SUSTAINABILITY OF PREVENTION
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Abstract — This paper outlines the guidelines for sustaining prevention and makes suggestions for getting from the field’s current status to greater levels of permanence for prevention. The paper begins by reviewing the status of prevention, then focuses on major considerations for achieving sustainability, including two processes of institutionalization, comprehensive programming and professionalism. © 2000 Elsevier Science Ltd.

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STATUS OF PREVENTION

The field of prevention is in the enviable position of having an emerging portfolio of science-based prevention programs for which there is evidence of efficaciousness and/or sustained effectiveness, and an increasingly strong methodological foundation for the science of prevention. It is not feasible to list all of the programs for which some scientific about efficacy and/or effectiveness exists. Therefore, the following are listed as examples.

1. Life Skills Training (Botvin, Baker, Dusenbury, Botvin, & Diaz, 1995; Botvin, this issue).
2. Project STAR (Pentz et al., 1989).
3. The All Stars character and normative education program (www.tanglewood.net/products/allstars/ALL_STARS_Literature.htm).
8. The Fast Track Project (see Conduct Problems Prevention Research Group, this issue).
9. The Triple P Project (see Sanders, this issue).

There is also evidence concerning various environmental strategies (see Higher Education Center for Alcohol and Other Drug Prevention, 1997, and Holder, this issue). The increasing maturity of prevention science can be seen in the fact that many of the most impressive programs are theory-based, involve a randomized trial approach, have acceptable initial equivalence, test for effects of differential attrition, use psychometrically sound measures, and utilize state-of-the-art statistical techniques to assess efficacy and effectiveness over extended periods of follow-up. In spite of the progress that has been made in prevention science, there are still some rather large gaps and limitations in our knowledge base. We need more replication by independent evaluators, much better understanding and measurement of process and implementation variables, and greater attention to the mediating mechanisms and processes that account for long-term follow-up results. Decay of effects is still a problem in many studies.

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There are a number of guides that review promising or model programs. However, there is little consistency in the rules of evidence used in assessing these programs and even less consensus on the criteria used in creating guidelines for practice. The lack of a consistent message and consensus on rules of evidence for determining what works and for whom, has produced considerable confusion in the practice and policy communities. It is clear that we need a strong, clearly delineated, and broader consensus about the criteria for effectiveness. This would reduce some of the present confusion. However, evidence that progress is being made in bridging the gaps between science and practice can be seen in existing guide and guidelines.

2. The Center for Substance Abuse Prevention (CSAP) (1999) has developed criteria for effectiveness in its Prevention Enhancement Protocols Systems (PEPS) and applied them to prevention efforts in several domains. It has further identified model programs from its own portfolio of grantees (www.ncadi.org).
3. The Center for the Application of Prevention Technologies has developed a guide to model programs (2000).
5. The National Institute on Drug Abuse produced a set of prevention principles that also contains a list of prevention programs in its so-called Red Book (1997).
6. The U.S. Department of Education (2000) has produced a list of prevention principles and used these principles to determine programs that meet them (www.doe.gov).

Most of the efforts listed above begin with a list of prevention principles and then list programs that reflect the principles (National Institute on Drug Abuse, 1997). To date, there are no evaluations of the efficacy and effectiveness of prevention programs designed on the basis of explicitly stated prevention principles, implemented in real-world settings, with subjects followed over an extended period of time. It would be interesting to investigate the relative effectiveness of a program based on principles of prevention versus an established prevention program developed prior to the publication of these various lists of principles. This type of study would be process-oriented as opposed to a more tightly controlled outcome study of a “packaged” program.

Some progress has been made in prevention science and the development of criteria for assessing efficacy and effectiveness. Most funding agencies involved with prevention programming have advocated the adoption of effective prevention programs. In spite of these developments, a high percentage of school districts have adopted programs that have little or no scientific support. For example, a number of rigorous and scientifically credible studies have found no sustained effects on drug use and other important variables for the Drug Abuse Resistance Education (D.A.R.E.) fifth-grade program (e.g., Clayton, Cattarello, & Johnstone, 1996; Ennett, Tobler, Ringwalt, & Flewelling, 1994). In spite of mounting scientific evidence of ineffectiveness, D.A.R.E. is presumably used by 75% of school districts. A K–12 curriculum, Here’s Looking at You, 2000 (Comprehensive Health Education Foundation, 1990), that has not been adequately evaluated (Swisher, Doebler, Babbitt, & Walton, 1991), has reportedly been adopted in 25% of school districts.

