well in advance of an event. To increase the possibility of coverage, it is helpful to pre-arrange opportunities for the media to interview an expert or authority on the subject either before, after or during the event. Consider what elements would tell a good visual story and plan a "photo opportunity."

3) Educating Providers

Because providers have influence within their fields of expertise, as well as opportunities to transmit information, skills and motivation to patients, clients, and colleagues, it is essential that they receive education to improve their own understanding of prevention. Certain professionals, e.g. doctors, firefighters, etc. , are also highly effective advocates for policy change related to their experiences on the job. But people in other positions in a community also have opportunities to be role models and providers of information, if they receive appropriate training.

A Special Report to the U.S. Congress on Alcohol and Health published in 1990 describes successful programs that trained alcohol servers to help reduce alcohol abuse and related injuries. Servers' post-training behavior demonstrates an increased effort to reduce the amount of alcohol served as well as to decrease the amount consumed by patrons.[xxvii,xxviii] Medical training has recently begun to place more emphasis on teaching doctors the value of advising patients about the diseases associated with unhealthy practices.[xxix]

Since 1990 traffic reporters in northern and southern California have attended conferences where they learned that "injuries are no accident." At these conferences, injury prevention specialists explain that most injuries are predictable, and therefore, preventable. Although the connection between driving under the influence and collisions is well-established, participants also learn that they have an important role as communicators who can reach large numbers of people every day with prevention messages.[2]

To respond to the needs of health care and educational providers, violence prevention experts at the Harvard School of Public Health, Education Development Center, Inc., and the Prevention Institute developed an advanced training of violence prevention. The curriculum combined pioneering courses taught at Harvard and University of California at Berkeley. In the first year of the training program, over 100 people representing all regions of the United States were trained and agreed to conduct at least three trainings each in their communities. Preliminary evaluations indicate more than three-quarters have reached or exceeded this goal, and as a result, thousands of people have received training in violence prevention.

Within the hospitality industry, a number of businesses have adopted "Server Education" programs. Managers train bartenders and serving staff to identify customers who have had too much to drink, how to suggest that the customer shift to non-alcoholic beverages, and when to stop serving alcohol. The number of patrons leaving a bar legally intoxicated has been shown to be reduced by up to fifty percent in some communities.[xxx]

SYNERGY: In the early 1990s, classes were initiated at Harvard and the University of California to teach violence prevention . These courses, which aim to educate future providers, deliver a comprehensive perspective, including epidemiology, partnerships, and program and policy development. Proponents of prevention education have used the example of these courses to advocate for and successfully expand course offerings to include violence prevention at many other colleges and universities. Additionally, health departments have adapted the curricula for staff training, and the national program of training violence prevention trainers (mentioned above) is based upon the curricula.

TIP: Typically, providers are defined as professionals, para professionals and community activists who work in health, social services, education, or other community organizations. However, a more inclusive perspective recognizes that there is a role for many other members of the community who "provide" information and expertise.

4) Fostering Coalitions and Networks

A collaborative approach brings together the participants necessary to ensure an initiative's success. The success of many public health movements such as the effort to decrease alcohol access to minors[xxxi] and challenges to existing alcohol policy has been directly related to the involvement of coalitions.[xxxii] The formation and efforts of coalitions have also been credited with the passing of Proposition 99 in California, a law that, five years from its passage in 1988, saw a 27% decrease in tobacco use (three times faster than the national average).[xxxiii]

Coalitions are useful for accomplishing a broad range of goals that reach beyond the capacity of any individual member organization. By working together, coalitions (and often partnerships, collaboratives and networks) can: conserve resources by reducing duplication and sharing expenses; foster cooperation between diverse sectors of society, and increase the credibility and often the impact of their efforts. Like a jigsaw puzzle, each piece is important, and when put together the picture becomes clear.

In the example of drowning prevention, zoning changes, such as the adoption of a fencing ordinance, cannot be accomplished without well-educated, vocal individuals working together. A coalition of paramedics, relatives of drowning victims, firefighters, and child safety advocates can mobilize political support to ensure the passage of a fencing ordinance.

The National Funding Collaborative, formed by foundations across the U.S. that are working to create a comprehensive violence prevention model, awarded violence prevention grants to fourteen local collaboratives in cities and rural areas throughout the U.S. While each group works primarily in its own community, the collaboratives benefit from networking and mutual aid.

Federally-funded Community Substance Abuse Partnerships (CSAP) exist in many communities throughout the country. In 1992, a northern California CSAP joined forces with a local United Way, a battered women's program, other community agencies, a public health violence prevention organization, and more than ten high schools to sponsor a youth conference on drug, alcohol and violence prevention. Together, these organizations mentored a group of youth organizers who planned and implemented the conference. More than 250 teens attended workshops, a job and information fair, and a dinner/dance.

