

**TOWARDS A FRAMEWORK FOR PREVENTION:
PRINCIPLES, APPROACHES, OR PROGRAMS**

Karol L. Kumpfer, Ph.D.
Director, Center for Substance Abuse Prevention

Introduction

After 20 years of successful research, the prevention field is calling for a synthesis of knowledge on what works. A major gap still exists between what is being provided to youth and families in communities and what the researchers know really works. Primarily commercially marketed, but untested programs are being implemented with the unfortunate outcome of unpredictably affecting behavioral and substance abuse problems in adolescents. In an effort to help "bridge this gap between research and practice," ONDCP, CSAP, and other federal and state agencies are disseminating information on what works in prevention.

There are several different levels of specificity concerning what works in prevention and considerable debate exists on how to disseminate best practices--principles, approaches, or programs/policies. In order to clarify concepts and frame the debate, the different levels or types of knowledge synthesis for best practices, which are frequently confused, include the following:

Principles of Effective Programs

This concept of "principles of effectiveness" generally includes characteristics of prevention programs that have positive outcome results as extracted from reviews of the research literature. A number of federal agencies (CSAP, NIDA, DoEd, & OJJDP) have created their own lists of prevention principles; however, Goal 1, Objective 9 of the National Drug Control Strategy, requires ONDCP to assess and compare these principles across agencies and to collapse them into a single set of categories of principles. By September 24, 1997 a matrix had been created by ONDCP staff, chaired by June Sivilli. Then a working group of experts (Botvin, Pentz, Kumpfer, etc.) in drug abuse prevention developed a set of "principles" relevant to the field. These principles plus the Principles of Demand Reduction developed by the United Nations Drug Control Program were added to the matrix and presented to an Interagency Working Group to develop a common set of "National Prevention Principles."

In addition, researchers are also publishing principles of prevention, such as Drs. Wandersman and Kumpfer, who have worked with graduate students at the University of South Carolina for two years to review all the different areas of prevention (i.e., tobacco, alcohol and drug abuse, delinquency, mental health, teen pregnancy, violence, etc.) and to determine common principles across these different outcome areas (Nation, et al., in press, Special Issue on Prevention of American Psychologist). In the process of synthesizing lists, it became clear

that each list contained different types or categories of "principles of effectiveness," namely:

1. **Principles of Effective Program Designs.** Characteristics of programs with successful outcomes across many different types of programs or domains, such as the Nation, Wandersman, Kumpfer, et al. list, and CSAP's principles based on analyses of their High Risk Youth Demonstration Program. Examples include: 1) the most effective programs are comprehensive, coordinated prevention programs that address locally determined primary precursors of the problem area, 2) science-based programs that are gender-, developmentally-, geographically-, and culturally-relevant or tailored are most effective, 3) the more risk factors in a population the more enduring and intensive the program interventions need to be, 4) behavioral skills training methods using interactive teaching methods are more effective than didactic methods, and 5) programs changing the family, school, and community environment are more enduring than programs that only change individual skills or attitudes.
2. **Principles of Effective Program Management or Implementation.** These lists include principles of effective program management which are accountability and evaluation oriented. DoEd's Principles of Effectiveness follow this model as well as the second set of principles of effective implementation in the Nation and associates American Psychologist paper. The HHS Interagency Workgroup document on "Science on the Same Page" identifies key characteristics addressing intervention implementation as does OJJDP's Comprehensive Strategy for Serious, Violent, and Chronic Juvenile Offenders. Examples of implementation principles include: 1) programs utilizing well trained staff will be more effective, 2) science-based prevention programs must be implemented with fidelity to be maximally effective, and 3) rigorous evaluations are needed to provide implementation feedback for corrections in implementation and to judge outcomes.

Principles of Effectiveness by Program Domains

Another way to describe principles of effectiveness is not to determine global principles across all prevention approaches, but to extract from the research literature more specific guidelines or principles by different domains of programs, such as school-based approaches, family-based approaches, environmentally-based approaches, etc. This approach to principles by domains of program approaches characterizes the CSAP principles lists at the end of Science-based Practices in Substance Abuse Prevention: A Guide (Brounstein, Gardner, and Zweig, 1998) and the principles lists in NIDA's Preventing Drug Use Among Children and Adolescents: A Research-Based Guide (NIDA/Sloboda & Davidson, 1997).

Guidelines and Criteria for Effective Program Types, Approaches or Strategies.

Another type of guideline for best practices include expert reviews that determine whether a particular approach or strategy to prevention has a sufficient level of evidence of effectiveness in the research literature to warrant recommendations to the field for implementation. This type of approach characterizes CSAP's Prevention Enhancement Protocols System (PEPS) series of expert reviews of approaches in the area of family, school, environmental policy, and mass media approaches. The family-based PEPS, entitled Family-Based Approaches to Prevention was published last year (CSAP, 1998). Three other PEPS Guidelines, namely Preventing Problems Related to Retail Alcohol Availability, Mass-media Approaches to Substance Abuse Prevention, and School-Based Strategies for Substance Abuse Prevention are scheduled for completion by July, 1999. To clarify what is meant by an approach or strategy, the family-based research review first categorized about ten different approaches, including: parent education, parent support, behavior parent training, affective parent training, family support, in-home family support, family education, family skills training, and several types of family therapy. The expert panel comprised of practitioners and researchers chaired by Drs. Kumpfer and Szapocznik concluded that only three of these approaches had the highest level of evidence of effectiveness, namely: 1) behavioral parent training, 2) family skills training, and 3) behavioral family therapy. In-home family support met a medium level of evidence of effectiveness.