D.A.R.E. America has updated its fifth grade curriculum with some positive results (Pennsylvania Commission on Crime & Delinquency, 1999) and has cooperated with a team of prevention researchers to completely revise the seventh-grade curriculum.
with funding from the Robert Wood Johnson Foundation. A new D.A.R.E. seventh-grade curriculum based on principles of effectiveness is being pilot-tested and will be subjected to a national longitudinal outcome study. The Comprehensive Health Education Foundation (CHEF) has also engaged in an evaluation of the impact of the Here’s Looking At You, 2000 (Comprehensive Health Education Foundation, 1990) curriculum.

PREVENTION SUSTAINABILITY

In spite of some reasons for optimism in the current situation, it is important for the field to develop a longer-term and more strategic view regarding how to sustain effective prevention programs that are now being implemented more widely than ever before. The focus of the remainder of this paper is on the sustainability of prevention. Although the issues regarding sustainability are listed as guidelines, they have not been empirically tested and are open to discussion and revision.

Guideline #1: Sustainability should be considered at the design stage of a prevention program

Given the current state of prevention science and the obvious need for diffusion strategies to bridge the gap between science and practice, it is apparent that some of the existing programs did not consider school or agency dynamics in their design. Strategic thinking about permanence should be an important agenda item at the outset for any new prevention endeavor. Rogers’ (1993) theory of diffusion of innovations makes this recommendation in the first stage of innovation development. The other four stages are dissemination, adoption, implementation, and maintenance. Rogers (1993) described the innovation development stage as the foundation for all the decisions that occur from conception through production. It is at this stage that questions about adoption, adaptation, and sustainability are raised and plans made to accomplish them.

Among the issues that need to be considered at this stage are personnel capacities, materials required, total costs, space needs, school or agency goals, the goodness of fit of a program, and time requirements for implementation. These types of issues become barriers to adoption and to permanence if not adequately addressed in the early stages.

Guideline #2: Long-term or permanent funding is essential to sustainability

Most of the better-known programs mentioned above have been extensively supported by federal, state, and/or private funding and have included randomized field trials or quasi-experimental designs. However, it is not an unusual occurrence for programs to lose their momentum and be discontinued within a short time after the external funding dries up and the experts move on to other projects. It is important to recognize that even grants that provide 5 years of funding represent a relatively short time in the life of a community. This being so, it makes good strategic sense for funding agencies to require a local commitment that increases over the life of a grant so that when one source of funding ceases there is another funding stream to continue the programming effort. Another reason many research-based programs were never
disseminated is that researchers are generally not rewarded by their institutions for dissemination activities.

It has been estimated (Swisher & Goplerud, 1995) that the U.S. federal government directly manages only 2% of all prevention and treatment expenditures for substance abuse and mental health. The other 98% is accounted for by insurance companies, state budgets, philanthropic organizations, and local community and school budgets. In fact, most local prevention initiatives are managed and funded by local school districts (e.g., the health curriculum) and community agencies. The best chances for achieving sustainability of prevention is by obtaining local funding. However, acquiring access to those dollars requires an understanding of how school districts and community agencies make funding decisions, and a willingness to become involved in the decision-making process. Furthermore, in order to avoid budget cuts, prevention programs need to be viewed as central to the mission of the school or community agency. Unfortunately, it is clearly easier to hire security personnel and purchase weapon detectors than to implement new prevention programs, particularly if the programs place considerable demands on agency resources and personnel.

Guideline #3: Sustainability can be achieved through a systematic process of institutionalization

The business world has long recognized a stage in the life history of a business when the “entrepreneur” who started the business is well-advised to turn over the management of the enterprise to specialists. This often stabilizes and sometimes diversifies a business. Prevention “entrepreneurs” may need to consider how they can begin a shift to a leadership and management style so their product, in most cases a prevention program or programs, can become more effectively institutionalized.

The process by which prevention becomes institutionalized within a school or community agency should be a topic of strategic consideration in the early stages of program planning and implementation. Over time there are several elements that need to be addressed. These often require knowledge of budgeting procedures and cycles, personnel procedure, and how a given agency or school makes decisions.

Elements of institutionalization include:

- Being a line item in the permanent agency budget.
- Having a place in the agency’s organization chart.
- Having personnel or full time equivalents (FTEs) assigned to specific prevention tasks.
- Having position descriptions that include prevention functions and level of effort.
- Having facilities and equipment for program operations.
- Developing an institutional memory for important agreements and understandings.

