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Creating School and Community Partnerships for Substance Abuse Prevention Programs

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The article reviews the scope and scale of the problem, explores a transactional view of etiology, and summarizes the prevailing approaches to prevention, exemplary and promising approaches, and standards for research and practice. The authors stress the importance of addressing the complexity of the problem through creation of comprehensive, multifaceted approaches to reduce substance abuse. Effective intervention frameworks are presented that weave together the resources of school, home, and community.

KEY WORDS: substance abuse; prevention; school; home; community; comprehensive; transactional.

In a National Institute on Drug Abuse Report to Congress (1999), Director Alan Lesher states: "Scientific advances have contributed greatly to our understanding of drug use and addiction, but there will never be a 'magic bullet' capable of making these problems disappear. Drug use and addiction are complex social and public health issues, and they require multifaceted approaches."

The purpose of this article is to discuss comprehensive, multifaceted approaches to reduce substance abuse. In particular, the emphasis is on approaches that weave together the resources of school, home, and community. As a basis for this discussion, we begin by briefly summarizing the state of the art and some major issues relevant to substance abuse prevention.

SUBSTANCE ABUSE PREVENTION: STATE OF THE ART

In exploring the state of affairs, we start with a review of how the problem of substance abuse is presented and understood. The emphasis here is on the scope

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and scale of drug use by youngsters in the United States and on a transactional (i.e., reciprocal determinist) view of etiology. We then look at the prevailing approaches to prevention and the movements to identify exemplary and promising approaches and establish higher standards for research and practice.

Social Norms and Sanctions and the "War" on Drugs

We begin by differentiating between use and abuse. Almost everyone uses "drugs" in some form, such as over-the-counter and prescription medications, caffeinated products, and so forth. Clearly, it is not use of such substances that is at issue with the majority of society. For the most part, society's concern is with those who use substances excessively or are involved with illegal drugs (MacCoun & Reuter, 1998; McBride, VanderWaal, Terry, & Van Buren, 1999). In this latter group are youth who access substances such as nicotine and alcohol products that are legal for adults but illegal for minors.

At schools, additional concerns arise because of the role schools play in socializing the young and because substance abuse is associated with poor school performance, interpersonal violence, and other forms of negative activity (Chandler, Chapman, Rand, & Taylor, 1998; Lowry, Cohen, Modzeleski, Kann, Collins, & Kolbe, 1999). The irony is that, while schools campaign and legislate against drugs, the surrounding society appears to sanction and glamorize many substances. The impact of all this with respect to substance use is compounded by the penchant of many young people to be curious and to experiment and test limits.

Moreover, the economics surrounding legal substances guarantee the ongoing operation of major market forces and advertisement designed to counter the impact of efforts to convince youngsters not to use. Although tobacco ads are being curtailed in the United States, mass media campaigns for alcohol and over-the-counter drugs and increasingly even for prescription drugs is omnipresent. Thus, youngsters are warned of the evils of substance use, while being bombarded with potent, pro-use commercial messages and provided relatively easy access to a wide range of substances. In addition, widespread use of prescribed medications for children and adolescents probably counters perceptions that drugs are dangerous. And, not surprisingly, the increased number of prescriptions has expanded the supply of drugs available for abuse.

Then, there is the business of trafficking in illegal drugs. Selling illicit drugs is a lucrative business enterprise. So much so that in some places the underground economy and life style of substance use is well-integrated into the daily life of the neighborhood.

Given the powerful forces operating around substance use, decisions about how to address substance abuse remain politically controversial. The ongoing debate is reflected in arguments about the "war on drugs," zero tolerance policies, drug use decriminalization, the value of prevention and treatment programs, and so forth.

In schools, concern about drugs translates into a variety of strategies, some of which are proactive, some of which are reactive, and almost all of which have little research supporting cost effectiveness or clarifying negative side effects (Brown & Kreft, 1998; Gorman, 1998; Rosenbaum & Hanson, 1998). Some critics hypothesize that the financial costs and negative consequences of prevailing strategies probably outweigh whatever benefits are accrued (Brown & Kreft, 1998; Weinberg, Rahdert, Colliver, & Glantz, 1998).

How the Problem is Presented and Understood

How big a problem is substance abuse? What leads to such abuse? Answers to these questions remain debatable. A sense of the nature and scope of substance use is provided by government-sponsored surveys, such as the Monitoring the Future Study (e.g., Johnston, O'Malley, & Bachman, 1999), the National Household Survey on Drug Abuse (e.g., Office of Applied Studies, 1998), the Partnership Attitude Tracking Study (e.g., Partnership for a Drug-Free American, 1999), and the Youth Risk Behavior Surveillance System (Centers for Disease Control and Prevention, e.g., Kann, Kinchen, Williams, et al., 1998). Such surveys have obvious limitations, and marked differences in some of the findings reported underscore the need to look for consensus across surveys. Nevertheless, the findings constitute the most comprehensive data sets available on the use of substances and are commonly cited in policy discussions.

Prevalence of Drug Use

A few findings suffice to highlight the current state of affairs. In 1998, the National Household Survey on Drug Abuse (NHSDA) estimated that nearly 36% of all Americans older than age 11 report having tried illicit drugs, but only 11% used during the past year and only 6% used during the past month. (The overall figures are similar to those reported in 1996 and 1997.) Conclusions based on the NHSDA survey data suggest that many try illicit drugs but few become regular users. The national MTF survey done in 1998 (focusing on 8th, 10th, and 12th graders) concluded that illicit drug use among secondary students was declining after six years of steady increases; the 1999 MTF survey, with a few exceptions, reports little change over the preceding year, especially with respect to use of marijuana, amphetamines, hallucinogens, tranquilizers, and heroin. The overall picture of use that can be extrapolated from available MTF evidence is that, in 1999, as many as 20% of older youth (16 to 20 years of age) are users of illicit drugs and at least as many are smoking cigarettes. The MTF data indicate that approximately one in four 12th graders, one in five 10th graders, and about one in eight 8th graders used an illicit drug in the past 30 days. It also appears that children are trying drugs at younger ages (in addition to the MTF data, see Loveland-Cheery,

Leech, Laetz, & Dielman, 1996; McDermott, Clark-Alexander, Westhoff, & Eaton, 1999).

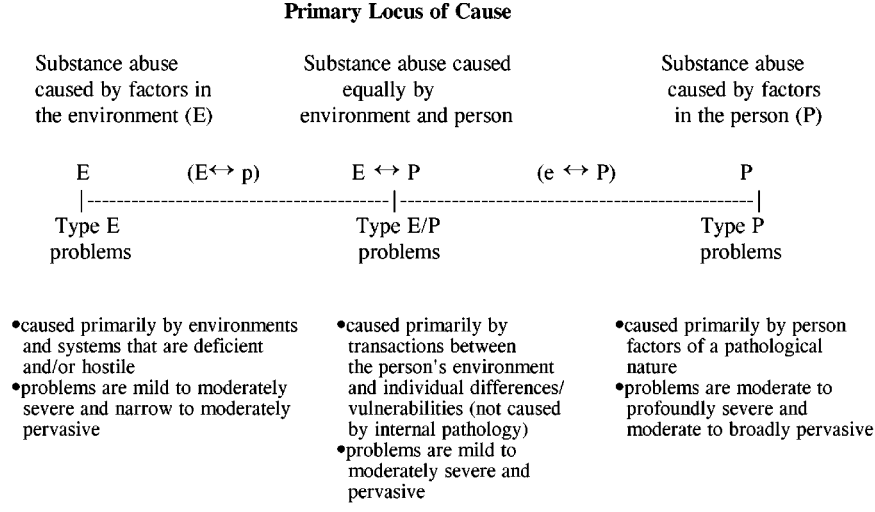
Fortunately, the picture that emerges from the various surveys suggests that the majority of youngsters will not become addicted to illicit drugs. At the same time, in the absence of intervention, it is probable that almost half of teens who smoke will continue to smoke, and significant numbers will use and abuse alcohol as they grow older. In this last respect, we also note that the Division of Biometry and Epidemiology of the National Institute on Alcohol Abuse and Alcoholism, using data from a 1992 national survey, estimates that approximately one in four children (about 17 million) is exposed to familial alcohol abuse and/or dependence prior to age 18 (National Institute of Health, 1999).

Although available epidemiological findings are limited, the reality is that little data are needed to support the notion that efforts should be made to minimize substance abuse. It is evident that few schools and neighborhoods have escaped significant complications related to the various ways substance use and abuse have permeated daily life. Not so evident, however, are the etiological bases of the problem and what accounts for fluctuations in rates when they occur.

Determinants of Substance Use and Abuse

A review of the extensive literature focused on improving understanding and intervention related to drug use and abuse underscores the variety of transacting factors that lead to the behavior and, for some users, addiction (e.g., Catalano, Kosterman, Hawkins, et al, 1996; Ciccheti & Rogosch, 1999; Deci & Ryan, 1987; Glantz & Hartel, 1999; Hansen, Rose, & Dryfoos, 1993; Hawkins, Catalano, & Miller, 1992; Institute of Medicine, 1996; Johnson & Pandina, 1993; National Institute on Drug Abuse, 1999; Petraitis & Flay, 1995; Weinberg, Rahdert, Colliver, & Glantz, 1998). Both proactive and reactive motivational models have been postulated within theories that emphasize biological, genetic, social, psychological, and environmental factors. Moreover, it is widely recognized that the same etiological factor(s) can produce a variety of problem behaviors and that several of these can co-occur, often exacerbating each other (e.g., delinquency, substance abuse, violence, comorbidity of mental disorders). Relatedly, it is clear that the same behavior may be caused by different factors (Donovan, Jessor, & Costa, 1988; Elliot, Huizinga, & Menard, 1988; Loeber, Stouthamer-Loeber, & White, 1999; SAMHSA, 1997; Weinberg & Glantz, 1999).