SYNERGY: For many years, drivers were admonished to drive carefully and to obey speed laws. Then consumer advocates and traffic safety leaders banded together to advocate for changes that would lower death and injury rates. Over the last 40 years, auto makers' standards have been improved, seatbelts, child safety seats, and airbags have gained community acceptance, and laws enforcing the provision and use of safety devices are being enforced. As a result, highway injuries and deaths continue to drop, even while the actual number of miles driven has increased.

TIP: A new coalition should not be formed in response to every issue. It is important to discover if there is another group working on the problem and to assess the level of commitment and time necessary for sustaining a new coalition. For additional information on coalitions, see author Cohen's article, "Developing Effective Coalitions: An Eight Step Guide."[xxxiv]

5) Changing Organizational Practices

By changing its own internal regulations and norms, an organization can affect the health and safety of its members and influence the community as a whole. The area of changing organizational practices is the least understood and most frequently ignored component of the Spectrum. Yet, this method has enormous potential. Changes in organizational practice to accommodate employee needs, such as providing day care facilities at the work site, have the added benefit of reducing economic and emotional stress on that employee and his or her family. To take this idea one step further, health experts Heaney and Goetzel suggest that "providing opportunities for individual risk reduction counseling

for high risk employees within the context of comprehensive programming may be the critical component of an effective work site health promotion program."[xxxv]

To ensure driver safety and a commitment to the health and well-being of their employees, a county government required that all newly purchased fleet vehicles be equipped with air bags. With the adoption of the air bag requirement, this government showed its constituents that it had a firm commitment to safety and prevention.

Changes in law generally require a concomitant change in organizational practice. For instance, after the passage of national regulations setting the minimum drinking age at 21, new enforcement procedures were adopted. The passage and enforcement of minimum drinking age laws are attributed with saving an estimated 15,667 lives between 1975 and 1995.[xxxvi] Increased police protection has been shown to decrease mortality rates for several alcohol-related causes of death, especially homicides and traffic accidents.[xxxvii]

Ten years ago, there was only a handful of conflict resolution programs in high schools, but the success of these programs in reducing the incidence of on-campus violence has resulted in the adoption of similar programs in thousands of American schools. At the same time, staff training in mediation has become common practice in districts throughout the U.S.

The Center on Alcohol Advertising successfully targeted the beer industry with its "Hands Off Halloween" campaign. The goal of their campaign was to discourage brewers from using the classic symbols of Halloween, primarily a children's holiday, to promote beer. Industry reports show that Miller Brewing Company, for instance, had identified Halloween as its second biggest night for bar and restaurant sales (behind St. Patrick's Day). Stroh Brewery also ranked Halloween as number two, behind the Super Bowl.

The Beer Institute, which is the trade association for the beer industry, refused the Hands-Off Halloween national coalition's request that the Institute revise its voluntary advertising code to discourage members for using Halloween theme marketing materials. The Center on Alcohol Advertising then shifted its organizational change efforts to the local level, asking merchants to send objectionable promotions back to their distributors. Dozens of communities across the country participated and thus reduced children's exposure to Halloween beer promotions. In response to this effort, Anheuser-Busch, the world's largest brewer, modified its 1996 Halloween ads to eliminate jack-o-lanterns, black cats and costumed characters that attract children's attention.

SYNERGY: In one low income community, the Police Activities League made a request to the Nike Corporation that they create a specially-designed basketball court like the animated court featured in their television advertisements during the National Basketball Association (NBA) Playoffs. Nike's positive response, using promotional dollars for a community improvement, represented a change in the company's organizational practices. Nike's contribution helped a local violence prevention coalition, of which PAL was a member, by installing a recreational facility in a neighborhood that was sorely lacking in alternatives for youth.

TIP: Begin by implementing changes in the organization that is most familiar. Then, when asking other organizations to change, you have the credibility and knowledge base to say, "we've tried it ourselves, here is how it worked."

6) Influencing Policy and Legislation

Influencing policy usually presents the opportunity for the biggest improvement in health outcomes. "...Studies of traffic crash data contain substantial support for the relationship between legal drinking age and the involvement of young drivers in traffic crashes. With occasional exceptions, studies of reductions in the legal drinking age were accompanied by increases in crash and fatality data among youth in the affected ages. Similarly, the preponderance of studies of increases in the legal drinking age have indicated that such increases in the legal drinking age have had the effect of reducing traffic crashes and fatality rates among youth in the affected ages."[xxxviii] Increases in the price of alcohol and cigarettes are also associated with decreases in mortality rates.[xxxix]

This category includes changes in local, state and national laws, as well as the adoption of formal policies by boards and commissions. Both institutional and legal policies can affect large numbers of people. In some cases, laws and policies already exist that could protect public health and safety; but an additional law or change in policy may be necessary to ensure its effectiveness. For instance, a ballot measure might be required to fund additional enforcement of laws prohibiting liquor sales to minors. Coalitions and media advocacy techniques have been critical to the development and implementation of policy change.