Guideline #4: Sustainability can be achieved through systematic professional development for practitioners and scientists

Professional development, including certification and degree programs for prevention practitioners and researchers, are not issues usually considered important by prevention researchers, except to maximize the implementation of a particular research project. This is unfortunate. We suggest that the academics in prevention have a special responsibility to provide professional development programs through credit courses that are or become a permanent part of higher education and that leads to certification and/or degrees for teachers and prevention specialists, as well as researchers. For
example, Penn State has developed a master’s program in chemical dependency counseling with program options that emphasize either treatment or prevention. However, relatively few programs similar to the one at Penn State are available nationwide. We believe that education majors in preservice training should be introduced to prevention principles and methodologies. Currently, most colleges of education are not providing this type of professional development.

Professional development programs for practitioners in addictions treatment are often subsumed under mental health or rehabilitation. Consequently, prevention as an option is rarely offered. Public health and health education departments have many health issues to consider other than substance abuse prevention, and the evolving science-based prevention practice is often not a high priority, or even included. It would be helpful for the field to clearly identify the critical concepts in prevention and critical elements of effective prevention strategies and programs, and to provide them through formal education. To date, government-sponsored training centers have not led to the sustainability of prevention. CSAP’s grant program for course development by faculty is an example in this domain, but more comprehensive efforts need to include certificate and degree programs. As part of this professional development effort, consideration should also be given to more effective continuing education programming with greater reach and rigor, perhaps utilizing distance learning approaches.

**Guideline #5: Sustainable prevention programs are comprehensive and inclusive**

There has been a continuing debate in the substance abuse field about how best to distribute or redistribute the existing resources between supply reduction and demand reduction initiatives. Within the demand reduction part of the field, this debate has most often involved debate about the relative return from investment in treatment, criminal justice, and law enforcement, and prevention initiatives. This has developed and persisted over the years without much effort devoted to rapprochement or the articulation of a comprehensive policy framework. Then there is the contentious issue of developing a strategy for increasing resources. The consequence is a pervasive mistrust, frequent interdisciplinary criticism about the relative efficacy of competing approaches to solutions to the problems; a diversion from the issues and problems that make us all more similar than different. This situation has not served the substance abuse field well and has produced a zero-sum game regarding total resources. A strategy (including partnerships) at several levels that advances all three domains (prevention, treatment, and criminal justice and law enforcement) would allow the field to become more comprehensive and inclusive.

There is also a need to develop interdisciplinary projects with prevention scientists and practitioners in fields that clearly overlap with prevention. For example, communication and assertiveness skills are central to substance abuse prevention, violence prevention, pregnancy prevention, and suicide prevention (Dryfoos, 1990). These and other skills have been used to enhance youth development and/or restore development (e.g., Battistich et al., 1997). One of the barriers for interdisciplinary projects is that prevention funding is often compartmentalized bureaucratically, with funding for clearly interrelated problems housed in different silos. Funding for prevention of various social problems doesn’t at all resemble the clustering of these problems at the individual level, nor the ways that the existing services infrastructure deals with them at the local level. The prevention field must provide the conceptual architecture and the committed and persuasive leadership to integrate these problem domains in ways that take into consideration the patchwork quilt that characterizes the federal and state
agencies that fund prevention programming. If it is not possible to create a new approach to prevention, then our efforts should perhaps be devoted to creating mechanisms by which different agencies with different legislatively driven mandates are able to collaborate to more closely reflect the distribution of problems in the real world. The emerging emphasis on inter- and multidisciplinary strategies and programs in the Society for Prevention Research is an important step in the right direction, with the potential for making an important contribution to the field.

In addition, and especially if greater emphasis on interdisciplinary collaboration occurs, it is important to clarify and introduce greater specificity regarding the issues of best practices. Some of these issues can obviously be resolved through further empirical research. However, researchers need to be more aware of and sensitive to how their debates about the relative importance of assertiveness versus normative awareness versus environmental strategies confuse and undermine the confidence of prevention practitioners. These debates often fall into “silver bullet” thinking, a rather constant problem to date. Researchers funded under the current NIDA grant announcement regarding component analyses will have to carefully consider how to avoid this same problem. Clearly, substance abuse problems did not emerge overnight, nor are they about to disappear quickly. This complex nexus of bio-psycho-social problems will be more effectively and efficiently addressed as the field matures and becomes more inclusive and comprehensive.