No specific factors have been established as predetermining drug abuse. Therefore, rather than reviewing the host of variables under study, we think it more useful, from a broad perspective, to start with a developmentally-oriented, transactional view of the determinants of behavior. Such a view stresses that substance abusers can be grouped along a continuum. At one end are those for whom internal factors are the primary determinants of the behavior; at the other end is a



In this conceptual scheme, the emphasis in each case is on problems that are beyond the early stage of onset.

Examples:

Type E problem – a neighborhood where there are not strong norms against the use of substance abuse and where illicit drugs are easily accessed.

Type E/P problem – a youngster who is not doing well academically and who then gravitates to peers who also are not doing well and who are involved in abuse of substances.

Type P problem – a youngster who is susceptible, psychologically and/or physiologically, to addictive behavior.

Adapted from: H.S. Adelman and L. Taylor (1993). *Learning problems and learning disabilities: Moving forward*. Pacific Grove, CA: Brooks/Cole.

Fig. 1. A continuum of substance abuse reflecting a transactional view of the locus of primary instigating factors.

group for whom environmental factors are the primary determinants; and at each point along the continuum, there are persons for whom some degree of transaction between internal and environmental factors determine the behavior (Adelman & Taylor, 1993, 1994).

As illustrated in Fig. 1, substance abuse originating from environmental factors is designated at one end of the continuum and is referred to as a Type E problem. At the other end is abuse stemming primarily from factors within the person—called Type P. In the middle are problems arising from a relatively equal

contribution of environmental and person sources, labeled Type E/P problems. It is yet to be empirically determined how many fall into each of these groups. However, generalizing from the literature on psychopathology, it seems likely that only a small percentage of substance abuse is *caused primarily by internal factors within a person* (i.e., a Type P problem). Youngsters are socialized by those around them. They respond to competing environmental options. Thus, as with other psychosocial problems, there is a significant group at the other end of the continuum whose substance abuse arises primarily from factors outside the person (i.e., a Type E problem). Such factors always should be considered in hypothesizing and assessing what *initially* caused a given person's behavior. By first ruling out environmental causes, hypotheses about internal factors become more viable. The majority of substance abuse probably reflects varying degrees of environment-person transactions. That is, at each point between the extreme ends, environment-person transactions are the cause, but the degree to which each contributes to the problem varies. Toward the environment end of the continuum, environmental factors play a bigger role (represented as E $\leftrightarrow$ p). Toward the other end, person variables account for more of the problem (thus e $\leftrightarrow$ P).

Clearly, a simple continuum cannot do justice to the complexities of differentiating and labeling human behavior and designing interventions that fit specific needs. This conceptual scheme does, however, suggest the value of starting with a broad model of cause. In particular, it helps counter tendencies to jump prematurely to the conclusion that an individual's substance abuse is caused by internal deficiencies or pathology. It also helps highlight the notion that improving the environment may be sufficient to prevent many problems.

Discussions of risk and protective factors related to drug abuse and other problem behaviors reflect a transactional model. Such thinking emphasizes not only factors internal to individuals, but environmental factors related to school, home, and neighborhood, and stresses complex transactions between both classes of variables. Researchers, policy makers, and practitioners are especially interested in the interplay between biological and psychosocial risk factors in understanding cause and in protective factors as risk mediators (Coie, Watt, West, Hawkins, et al., 1993; Glantz & Sloboda, 1999; Institute of Medicine, 1994; Masten & Coatsworth, 1998; National Institute on Drug Abuse, 1999; Pandina, 1998). At this stage, the evidence suggests that the more risk factors that are at play, the less likely it is that an accumulated set of protective factors can counteract their impact (Center for Substance Abuse Prevention, 1993, 1999).

Hawkins, Catalano, and Miller (1992) provide a research-based discussion of common risk and protective variables relevant to substance abuse prevention. Among the environmental variables identified by researchers as common risks are such community/school/family factors as norms favorable toward drug use, availability of drugs, extreme economic deprivation, high levels of mobility, low neighborhood attachment and community organization, friends who engage in the

problem behavior, academic failure, family histories of the problem behavior, and family conflict. Person factors include various differences and vulnerabilities as manifested in behaviors seen as reflecting elevated degrees of withdrawal, alienation, impulsiveness, defiance, aggression, poor school performance, and so forth. It is essential to remember that the various correlates have limited predictive value. As a recent report from NIDA (National Institute on Drug Abuse, 1999) cogently states, a list of such factors "does not give much insight into how risk factors operate for individuals and groups because it does not consider the embeddedness of individuals in contexts that may place them at risk, the active role that individuals play in their own development through interactions and transactions within the social environment, developmental stages of individuals, and individual differences in the susceptibility to type and number of risks. Moreover, for many years the risk factor focus did not consider the influence of protective or resiliency factors . . . [such as] a stable temperament, a high degree of motivation, a strong parent-child bond, consistent parental supervision and discipline, bonding to prosocial institutions, association with peers who hold conventional attitudes . . . "(p. 45). (See the NIDA report for more discussion of etiology covering individual, family, peer group, school, and special population considerations.)

Finally and ironically, we note that an underlying motivational view leads to contrasting hypotheses about causal links between prevention efforts and substance experimentation. One view suggests that anti-substance abuse messages lead some youngsters to proactively seek out the experience. The other view hypothesizes that youngsters perceive such messages as filled with half truths and as attempts to indoctrinate them, and this leads to a form of psychological *reactance* motivating substance use. Neither of these hypotheses have been researched directly; they are extrapolated from theorizing about what motivates human behavior (e,g., see Brehm & Brehm, 1981; Deci & Ryan, 1985).

Prevailing Approaches to Prevention

School-based interventions are widely advocated to prevent substance abuse. Because of interest in making schools safe and drug free, most programs focus on preventing substance abuse and violence by reducing risks/stressors and enhancing protective factors. From a developmental perspective, advocates argue for beginning programs in elementary school and perhaps even before (e.g., Frankel, 1998; Schaps & Battistich, 1991).

The Many Facets of Substance Abuse Prevention

Prevention initiatives vary in many ways. The emphasis may be on primary prevention of substance use through "universal" programs for the general population, "selective" programs that target specific groups seen as "at risk," or

"indicated" programs whose preventive focus is on interrupting drug use (e.g., ending drug experimentation, stopping a progression to drug abuse, minimizing the impact of drug abuse, reducing the likelihood of future co-occuring problems or relapse for those who have stopped). Thus, at a school, some initiatives may be school-wide with the intent of having an impact on all students; others may be limited to a classroom; others may target a specific group. In each instance, various strategies may be used to promote healthy development or address factors interfering with positive functioning. Elsewhere, we outline key categories as an aid in analyzing school-oriented prevention efforts and stress that the term prevention encompasses both discrete strategies and broad, multifaceted approaches (Adelman & Taylor, 2000).

A great deal of emphasis over the years has been devoted to three types of prevention strategies: (1) public educational programs and campaigns to enhance knowledge about substances and present a negative view about their impact, (2) skill training to enhance positive social coping, with a major emphasis on resisting peer pressure to engage in substance use, and (3) multifaceted programs. The best available evidence indicates that information-oriented strategies alone have little impact (see Botvin, Schinke, & Orlandi, 1995; Brown & Kreft, 1998; Chou, Montgomery, Pentz, et al., 1998). More promising have been skill training programs that (a) encompass a wide range of personal and social skills designed to enhance general competence and curtail interest in substance use, (b) pursue implementation in ways that ensure skills are learned, and (c) provide subsequent "booster inoculations" (Botvin, 1995). However, an emphasis on skills, per se, also is insufficient. (It is clear that lack of skills does not inevitably lead to drug abuse, and some very socially adept youngsters are drug abusers.) Thus, multifaceted programs are emerging in an attempt to influence not only youngsters, but their families, schools, neighborhoods, and the media (Chou, Montgomery, Pentz, et al., 1998; National Institute on Drug Abuse, 1997, 1999; Peters & McMahon, 1996; SAMHSA, 1999 a; Tobler & Stratton, 1997). Such approaches usually include strategies emphasizing development of cognitive and behavioral skills, changing school and community norms and practices, and enhancing social supports. The logic of such approaches is appealing, however, their complexity can be staggering, which makes implementation and evaluation a methodological nightmare.

How Good are Substance Abuse Prevention Programs?

Over the last 20 years, the market for substance abuse prevention programs has burgeoned. As a result, many hundreds of packaged "curricula" exist, as do a host of noncurricular approaches. In an effort to bring some coherence to the situation, lists of "research-based" or "evidence-based" approaches have been generated through initiatives sponsored by public agencies and private groups.

Different lists apply different criteria for what constitutes satisfactory empirical evidence. Mostly, the criteria used do not reflect stringent research standards.