"Media advocacy ... focuses on the power gap, viewing health problems as arising from a lack of power to create social change," states Lori Dorfman et al. of Berkeley Media Studies Group. "Media advocacy's target is the power gap. It attempts to motivate social and political involvement rather than changes in personal health behavior."[xl] Media advocacy is an integral part of a comprehensive prevention campaign. As Dorfman et al. explain, "[m]edia advocacy typically addresses short-term, pressing issues (e.g., a specific advertising campaign for a new, youth-oriented alcoholic beverage) only in the broader context of overall policy development and change."[xli]

The examples of political and legislative changes that have impacted prevention are many and varied. In general, policies that require safe practices, safety standards, and the use of safety equipment can dramatically reduce injury. For example, recent data demonstrate that California's mandatory motorcycle helmet law has reduced dramatically the number of serious and fatal head injuries.[xlii]

Several cities and counties throughout the United States have recently passed laws that regulate the conditions under which guns may be bought and sold in spite of powerful opposition from the major pro-gun lobby, the National Rifle Association. By reducing the availability of deadly weapons these new laws are helping to lower the toll of firearm death and injury. Equally important, these victories are building momentum for a more

comprehensive set of state and national gun regulations to stem the rising tide of firearm violence.

Communities intent upon lowering violence and other problems related to alcohol abuse have mounted campaigns to regulate the density of liquor outlets in their neighborhoods. The City of Oakland, California levies a tax on outlets to cover additional law enforcement costs associated with alcohol sales. Other examples include efforts to ban billboards that advertise alcohol on highways or in communities with a high risk for alcohol-related violence and other injuries.

SYNERGY: The Harbor Patrol has taken advantage of the introduction of a new law to educate the public about the dangers of steering a boat while intoxicated. Extensive news coverage of the new law, which increases the penalties for driving under the influence, informs the public of both the dangers and the penalties. The new law necessitated additional training of enforcement officers and in combination with the publicity, this policy is helping to reduce injuries.

TIP: Local policies can often be catalysts for regional and national reform. The successful implementation of a local policy often leads to its replication in other areas, a process that can create a groundswell of public opinion that attracts the attention of lawmakers.

Data and Evaluation

The Spectrum of Prevention's six levels comprise a strategy that together can improve health outcomes. To develop a successful strategy it is essential to first review the data and determine an appropriate set of objectives. During implementation, ongoing evaluation of the overall approach and the individual activities at each level of the Spectrum will provide information necessary for adjusting the strategy to best meet the objectives.

For example, after a young boy was crushed by a train, the community was ready to mobilize to prevent future recurrences from happening. However, after reviewing child injury data from that community, it became clear that train-related injuries were extremely rare, and many more children were killed by cars. As a result of looking at this data, a coalition formed to promote the safety of child pedestrians. Although the coalition initially focused its efforts on young children going to and from school, members later realized that children were at risk later in the day around neighborhood parks and so the coalition expanded its efforts to include neighborhood outreach.

At the design stage, when first beginning to strategize various activities along the Spectrum, it is very helpful to also identify ways to measure success and to gather input from participants and the affected community. Shifts in community norms and the effectiveness of coalitions, for instance, are difficult to measure, but the increasing development of process evaluations and survey tools can help to quantitatively evaluate prevention initiatives.

Conclusion

"The Spectrum of Prevention" was initially introduced in 1982 at a conference of health care leaders wanting to identify a more effective preventive approach. A training video, "Beyond Brochures: New Approaches to Prevention," was produced to document the conference proceedings.[xliii] In the video, which has been used widely for training students and staff, participants describe a "systems approach" and the Spectrum of Prevention methodology. Another resource for understanding and implementing the Spectrum is the paper, "Building Effective Coalitions: An Eight Step Guide."[xliv]

The Spectrum has been applied to health problems in communities throughout the United States and worldwide. In California, where the Spectrum was introduced, state-funded projects, from injury prevention to nutrition and fitness, have been required to use of the Spectrum of Prevention in program design and evaluation. The Spectrum has also been used in Requests For Proposals (RFPs) as a way to evaluate the merit of competing applicants.

Because of the growth of interest in a "systems approach," the Spectrum is increasingly applied to a variety of community health and social problems. The use of the Spectrum of Prevention to integrate the efforts of alcohol prevention and injury prevention offers hope for significant reduction of alcohol-related injuries.

Footnotes

[1] Unless otherwise noted, all statistics in this paper refer to the United States.

[2] These conferences have been coordinated by the Contra Costa County Prevention Program and the Annenberg School of Communication.

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