**Guideline #6: Sustainable prevention is less oriented to immediate crises**

In the 1980s the substance abuse field expanded considerably and thrived because drug use and abuse, especially among youth, was listed in most polls as the number one fear among parents. As a result of this ranking, considerable interest in and support for treatment, criminal justice and law enforcement, and prevention initiatives emerged. However, the relative ranking of various social problems by the American public is not exactly stable. In the past several years, violence has emerged as a top priority on the public’s menu of fears and concerns. The result is that substance abuse is no longer as high a priority in many federal or state agencies as it once was.

There is increasing recognition among scientists and practitioners in various parts of the substance abuse field, including prevention, that the strident rhetoric about the “War on Drugs” and “Drug Czars” has not served any of us well. Further, there is a tendency for the media and the public to experience “issue burnout.” As long as the prevailing rhetoric prevails, it will become increasingly difficult to keep the public’s attention and concern focused on substance abuse issues. An example of this problem is that the recent slight increase in heroin use among adolescents has contributed to the misperception that heroin is now the drug of choice among adolescents in the United States. A greater effort could be made to educate the public and to maintain a sense of perspective and proportionality about drug problems in general so that we are all less likely to misread the situation. The manner in which trends are described ought to help the public gain a better understanding of the overall patterns of use of various substances, not just scare them.

**Guideline #7: Sustainable prevention is woven into the fabric of community agencies and schools**

At this point in time, most prevention programming has been developed under controlled conditions. However, such programs must be “adaptable” in order to be “adopted” (Rogers, 1993). Furthermore, when a community agency or school is ap-
proached about adopting a specific prevention program, it is important that the central mission of that organization be a decisive factor in how a program can be woven into the fabric of that organization. This is perhaps best illustrated by the fact that prevention programs have been successfully adopted and become a permanent feature of a variety of youth-serving organizations. For example, although schools are increasingly focused almost exclusively on accountability and meeting academic achievement goals, almost all schools have active prevention programming. The same is true of the scouting organizations and the Boys and Girls Clubs of America.

Sustainability is more likely to occur if the program can be adapted to the format and the usual pattern and cadence of activities of the agency. Researchers on a current NIDA project (Swisher, Bechtel, Henry, Vicary, & Smith, in press) have been working with teachers to develop lessons that embody a basic instructional objective and a prevention objective simultaneously. For example, English teachers have taken vocabulary lists related to the short-term risks of alcohol, tobacco, and other drug use, and have woven them into their standard approach to teaching vocabulary (i.e., using the words in sentences and/or stories). Math teachers have been using normative substance use data to teach about charts and graphs. A geography teacher analyzed the Coors ad with the Rocky Mountains in the background as an introduction to the Rockies, combining it with a focus on advertising resistance. Students in a social studies course learned about the risks of smoking by discussing the current legal issues faced by the tobacco industry. One advantage of this approach is that there is a potential for increased program dosage. At a single grade level, five teachers developed five lessons, each of which provided greater exposure than one teacher offering the standard 15 lessons. This approach was also less of a burden on any one teacher. Another potential advantage of this approach is that prevention was woven into multiple curricula, not a very visible add-on, totally unintegrated into the adult-controlled world of the school. Furthermore, the program is more likely to become institutionalized and a permanent part of the curriculum using this approach and strategy.

Guideline #8: Sustainable prevention will require the continuing evolution of a profession

Permanence for prevention will necessitate the emergence of a new profession with members who function at a variety of levels, including practitioners, practitioner educators, and researchers. Many professions have evolved from a practice (e.g., medicine) and the scientific foundations have followed later. The occupation of prevention is emerging as a profession with simultaneous developments in practice and research that contribute to the large gap between research knowledge and best practices. Professions are characterized by the following (Swisher, 1970):

1. A theoretical foundation.
2. A research base to guide practice.
3. An extended period of training.
4. Specialization.
5. Social authorization.

As mentioned previously, the prevention field has an emerging research base that has been largely theory-driven. However, the field is not as strong in providing training and recognizing levels of specialization. At present, the field lacks social authorization to ensure the delivery of science-based and effective prevention services to the public, and to limit the delivery of prevention services to certified practitioners.
CONCLUSION

The last century was an interesting one for the field of prevention with the introduction and repeal of prohibition, the relatively recent emergence of normative proscriptions against tobacco use in most social and professional settings, the War on Drugs, the “medicalization” of marijuana, and the arrival of the science of prevention. The future is obviously very difficult to predict. However, leaders in the prevention field will need to think strategically about how to achieve more permanence for prevention at all levels, taking into consideration the issues of institutionalization and professionalization. How we in the prevention field deal with these issues will set parameters on the nature and extent of the contributions made by prevention in this new century.

REFERENCES