As an aid to the field, the Substance Abuse and Mental Health Services Administration's (SAMHSA) centers and information clearinghouses have compiled and disseminated lists of model programs. For example, CSAP has two related efforts for cataloguing and assessing prevention programs: (1) the National Prevention System (NPS) databases which lists all prevention programs (including self-nominated ones) and (2) the National Registry of Effective Prevention Programs (NREPP) which integrates models from CSAP, other federal agencies, and nonprofit and corporate resources. To disseminate models, CSAP has established a model program website (www.samhsa.gov/csap/modelprograms/) and has published a primer on effective programs (CSAP, 1999). Also, through SAMHSA's Knowledge Exchange Network (KEN), several prominent compilations have been combined and widely disseminated under the heading "Examples of Exemplary/Promising Programs" (SAMHSA, 1999 b). This list offers about 125 different programs of relevance to violence and substance abuse prevention. Most of the programs address some or all of the 19 common risk factors identified through research as associated with problems such as youth delinquency, violence, substance abuse, teen pregnancy, and school dropout (as compiled by Hawkins, Catalano, & Miller, 1992). In keeping with the growing interest in protective factors, some of the programs reframe risk factors into an approach that stresses strengthening protective factors and building assets.

In recent years, support for the positive impact and future potential of prevention programs has been extrapolated from literature reviews, including meta-analyses (e.g., CSAP, 1998, 1999; Durlak & Wells, 1997; National Institute on Drug Abuse, 1997; SAMHSA, 1999 a; Silvia, Thorne, & Tashjian, 1997; Scattergood, Dash, Epstein, & Adler, 1998; Tobler & Stratton, 1997; White & Pitts, 1998). A more refined sense of the state of the art is emerging from initiatives that use stringent research-based criteria to identify effective substance abuse model programs. For instance, CSAP's Division of Knowledge Development and Evaluation has published a working draft of a guide for judging science-based practices (CSAP, 1998). From this perspective, CASP has established a list of 30 model programs as of July, 2000 and is using their model programs web site (cited above) to disseminate them. Similarly, the Center for the Study and Prevention of Violence's *Blueprint* project has used more rigorous criteria than earlier reviews in generating its list of model and promising programs (Elliott, 1998). Although the project's primary focus is on violence prevention, it also has identified a few programs with evidence of efficacy in preventing substance abuse. The criteria used for designating an approach as a model include: (a) a formal evaluation using an experimental or quasi-experimental design which (b) generated evidence of a statistically significant deterrent (or marginal deterrent) effect, (c) encompassed replication on at least one additional site with experimental design and demonstrated effects, and

(d) found evidence that the deterrent effect was sustained for at least one year post-treatment. Using these research standards, only 10 model programs were identified. By reducing the criteria to encompass programs using a single site, those that were unreplicated, or those having a small effect on outcome measures, 13 additional programs were designated as promising. But, again it should be noted that only a few of the 23 provide evidence of direct impact on preventing substance abuse.

Two programs on every list, one designated as a model and the other as a promising program by the Blueprint project, are illustrative. The Life Skills Training Program (e.g., Botvin, 1995) is widely recognized because it's extensive research reports positive impact on substance abuse. The intervention is a 3 year, universal classroom curriculum for middle schools. It is designed to address a wide range of risk and protective factors by teaching (1) drug resistance skills and information, (2) self-management skills, and (3) general social skills. These skills are taught during 15 periods in the first year, 10 booster sessions in the second year, and 5 more boosters in the third. Booster sessions are seen as essential in maintaining program effects. Reported findings indicate short-term results of 59–75% lower levels (than controls) of tobacco, alcohol, and marijuana use. A randomized follow-up field trial with about 6,000 students from 56 schools conducted six years after baseline assessment compared those who received the program with controls and reports prevalence rates 44% lower for cigarette, alcohol, and marijuana use and 66% lower for weekly use of multiple drugs.

The Seattle Social Development Project (Hawkins, Catalano, Morrison, et al., 1992) is designated a promising program by the Blueprint's project (and others). This multi-component, school-based intervention for grades one through six (and now being extended into middle school) is designed to reduce childhood risks for delinquency and drug abuse by enhancing protective factors. It simultaneously works with teachers and parents. Based on social control and social learning theories, the intent is to increase prosocial bonds to school and family, strengthen attachment and commitment to schools, and decrease delinquency by enhancing opportunities, skills, and rewards for prosocial behavior at school and at home, and increasing commitments to no drug use. With teachers, the emphasis is on how to use active classroom management, interactive teaching strategies, and cooperative learning in classrooms. In addition, first-grade teachers are involved in teaching communication, decision-making, negotiation, and conflict resolution skills, while sixth-grade teachers offer refusal skills training. Parents are offered optional training programs throughout their children's schooling. These encompass (1) a family management skills training curriculum (seven sessions) called "Catch 'em Being Good' for parents of 1st and 2nd graders, (2) four sessions in 2nd and 3rd grade on "How to Help Your Child Succeed in School" emphasizing communication between themselves, teachers, and students, positive home learning environments, helping with their children's reading and math, and generally supporting academic progress, and (3) the "Preparing for the Drug-Free Years," curriculum (five sessions) for parents of 5th and 6th graders to help establish family

positions on drugs and build children's resistance skills. Results indicate improved school performance and family relationships and reduced substance involvement at various grades. Specifically, compared to controls: At the end of grade 2, white male students showed lower levels of aggression and antisocial, externalizing behaviors and white females showed lower levels of self-destructive behaviors. At the beginning of grade 5, students showed less alcohol and delinquency initiation and more attachment and commitment to school, while family management practices, communication, and attachments increased. At the end of grade 6, high-risk youth were more attached and committed to school, and boys were less involved with antisocial peers. A follow-up study reports that, at the end of grade 11, students displayed reduced involvement in violent delinquency and sexual activity and reduced episodes of drinking and driving and drunkedness (O'Donnell, Hawkins, Catalano, et al., 1995).

So, overall, how good are specific programs in preventing substance abuse? Regardless of whether a program is designated as an exemplary model or promising, at this juncture those generating the best findings still represent a rather limited approach to prevention. Their data mostly suggest short-term impact related to enhancing specific knowledge and skills and/or environmental supports (the absence of which have been identified as constituting risk factors). Only a few report evidence from appropriately controlled studies that show a direct, long-term impact in preventing substance abuse (e.g., Botvin, 1995). Because programs are mostly carried out as projects or demonstrations, their findings mainly constitute evidence of efficacy not effectiveness, nevermind cost-effectiveness. Moreover, the majority of programs with sound evaluation data have focused on elementary age children and young teens. The few implemented with older youngsters have targeted specific subgroups and problems (e.g., programs to reduce use of anabolic steroids by high school athletes).

In addition to data from specific prevention programs, fluctuations over the years in the incidence and prevalence of substance use often are pointed to as evidence of the impact of widespread prevention efforts. The difficulties associated with inferring such causal relationships from epidemiological studies need not be repeated here. And, the problem of interpretation is compounded by findings that show increased rates for some substances. There also are attempts to contrast current use with past participation in prevention programs. Here, too, sound interpretations of cause and effect usually are precluded by serious methodological flaws.

Despite current limitations, it is evident that researchers are committed to improving understanding of the nature and scope of substance abuse and its prevention. In this respect, the federal government and institutions of higher education have worked with schools not just to gather data but to play increasingly important roles as partners in developing programs. This has also been true of various public agencies including those involved in law enforcement. Such activity provides important examples and lessons learned to guide future efforts to expand school and community partnerships.

Movement to Raise Standards for Practice

Concern about proliferation of unvalidated programs and demands for greater accountability have led to a growing movement for documenting empirically supported interventions (Lonigan & Elbert, 1998). In effect, the focus by CSAP and the Blueprints' project on well-researched programs (discussed above) are just part of a first wave encompassing violence and substance abuse prevention. These intervention arenas also are the focus of other federal agencies, such as the U.S. Department of Education's Safe, Disciplined, and Drug Free School Program (USDOE, 1999). Because of its concern for schools, the DOE process emphasizes not only sound evidence of efficacy, but also how well a program is integrated with the educational mission of schools and the likelihood that it can be replicated throughout a school district. Such criteria anticipate the next wave in this movement which aims to extend concern for impact beyond evidence of efficacy to encompass data on effectiveness related to widespread program replication.

In the long run, raising standards for designating programs as exemplary can help improve standards for practice. In the short-run, however, the problem remains that of extrapolating consensus guidelines from the best available research and from those persons who have the greatest expertise, the broadest perspective, and the most wisdom. Thus, it is not surprising that growing dissatisfaction with the state of the art also has increased interest in encapsulating what is known about "best" practices for substance abuse prevention. One example of this trend is the following synthesis of 14 principles published in 1997 by the National Institute of Drug Abuse to guide development of substance abuse prevention initiatives:

- Prevention programs should be designed to enhance "protective factors" and to move toward reversing or reducing known "risk factors."
- Prevention programs should target all forms of drug use, including the use of tobacco, alcohol, marijuana, and inhalants
- Prevention programs should include skills to resist drugs when offered, strengthen personal commitments against drug use, and increase social competency (e.g., in communications, peer relationships, self-efficacy, and assertiveness) in conjunction with reinforcement of attitudes against drug use.
- Prevention programs for adolescents should include interactive methods, such as peer discussion groups, rather than didactic teaching techniques alone.
- Prevention programs should include a parents' or caretakers' component that reinforces what the children are learning, such as facts about drugs and their harmful effects. Moreover, the intervention should promote opportunities for family discussions about use of illegal substances and family policies about their use.