Criteria for Level of Evidence of Effectiveness. A **"strong"** level of evidence of effectiveness was determined by finding positive results in at least three well-executed studies employing true-experimental designs by three different research groups. A **"medium"** level of evidence of effectiveness was determined by two well-executed studies with experimental or quasi-experimental designs by two different research groups or one experimental study and three prevention case studies showing statistically significant or qualitatively clear outcome effects on the major precursors of drug use using at least two different methodologies. A low level of evidence of effectiveness called, **"Suggestive but Insufficient Evidence"** was characterized by a promising practice model which does not meet the other two higher levels of evidence, but needs additional research because of insufficient numbers of studies with experimental designs, or equivocal results. A fourth level **"Substantial Evidence of Ineffectiveness"** includes approaches with good evaluation designs, but either no evidence of effectiveness or statistically significant negative effects in at least two well-executed studies with sufficient sample sizes.

Program Interventions

Another approach to dissemination or marketing of best practices is to actually list those programs that have evidence of effectiveness. Most federal agencies in the area of substance abuse prevention have published their lists of best practices, such as OJJDP's Blueprints (Elliot, et.al., 1998), Strengthening America's Families Initiative (Kumpfer & Alvarado, 1993; 1997), and Comprehensive Strategy for Serious, Violent, and Chronic Juvenile Offenders (Hawkins, et al.,

1996?), CSAP's Here's Proof Prevention Works (CSAP, 1999) listing eight model programs, and the ten exemplary programs listed in NIDA's Preventing Drug Use Among Children and Adolescents: A Research-Based Guide (NIDA/Sloboda & Davidson, 1997). The SAMHSA Center for Mental Health Services (CMHS) has recently compiled a listing of all of these lists of effective programs across a number of different federal agencies. While there are many overlapping programs mentioned in each list, which is reassuring, there are different best practice programs listed by each federal agency, because they are targeting programs:

- ! **Addressing Overlapping, but Some Unique Precursors** of the area of youth problems that their agency is authorized to address, such as delinquency, substance abuse, alcohol abuse, teen pregnancy, mental health problems, etc. The overlapping programs in the lists occur happily because there are many overlapping precursors of problems in youth and adults.
- ! **Using Different Criteria for Judging Effectiveness.** Each of the expert reviews uses their own set of criteria by which to determine best practices. This is a major issue in this area of knowledge synthesis that needs to be addressed by ONDCP, possibly in conjunction with the Robert Wood Johnson Foundation and the Society for Prevention Research as they are proposing to address this issue.
- ! **Different Terminology for Levels of Evidence of Effectiveness.** Even if agencies use the same criteria, they need to use the same terms for the different levels of effective programs. Some agencies such as OJJDP's Strengthening America's Families Project (www.strengtheningfamilies.org) use the term "exemplary" to describe only those programs with positive results in true randomized control experimental designs, leaving the terms "model" for those with positive results from "quasi-experimental" designs, and "promising" to those programs with non-experimental designs. CSAP's new Here's Proof Prevention Works, however, used the terms "model" for the highest level of effectiveness, but a number of the eight studies listed had only quasi-experimental designs. Standard terminology is needed for the prevention field.
- ! **Different Data Bases.** It is difficult to do a completely exhaustive search of the published and unpublished literature for best practices, hence, federal agencies and states are working with different lists. To rectify this several agencies have conducted national calls for effective practices including CSAPs new call on a web site for their National Registry of Effective Prevention Programs at www.preventionregistry.org. CSAP and OJJDP have collaborated on the FACES project, a national website registry of federally-funded projects.

! **Different Coding Systems.** Each of these data bases has to code the characteristics of programs into their computerized databases and each uses a different categorization scheme. The Society for Prevention Research through their International Classification of Prevention Project by Pat Mrazek and Hendricks Brown have worked for over a year with experts to create an extensive coding scheme for all prevention trials. They hope to be funded by Robert Wood Johnson Foundation to apply this coding scheme to classify the different aspects of best practices for the prevention field as a whole.

Computerized Prevention Decision Support Systems

Practitioners are hungry for science-based models and in many cases are being mandated by their county, state or federal governments to implement a science-based model. Unfortunately, they may be prone to implement any model that looks good to them. It is not sufficient for practitioners to implement just any science-based model. To be maximally accountable and effective with their public funds, they need to implement the best science-based model that matches the assessed needs in their target population. This means developing criteria for effectiveness by different target populations in a computerized expert system through knowledge engineering, rather than just paper or internet lists of effective prevention programs or approaches. For this reason, CSAP is currently developing a Substance Abuse Prevention Decision Support System that will take practitioners all the way from needs assessment, resource gap analysis, logic models, program selection, program technical assistance and training by internet, outcome and process measures, data analysis, report writing, and grant writing in a single integrated web-based decision support system. CD-ROM versions will also be available to practitioners without access to the web. CSAP is looking for partners in this project.

Conclusion

In order to have "Science on the Same Page," the different federal agencies and other interested parties, such as states, foundations, and researchers, need to come to consensus on terminology around best practices. This paper begins to clarify some of the areas of confusion and areas where consensus panels are needed. According to Tom Vischi at HHS, "There is an embarrassment of riches in the prevention field" after twenty years of solid research. We have considerable research and evidence of best practices, but we need to be clear and reach more consensus on best practices so as not to confuse the field." This framework for best practices will begin to address this issue.