- Prevention programs should be long term and should continue over the school career, with repeated interventions to reinforce the original prevention goals. For example, school-based efforts directed at elementary school and middle school students should include booster sessions to help with critical transitions from middle school to high school.
- Family-focused prevention efforts have a greater impact than strategies that focus on parents only or children only.
- Community programs that include media campaigns and policy changes, such as new regulations that restrict access to alcohol, tobacco, and other drugs, are more effective when they are accompanied by school and family interventions.
- Community programs need to strengthen norms against drug use in all drug use prevention settings, including the family, school, and community.
- Schools offer opportunities to reach all populations and also serve as important settings for specific subpopulations at risk for drug use, such as children with behavior problems or learning disabilities and those who are potential dropouts.
- Prevention programming should be adapted to address the specific nature of the drug use problem in a local community.
- The higher the level of risk for the target population, the more intensive the prevention effort must be, and the earlier it must begin.
- Programs should be age-specific, developmentally appropriate, and culturally sensitive.
- Effective prevention programs are cost-effective.

Although principle-based programming is controversial, such a list does drive home the points that prevention efforts must be comprehensive and multifaceted and must focus on the home, school, and community. The principles also underscore the importance of attending to developmental and population differences and motivational and developmental considerations.

DEFICIENCIES IN CURRENT TRENDS

If prevention practice is to advance, greater attention must be devoted to a host of conceptual and research concerns. These include enhancing understanding of the linkages among psychosocial problems, expanding the breadth of prevailing models of prevention, increasing standards for accepting claims of intervention *efficacy* and cause and effect, and moving forward to demonstrate intervention *effectiveness* (with special attention to the problems of systemic change, moving to scale, and evaluating the worth and impact of large-scale interventions). Related to all this is a heightened concern about implementation problems. These include such matters as not being able to gain sufficient access to and buy-in from youngsters, their

families, and their neighborhoods and not having adequate capacity to establish and maintain intervention integrity (sometimes called fidelity). And, at the root of current deficiencies is the problem of policy marginalization, which is responsible for the ongoing project mentality and the widespread fragmentation that dominate research and practice.

Some Prominent Conceptual and Research Concerns

The term prevention conjures up varying reactions. Few argue against the desirability of preventing educational and psychological problems. However, some leaders in the field have lamented that prevention initiatives continue to be based on simplistic etiological models—focusing on too limited a range of factors and placing too much burden for countering substance abuse on the individual. Examples of this concern are seen in critiques of the overemphasis on the social influence model and the dearth of multifaceted approaches (e.g., Carvajal, Clair, Nash, & Evans, 1998; Hawkins, Catalano, & Miller, 1992; Holder, 1998; Jason & Barnes, 1997; Kellam, Koretz, & Moscicki, 1999; Office of National Drug Control Policy, 1999; Stacey, Galaif, Sussman, & Dent, 1996; U.S. Department of Health and Human Services, 1991). Others have complained that such initiatives are still too oriented to risk reduction, which often works against efforts to promote wellness as an invaluable end in and of itself (e.g., Cowen, 1997).

In schools, the orientation to reducing risk has led to an overemphasis on observed problems and on treating them as discrete entities. Prevention programs frequently are offered as short-term, narrowly-focused, and isolated interventions. All this contributes to deemphasizing common underlying causes and their treatment. Such a state of affairs is both a result and an ongoing factor in perpetuating widespread fragmentation of prevention initiatives at all levels. In recent years, appreciation of the connection between problems such as substance abuse, violence, pregnancy, school dropout, and delinquency has produced concerns that prevention programs seldom have a combined focus (e.g., Lowry et al., 1999) and are not incorporated into a comprehensive continuum of intervention ranging from prevention to treatment.

With specific respect to prevention research, there are too many concerns to enumerate here. Examples of the most troubling are: Basic standards for sound research often are ignored in the rush to claim intervention efficacy (Brown & Kreft, 1998; Rindskopf & Saxe, 1998). Policy continues to ignore the need to underwrite research on moving to scale and pursuing systemic changes for prevention—all of which is essential to implementing widespread replications and evaluations to determine intervention *effectiveness*. The potential power of technology as a program aid and as a diffusion tool remain relatively untapped (Bloom, 1987; Bosworth & Yoast, 1991; Freimuth, Plotnick, Ryan, & Schiller, 1997;

Orlandi, Dozier, & Marta, 1990). Too often, data are analyzed without a sophisticated disaggregation of evaluation findings, such as differentiating among high and low risk groups and using multilevel analytic strategies (Palmer, Graham, White, & Hansen, 1998). Little attention is paid to the degree to which prevention programs produce negative consequences, which is important in and of itself and is a basic facet of moving on to cost-benefit and cost-effectiveness analyses. Finally, given demonstrated positive impact, there remains the fundamental matter of clarifying what the "active ingredients" are for a specific intervention. Such process research, of course, requires well-controlled studies that allow for unambiguous analyses of cause and effect. All of the above matters underscore why there is renewed interest in studying and solving implementation difficulties.

Implementation Problems: A Critical Concern for Prevention Research and Practice

As with other interventions, prevention suffers from problems related to how well a program is implemented. Concerns about program integrity arise from the many factors that can interfere with ensuring that key elements of an intervention are faithfully carried out. Difficulties are common when a program is implemented by individuals who were not involved in its development. Problems are associated with variations in the degree to which the active ingredients of a program are implemented and variations in the degree to which factors are introduced that can interfere with desired outcomes. Problems also arise due to a host of transactional variations associated with a particular setting, intervener, and individuals and groups of recipients. And, when the program is implemented in more than one setting, additional cross-setting variations are of concern.

Evidence on implementation problems is limited because so few researchers gather the data, but the consensus is that these problems are widespread (Dane & Schneider, 1998; Durlak, 1998; Elias, 1997; Greenberg & Babinski, in press; Rohrbach, D'Onofrio, Backer, & Montgomery, 1996). As a result, there are increasing calls for studies on implementation integrity, and failure to evaluate implementation variations has been designated as a basic methodological error (Durlak, 1998). Research is needed both to allow for analyses of variations in program outcomes (positive and negative) and to determine how to improve implementation integrity. Implementation studies also can help identify key features of effective practice. However, as with all empirical research, overcoming the methodological problems of defining and measuring essential implementation variables remain a significant challenge. As methodological bridges in addressing this challenge, greater use of ethnography has been recommended (National Institute on Drug Abuse, 1999), as has enhanced use of theory-driven evaluations (Chen & Rossi, 1992).

Widespread scale-up of programs raises additional, albeit connected concerns. Currently, effectiveness (as contrasted to efficacy) research primarily shows that an intervention can produce outcomes under conditions regularly found in an implementation setting. In the long-run, however, initiatives to prevent substance abuse should reach all youngsters and do so in ways that are effective. From this point of view, such initiatives are only as good as a school district's ability to develop and institutionalize them on a large scale. Given this state of affairs, *effectiveness* should be demonstrated for large-scale implementation, and the need to do so considerably broadens the discussion of ensuring implementation integrity. In this respect, it is fortunate that there is a vast literature relevant to scale-up (often called diffusion, replication, or roll out).

Work on scale-up underscores the importance of interveners having sufficient capacity to establish and maintain intervention fidelity for widespread replication. It also highlights common implementation deficiencies, such as using change agents who are inadequately trained to facilitate large-scale systemic change and/or scheduling unrealistically short time frames for building motivational readiness and capacity to accomplish changes. To provide a school-related perspective on widespread replication, we have drawn on the organizational literature to develop a framework of major phases and tasks involved in scale-up (see Adelman & Taylor, 1997 a; Taylor, Nelson, & Adelman, 1999). This framework provides another tool to guide implementation research. In addition, we have conceived and pilot tested the use of a special type of change agent, called an *Organization Facilitator*—a cadre of whom provide a mechanism to assist a school district in replicating systemic reforms and new programs by helping redesign the infrastructure at school sites (Adelman & Taylor, 1997 b, 1998, 2000). With respect to ethnographic approaches to implementation problems, such change agents can play an important role in generating hypotheses and as a source of participant-observer data.

As all this suggests, those who set out to prevent substance abuse are confronted with two enormous tasks. The first is to clarify how the prototype for a prevention program can be implemented with fidelity. The second involves clarifying how to accomplish large-scale replication and do so in ways that maintain program integrity. One without the other is insufficient. Yet, as the field of substance abuse prevention demonstrates, considerably more attention is paid to developing and evaluating program prototypes than to scale-up processes. This is not surprising given that the nation's research agenda does not include a major focus on delineating and testing models for widespread replication of initiatives designed to address psychosocial problems and diffuse education reforms (see Connell & Klem, 2000; Fawcett, Lewis, Andrews, et al., 1997; Replication and Program Services, 1993; Schorr, 1997). Training programs also give short shrift to the topic of scale-up. And, this state of affairs is likely to continue until prevention initiatives are accompanied with the resources necessary for accomplishing large scale replication in an effective manner.

At the Root of the Problems—*Policy Marginalization*

Substance abuse prevention programs, like so many other problem-oriented programs, tend to be treated in an ad hoc fashion in most schools and neighborhoods. As long as this is the case, narrow, time-limited, and fragmented approaches are likely to remain the norm. This raises the question of how to make such matters fundamental and essential in the thinking of school and community policy makers. In this respect, a statement by Schaps and Battistich (1991) is worth reiterating here: "... prevention programs should attempt to create and maintain a positive social climate that facilitates socialization, rather than attempt to compensate for a prevailing negative social climate. This argues further that prevention programs should be a natural and important part of the school curriculum and, hence, be reflected in the overall organization, practices, and climate of the school. Under this conceptualization, the term 'prevention program' would be inappropriate. The program would disappear as a separate entity; it would be seen by both faculty and students as an integral, inseparable part of the school. In short, promotion of positive personal and social development must be recognized as a primary goal of the school (along with acquisition of academic skills and intellectual growth)" (p. 135).

Similarly, in our work, we have stressed that, for prevention to play a significant role in the lives of children and their families, policy and practice must undergo a radical transformation (Adelman, Reyna, Collins, Onghai, & Taylor, 1999; Adelman & Taylor, 2000). Currently, the focus on prevention is so marginalized that schools and communities continue to operate with virtually no comprehensive frameworks to guide thinking about the most *potent* approaches. The consequences of all this are seen in the lack of attention given these matters in consolidated plans and program quality reviews and the lack of efforts to map, analyze, and rethink resource allocation. The impact also is apparent in the token way these concerns are dealt with in designing preservice and continuing education agendas for administrative and line staff. Therefore, no one should be surprised at the various deficiencies discussed above or at how difficult it is to improve the state of the art. As long as prevention remains marginalized in policy, underwriting of the research and practice agendas for substance abuse prevention will be insufficient for accomplishing the type of advances policy makers are demanding. This reality is underscored in the next section as we suggest new directions.

NEW DIRECTIONS: CONNECTING SCHOOLS, FAMILIES, AND COMMUNITIES

While not prescriptive, analyses of the deficiencies related to substance abuse prevention efforts do underscore the need for new directions and for bold thinking in formulating courses of action. Those who want to think boldly can find inspiration

from current trends and innovative "big picture" analyses for enhancing the well-being of youngsters (Adelman & Taylor, 1997 b, 1998, 2000; Dryfoos, 1998; Schorr, 1997).

Based on our understanding of prevailing substance abuse initiatives and many other related efforts for addressing problems experienced by young people, the following propositions seem fundamental. For one, substance abuse prevention is best pursued as an integrated part of a comprehensive, multifaceted continuum of interventions designed to address barriers to learning and to promote healthy development. For another, comprehensive, multifaceted approaches are only feasible if the resources of schools, families, and communities are woven together. A corollary of this is that the committed involvement of school, family, and community is essential in maximizing intervention implementation and effectiveness.

With these propositions firmly in mind, we discuss five topics. Each represents a major arena for work to make the above propositions a reality. First, we place initiatives for substance abuse prevention within the context of a comprehensive and multifaceted continuum of interwoven interventions and explore the importance of thoroughly integrating such initiatives into prevailing school reforms. Then, we turn to the complicated and critical problem of appropriately connecting school, home, and community and the related matter of building from localities outward in designing the infrastructure for the intervention continuum. Finally, we discuss adopting a results orientation that encompasses both evaluation of impact and process research.

Framing Prevention as One End of a Comprehensive and Multifaceted Continuum of Interwoven Interventions

As discussed above, substance abuse is best understood from the perspective of a transactional (reciprocal determinist) model of causality that encompasses biological, psychological, social, economic, political, and cultural factors. From this viewpoint, initiatives for substance abuse prevention must be designed in ways that account for problems stemming from external, internal, and transactional considerations. This means the initiatives must be broad and multifaceted.

How broad and multifaceted? We suggest they should include not only primary prevention and early age interventions to promote healthy development and identify and ameliorate risk factors, but also embrace strategies for identifying and ameliorating problems as early-after-onset as is feasible. Furthermore, an appreciation of tertiary prevention underscores the need to ensure there are strategies for the ongoing amelioration of problems. Clearly, this encompasses an extensive range of activities.

As illustrated in Fig. 2, the desired interventions can be conceived as a continuum ranging from primary prevention/universal approaches (including a focus on

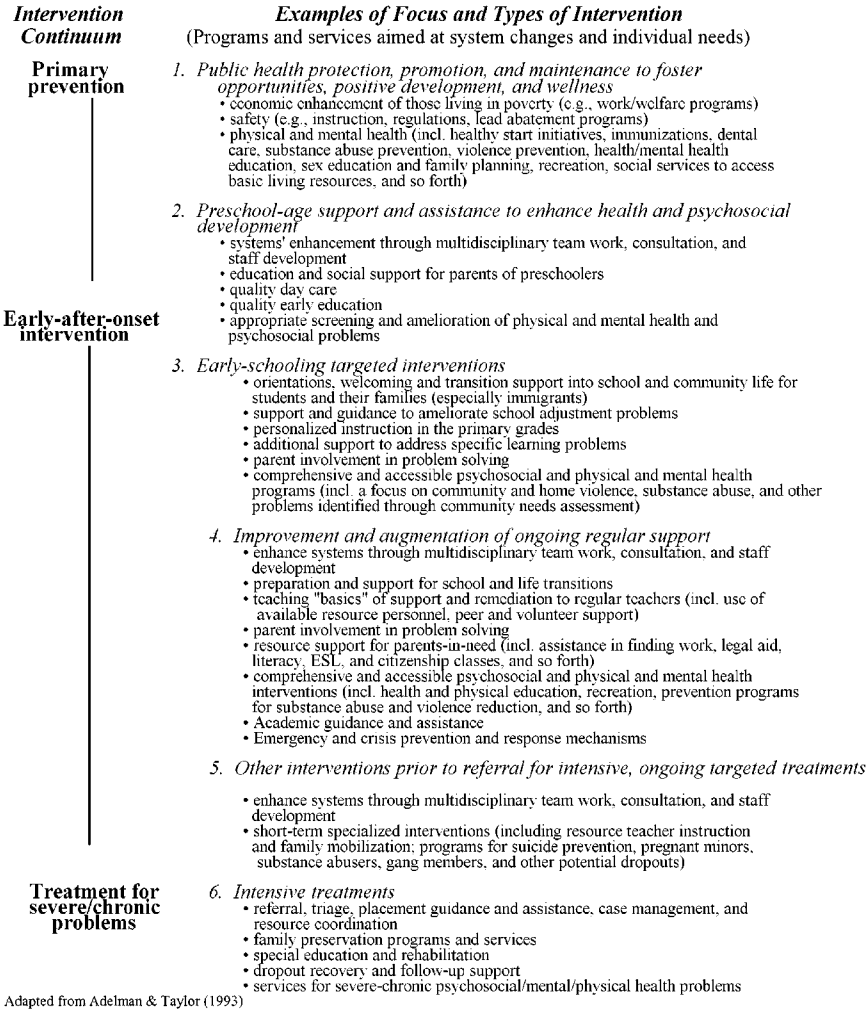
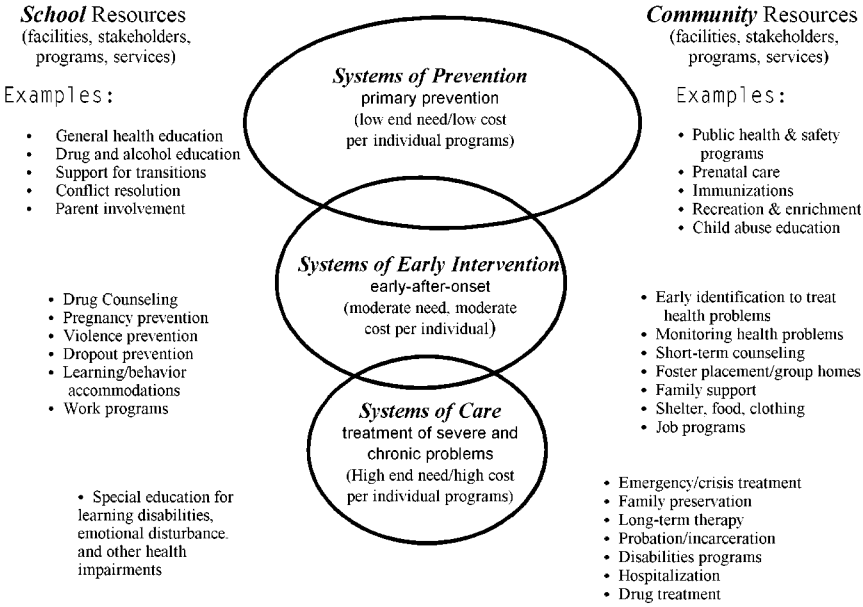


Fig. 2. From primary prevention to treatment of serious problems: A continuum of community-school programs to address barriers to learning and enhance healthy development.

wellness or competence enhancement) through approaches for treating problems early-after-onset (selective and indicated programs), and extending on to narrowly focused treatments for severe/chronic problems. Not only does the continuum span the concepts of primary, secondary, and tertiary prevention, it can incorporate a holistic and developmental emphasis that envelops individuals, families, and the contexts in which they live, work, and play. The continuum also provides a framework for adhering to the principle of using the least restrictive and nonintrusive

forms of intervention required to appropriately respond to problems and accommodate diversity.

Moreover, given the likelihood that many problems are not discrete, the continuum can be designed to address root causes, thereby minimizing tendencies to develop separate programs for each observed problem. In turn, this enables increased coordination and integration of resources which can increase impact and cost-effectiveness. Ultimately, as illustrated in Fig. 3, the continuum can be evolved into integrated *systems of prevention*, *systems of early intervention*, and *systems of care* by enhancing the way the interventions are connected. Such connections may



Systemic collaboration* is essential to establish interprogram connections on a daily basis and over time to ensure seamless intervention within each system and among *systems* of *prevention, systems* of *early intervention*, and *systems of care*.

*Such collaboration involves horizontal and vertical restructuring of programs and services
(a) within jurisdictions, school districts, and community agencies (e.g., among departments, divisions, units, schools, clusters of schools)
(b) between jurisdictions, school and community agencies, public and private sectors; among schools; among community agencies

Adapted from various public domain documents authored by H. S. Adelman & L. Taylor and circulated through the Center for Mental Health in Schools at UCLA.

Fig. 3. Interconnected systems for meeting the needs of all students.

involve horizontal and vertical restructuring of programs and services (a) within jurisdictions, school districts, and community agencies (e.g., among divisions, units) and (b) between jurisdictions, school and community agencies, public and private sectors, among clusters of schools, and among community agencies

The interventions outlined in Fig. 2 provide a template for assessing the nature and scope of programs in local geographic or catchment areas. Unfortunately, when such a template is applied to communities that must rely on underwriting from public funds and private philanthropic organizations, many essential programs and services are not found. With respect to schools, this is certainly the case. In particular, prevention programs are few in number and usually are funded as discrete projects often with "soft" money (e.g., see the examples on any of the various compiled lists). Moreover, where prevention efforts are in place, they are seldom integrated with related programs and services. Thus, the type of comprehensive, multifaceted, and integrated approach necessary to deal with the continuum of problems illustrated in Fig. 1 is missing. We submit that a major breakthrough in the battle against substance abuse probably can be achieved only when such an approach is in place.

Integrating with School Reform

It is one thing to stress the desirability of framing primary prevention as one end of a continuum of intervention; it is quite another to argue that schools should pursue the type of comprehensive approach outlined above. In the long-run, the success of such proposals probably depends on anchoring them in the context of the mission of schools. That is, the proposals must be rooted in the reality that schools are first and foremost accountable for educating the young. More specifically, the proposals must reflect an appreciation that schools tend to become concerned about addressing a problem when it clearly is a barrier to student *learning*. In this respect, while some barriers leading to learning, behavior, and emotional problems are internal (psychological and/or biological), relatively few children start out with internal factors predisposing them to trouble. The majority who end up having difficulties, including those who abuse substances, experience a range of external barriers that interfere with their succeeding at school. Anyone who works with youngsters is all too familiar with the litany of such factors (e.g., violence, drugs, frequent school changes, and a host of problems that confront recent immigrants and families living in poverty). It is the entire constellation of barriers to learning that argues for schools, families, and communities working together to offer much more in the way of prevention, and to do so as part of a comprehensive approach.

However, as noted above, the current situation is one where schools are so enmeshed in instructional and management reforms that they treat everything else in a marginalized manner. Therefore, efforts to enhance school participation in evolving comprehensive approaches, including substance abuse prevention initiatives,

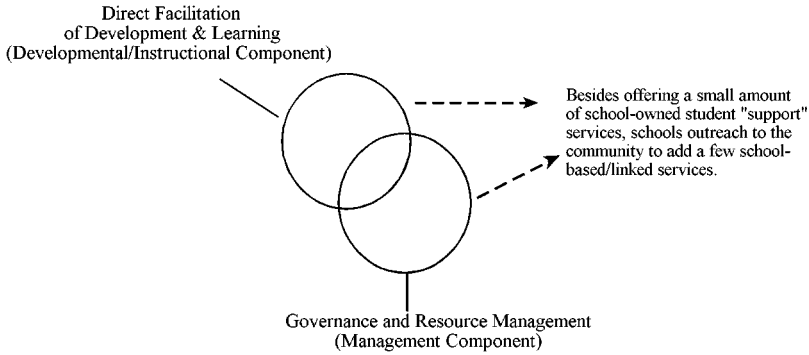
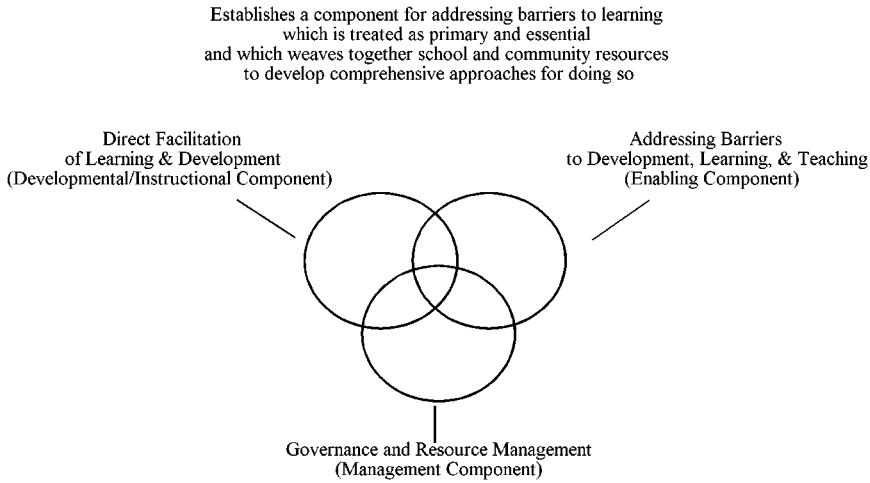


Fig. 4a. A two component model for reform and restructuring.

must be pursued within an expanded school reform agenda that goes beyond improving instruction and the ways in which schools are managed. The continued failure of so many educational reforms certainly suggests the need for better models and a fundamental shift in policy that expands the process (Tyack & Cuban, 1995).

From the above perspective, we have proposed that policy makers move from the two component model that dominates school reform to a three component framework (see Adelman, 1996a; 1996b; Adelman & Taylor, 1994, 1997 b, 1998; Center for Mental Health in Schools, 1996, 1997, 1998). As highlighted in Figs. 4a and 4b, a three component model calls for elevating efforts to address barriers to



Adapted from various public domain documents authored by H. S. Adelman & L. Taylor and circulated through the Center for Mental Health in Schools at UCLA.

Fig. 4b. A three component model for reform and restructuring.

learning, development, and teaching to a high level of policy focus. That is, a component that comprehensively enables learning by addressing barriers (e.g., an enabling component) is conceived as a fundamental and essential facet of educational reform. When policy and practice are viewed through the lens of this third component, it becomes evident how much is missing in current efforts to enable all students to learn and develop. Such a concept provides both a basis for combatting marginalization and a focal point for developing a comprehensive framework for policy and practice. It can also help address fragmentation by unifying disparate approaches to preventing and ameliorating psychosocial problems and promoting wellness. The usefulness of such a concept as a broad unifying focal point for policy and practice is evidenced in its adoption by schools and education agencies around the country and by one of the New American Schools' models. (Adopters often use different names such as a *Learning Supports* component or a component for a *Supportive Learning Environment*; the state of Hawaii calls it a *Comprehensive Student Support System*.)

It is important to reiterate that addressing barriers is not a separate agenda from a school's instructional mission. In policy, practice, and research, all categorical programs, such as safe and drug free school programs, can be integrated into a comprehensive component to address factors interfering with learning and teaching. Again with reference to our work, analyses indicate that schools can build such a component by developing programs in six basic areas (see Fig. 5; for a more detailed description of each area, see Adelman, 1996a; Adelman & Taylor, 1998). In doing so, they can evolve comprehensive, multifaceted approaches (Adelman, 1996a; Adelman & Taylor, 1994; New American School's Urban Learning Center, 1995). And, concern for substance abuse prevention can be fully integrated into the intervention continuum.

Emergence of a cohesive component to enable learning, of course, requires policy reform and operational restructuring that allow for weaving together what is available at a school, expanding this through integrating school, community, and home resources, and enhancing access to community resources by linking as many as feasible to programs at the school. We see expanded school reform as a foundation upon which to mesh resources for minimizing risk factors and fostering healthy development. However, as we stress in the remainder of this article, considerable work must be directed at the processes and problems of getting from here to there.

Connecting School-Community-Home

Initiatives to link community resources with each other and with schools are underway across the country. With such initiatives has come increasing emphasis on establishing *collaboratives* involving school, home, and community. There is much to learn from these efforts.

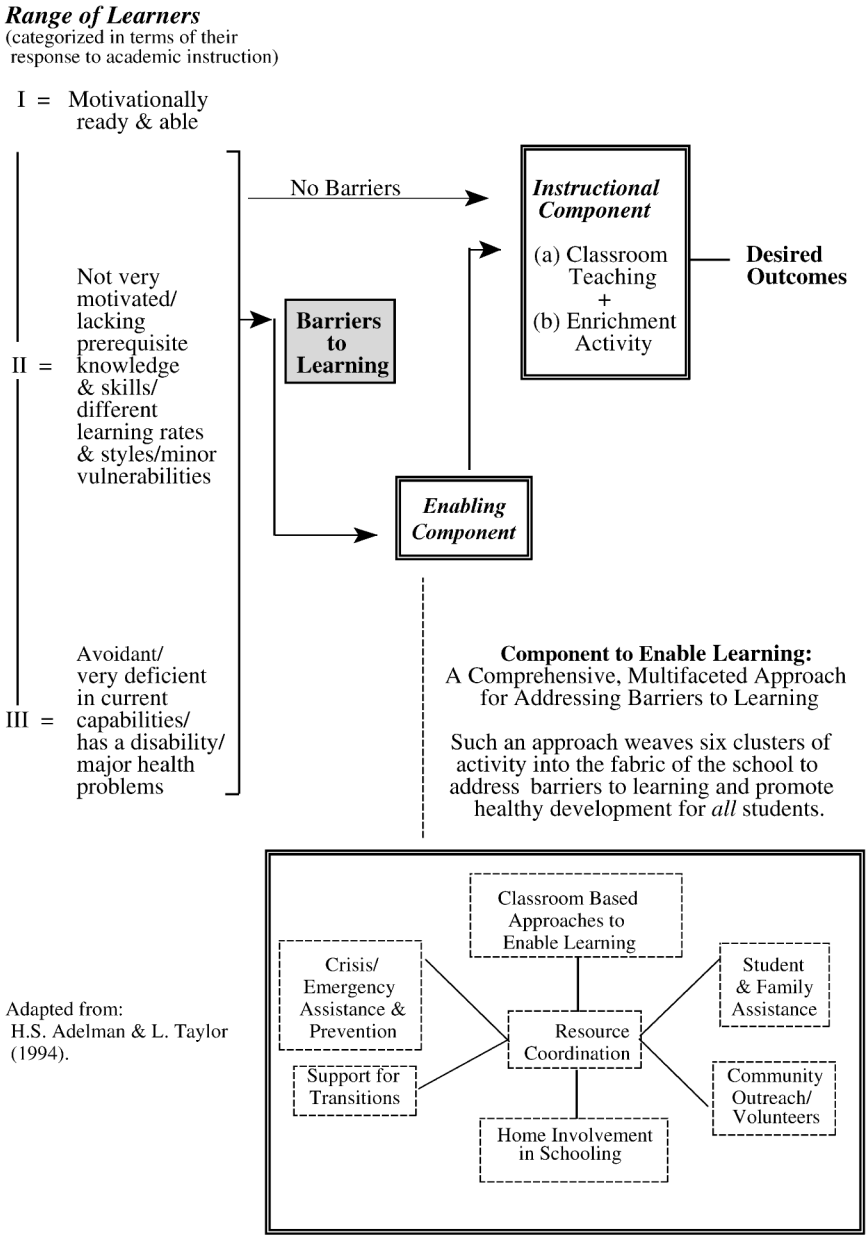


Fig. 5. An enabling component to address barriers to learning and enhance healthy development at a school site.

Linking with Community Resources

With respect to a host of concerns, including substance abuse prevention, there is considerable interest in developing strong relationships between school sites and public and private community agencies. Such interest meshes nicely with the renewed attention given to human service integration over the last decade. Major aims include reducing fragmentation of effort and, in the process, evolving better ways to meet needs and use existing resources. In analyzing such initiatives, Franklin and Streeter (1995) group them as—informal, coordinated, partnerships, collaborations, and integrated services. These categories are seen as differing in terms of the degree of system change required. As would be anticipated, most initial efforts focus on developing informal relationships and beginning to coordinate services.

With a view to improving access to and for clients, community agencies have developed the notion of *school-linked services*. A recent nation-wide survey of school board members reported by Hardiman, Curcio, & Fortune (1998) indicates widespread presence of school-linked programs and services in school districts. For purposes of the survey, school-linked services were defined as "the coordinated linking of school and community resources to support the needs of school-aged children and their families." The researchers conclude that school-linked services are used in varying degrees to address many educational, psychological, health, and social concerns, including substance abuse, job training, teen pregnancy, juvenile probation, child and family welfare, and housing. Not surprisingly, the majority of schools report using school-linked resources as part of their efforts to deal with substance abuse; far fewer report such involvement with respect to family welfare and housing. Most of this activity reflects collaboration with agencies at local and state levels. Respondents indicate that these collaborations operate under a variety of arrangements: "legislative mandates, state-level task forces and commissions, formal agreements with other state agencies, formal and informal agreements with local government agencies, in-kind (nonmonetary) support of local government and nongovernment agencies, formal and informal referral network, and the school administrator's prerogative." About half the respondents note that their districts have no policies governing school-linked services.

Projects across the country demonstrate how schools and communities are connecting with the intent of improving results for youngsters, families, and neighborhoods. Various levels and forms of school-community connections are being tested, including state-wide initiatives in California, Florida, Kentucky, Missouri, New Jersey, Ohio, Oregon, and Utah among others. The aims are to improve coordination and eventually integrate many programs and enhance their linkages to school sites. To these ends, projects incorporate as many health, mental health, and social services as feasible into "centers" (including school-based health centers, family and parent centers) established at or near a school. They adopt terms

such as school-linked and coordinated services, wrap-around, one-stop shopping, full service schools, systems of care, and community schools. There are projects to (a) improve access to health services (including substance abuse programs) and access to social service programs, such as foster care, family preservation, child care, (b) expand after school academic, recreation, and enrichment, such as tutoring, youth sports and clubs, art, music, museum programs, (c) build systems of care, such as case management and specialized assistance, (d) reduce delinquency (preventing drug abuse and truancy, providing conflict mediation and reducing violence), (e) enhance transitions to work/career/post-secondary education, and (f) enhance life in school and community, such as programs to adopt-a-school, use of volunteer and peer supports, and building neighborhood coalitions.

Such "experiments" are prompted by diverse initiatives: most are connected to efforts to reform community health and social service agencies; some stem from the youth development movement; a few are driven by school reform; and a few others arise from community development initiatives. Thus, in addition to involvements related to school-linked services, schools are connecting, for example, with the growing youth development movement (e.g., with respect to substance abuse prevention, see Kim, Crutchfield, Williams, & Hepler, 1998). This movement encompasses concepts and practices aimed at promoting protective factors, asset-building, wellness, and empowerment. This focus on community embraces a wide range of stakeholders, including families and community based and linked organizations such as public and private health and human service agencies, schools, businesses, youth and faith organizations, and so forth (CSAP, 2000). In some cases, institutions for postsecondary learning also are involved, but the nature and scope of their participation varies greatly, as does the motivation for the involvement. Youth development initiatives encourage a view of schools not only as community centers where families can easily access services, but also as hubs for community-wide learning and activity. Increased federal funding for after school programs at school sites is enhancing this view by expanding opportunities for recreation, enrichment, academic supports, and child care (Larner, Zippiroli, & Behrman, 1999).

Schorr (1997) also approaches community-school initiatives from an expanded perspective—that of strengthening families and neighborhoods. Her analysis of promising partnerships led her to conclude that a synthesis is emerging that "rejects addressing poverty, welfare, employment, education, child development, housing, and crime one at a time. It endorses the idea that the multiple and interrelated problems . . . require multiple and interrelated solutions."

In surveying school-community initiatives, Melaville and Blank (1998) state the number is skyrocketing and the diversity in terms of design, management, and funding arrangements is dizzying and daunting. Their analysis leads them to suggest (1) the initiatives are moving toward blended, integrated purposes and activity and (2) the activities are predominantly school-based and the education

sector plays "a significant role in the creation and, particularly, management of these initiatives" and there is a clear trend "toward much greater community involvement in all aspects" of such initiatives—especially in decision making at both the community and site levels. They also stress that "the ability of school-community initiatives to strengthen school functioning develops incrementally," with the first impact seen in improved school climate.

Findings from our work (e.g., Center for Mental Health in Schools, 1996, 1997; Taylor & Adelman, 2000) are in considerable agreement with other reports. However, we also stress that the majority of school and community programs and services still function in relative isolation of each other. Most school and community interventions continue to focus on discrete problems and specialized services for individuals and small groups. Moreover, because the primary emphasis is on restructuring community programs and co-locating some services on school sites, a new form of fragmentation is emerging as community and school professionals engage in a form of parallel play at school sites. Thus, ironically, while initiatives to integrate health and human services are meant to reduce fragmentation (with the intent of enhancing outcomes), in many cases fragmentation is compounded because these initiatives focus mostly on *linking* community services to schools. It appears that too little thought has been given to the importance of *connecting* community programs with existing programs operated by the school. As a result, when community agencies collocate personnel at schools, such personnel tend to operate in relative isolation of existing school programs and services. Little attention is paid to developing effective mechanisms for coordinating complementary activity or integrating parallel efforts. Consequently, a youngster identified as at risk for substance abuse, dropout, and suicide may be involved in three counseling programs operating independently of each other.

Based on the evidence to date, fragmentation is worsened by the failure of policy makers at all levels to recognize the need to reform and restructure the work of school and community professionals who are in positions to address barriers and promote development. Reformers mainly talk about "school-linked integrated services"—apparently in the belief that a few health and social services will do the trick. Such talk has led some policy makers to the mistaken impression that community resources alone can effectively meet the needs of schools in addressing problems such as substance abuse and other barriers to learning. In turn, this has led some legislators to view linking of community services to schools as a way to free-up the dollars underwriting school-owned services. The reality is that even when one adds together community and school assets, the total set of services in impoverished locales is woefully inadequate. Another problem is that the overemphasis on school-linked services is exacerbating rising tensions between school district service personnel and their counterparts in community based organizations. As "outside" professionals offer services at schools, school specialists often view the trend as discounting their skills and threatening their jobs. At the

same time, the "outsiders" often feel unappreciated and may be rather naive about the culture of schools. Conflicts arise over "turf," use of space, confidentiality, and liability.

Because of the type of marginalization described above and the overemphasis on school-linked service models, little attention is paid to pursuing a comprehensive restructuring of what schools and communities already do to prevent and ameliorate youngsters' problems. And a key facet of all this is the need to develop models to guide development of the type of school-community-home partnerships that can accomplish such restructuring.

School-Community-Home Collaboratives

Collaboratives involving school, home, and community are sprouting in a dramatic and ad hoc manner. They have the potential to improve schools, strengthen neighborhoods, and lead to a marked reduction in young people's problems. Or, such "collaborations" can end up being another reform effort that promised a lot, but did little. While it is relatively simple to make informal linkages, establishing major long-term partnerships is complicated. They require vision, cohesive policy, and basic systemic reforms. The complications are readily seen in efforts to evolve a comprehensive, multifaceted, and integrated continuum of interventions. Such a continuum clearly involves much more than linking a few services, recreation, and enrichment activities to schools. Major processes are required to develop and evolve formal and institutionalized sharing of a wide spectrum of responsibilities and resources. And, the intent must be to sustain such partnerships over time.

Effective school-community-home partnerships weave together a critical mass of resources and strategies to enhance caring communities that support all youth and their families and enable success at school and beyond. From a local perspective, there are three overlapping challenges in developing partnerships for comprehensive, multifaceted programs to address matters such as substance abuse prevention. One involves weaving existing school resources together. A second entails evolving programs so they are more effective. The third challenge is to reach out to additional resources and broaden the range of partnerships.

Comprehensive school-home-community partnerships represent a promising direction for efforts to generate essential interventions to prevent substance abuse, address other barriers to learning, enhance healthy development, and strengthen families and neighborhoods. Clearly, getting from here to there involves weaving together resources (e.g., formally connecting school programs with assets at home and in the business and faith communities, as well as collaborating with enrichment, recreation, and service resources in the neighborhood). For this to happen in optimal ways, there must be an extensive restructuring of all school-owned activity, such as pupil services, safe and drug free school initiatives, and special

and compensatory education programs. There also must be full integration of such activity with the instructional and management components. And, there must be a rethinking of community resources. All this calls for developing mechanisms to coordinate and eventually integrate school-community-home resources. This brings us to the topic of infrastructure.

Building an Intervention Infrastructure from Localities Outward

Pioneering initiatives around the country are demonstrating what is involved in developing an infrastructure for comprehensive, multifaceted, and integrated school-community approaches (Center for Mental Health in Schools, 2000). The following are lessons learned from these ground-breaking efforts.

Effective school-home-community partnerships require an infrastructure of organizational and operational mechanisms to provide oversight, leadership, resource development, and ongoing support. They are used to (a) arrive at decisions about resource allocation, (b) maximize systematic and integrated planning, implementation, maintenance, and evaluation of existing activity, (c) outreach to expand formal working relationships, and (d) upgrade and modernize in ways that reflect the best intervention thinking and use of technology. These tasks require that staff at various levels adopt some new roles and functions and that families, youth, and other representatives of the community enhance their involvement. The work also calls for redeployment of existing resources, as well as finding new ones.

From the perspective of decentralization, the necessary infrastructure should not be conceived as a hierarchy that starts centrally and works its way down to localities. Rather, the process should be one of building from localities outward. That is, first the focus is on mechanisms at the school-neighborhood level. Then, based on analyses of what is needed to facilitate and enhance efforts at a locality, mechanisms are conceived that enable several school-neighborhood-home collaborations to work together to increase efficiency and effectiveness and achieve economies of scale. Then, system-wide mechanisms are (re)designed to provide support for what each locality is trying to develop. Such a process is highly supportive of the intent to evolve a comprehensive continuum of interventions that plays out effectively in *every locality*. A few examples may help clarify these points and highlight some emerging ideas.

Site-Based Leadership and a Resource-Oriented Team

Effective school-community-home partnerships must coalesce at the local level. Thus, a school and its surrounding community are a reasonable focal point around which to build a multi-level organizational plan, and such a focus meshes nicely with contemporary restructuring views that stress increased school-based

and neighborhood control. All of this requires development of well-conceived mechanisms that are appropriately sanctioned and endowed by governance bodies. One starting place is to establish a resource-oriented team (e.g., a Resource Coordinating Team) for a specific school and neighborhood (Adelman, 1993; Adelman & Taylor, 1998; Lim & Adelman, 1997; Rosenblum, DiCecco, Taylor, & Adelman, 1995). Properly constituted, a resource team steers the development of local partnerships and ensures maintenance and improvement of a multifaceted and integrated continuum of interventions. For example, with respect to substance abuse prevention, such a team can help reduce fragmentation and enhance cost-efficacy by analyzing, planning, coordinating, integrating, monitoring, evaluating, and strengthening ongoing efforts.

A resource-oriented team differs from those created to review students (such as a student assistance or success team, a teacher assistance team, a case management team). That is, its focus is not on specific cases, but on clarifying resources and their best use. Such a team provides what often is a missing mechanism for managing and enhancing *systems* to coordinate, integrate, and strengthen interventions. For example, the team can take responsibility for (a) identifying and analyzing activity and resources with a view to improving how problems are prevented and ameliorated, (b) ensuring there are effective systems to promote use of prereferral interventions, referral, case management, and quality assurance processes, (c) guaranteeing procedures for effective program management and for communication among school and community staff and with the home, and (d) exploring ways to redeploy and enhance resources—such as clarifying which activities are nonproductive and suggesting better uses for the resources, as well as reaching out to connect with additional resources in the school district, home, and neighborhood.

Creation of resource-oriented teams provides essential mechanisms for starting to weave together existing school, home, and community resources and encourage services and programs to function in an increasingly cohesive way. Such teams also are vehicles for building working relationships and can play a role in solving turf and operational problems, developing plans to ensure availability of a coordinated set of efforts, and generally improving the attention paid to developing comprehensive, integrated approaches for addressing barriers to student learning, such as substance abuse. Although a resource-oriented team might be created solely around psychosocial programs, such a mechanism is meant to bring together representatives of all major programs and services at a school and in the neighborhood. This includes such school personnel as guidance counselors, safe and drug free school staff, attendance and dropout counselors, psychologists, nurses, social workers, health educators, special education personnel, after school program staff, and bilingual and Title I program coordinators. It also includes representatives of any community agency that is significantly involved with schools and, of course, parents and older students. Beyond these, such a team is well-advised to

add the energies and expertise of administrators, regular classroom teachers, non-certificated staff, the local business community, the faith community, and others willing to make the commitment.

Where creation of "another team" is seen as a burden, existing teams can be asked to broaden their scope. At school sites, teams such as student assistance teams, teacher assistance teams, site based management teams, and school crisis teams have extended their functions to encompass resource mapping, analyses, coordination, and enhancement. To do so, however, they must take great care to structure their agenda so that sufficient time is devoted to the additional tasks.

Most schools and agencies do not have an administrator whose job definition includes the leadership role and functions related to the above activity. Moreover, most principals or agency heads don't have time to add such a role to their job descriptions. Thus, we find it imperative that a school and agency establish policies and restructure jobs to ensure there is a *site administrative lead* whose job encompasses this role and its many functions. In addition, a site *staff lead* can be identified from the cadre of line staff who have interest and expertise with respect to school-community-home partnerships. If a locality has a center facility (e.g., Family or Parent Resource Center or a Health Center), the center's coordinator would be one logical choice for this role. Such leads must sit on the resource team and then represent and advocate the team's recommendations whenever governance and administrative bodies meet—especially at key times when decisions are made regarding programs and operations (e.g., use of space, time, budget, and personnel). Besides facilitating the development of a potent approach for developing school-community-home partnerships, administrative and staff leads carry out key functions in daily implementation, monitoring, and problem solving of such partnerships.

Building Outward

Conceptualization of the necessary local level infrastructure helps delineate what supportive mechanisms should be developed to enable several school-neighborhood collaborations to work together (Adelman, 1993; Center for Mental Health in Schools, 1999 a, 1999 b). Such a perspective also provides the necessary foundation for defining what is needed at system-wide levels to support localities.

Neighboring localities have common concerns and may have programs that can use the same resources. By sharing, they can eliminate redundancy and reduce costs. Some school districts already pull together clusters of schools to combine and integrate personnel and programs. These are sometimes called complexes or families of schools. Some cities and counties have developed local planning groups involving public and private agencies and community representatives. A multi-locality *Resource Council* provides a key infrastructure mechanism for work at this level. Such councils can help ensure cohesive and equitable deployment of

resources and also can enhance the pooling of resources to reduce costs. They can be particularly useful for linking schools and community resources and integrating the efforts of high schools and their feeder middle and elementary schools. Multi-locality councils are especially attractive to community agencies who often don't have the time or personnel to link with individual schools. To these ends, one to two representatives from each local resource team can be chosen to form a council and meet at least once a month. Specifically, such a council helps (a) coordinate and integrate programs serving multiple schools and neighborhoods, (b) identify and meet common needs for capacity building including staff development, and (c) create linkages and collaborations among schools and agencies. More generally, it provides a mechanism for leadership, communication, maintenance, quality improvement, and ongoing development of a comprehensive continuum of programs and services. Natural starting points for councils are the sharing of needs assessment, resource mapping, analyses, and recommendations for reform and restructuring. Specific areas of initial focus may be on such matters as community-school substance abuse and developing comprehensive, multifaceted, and integrated prevention programs.

Local and multi-site mechanisms are not sufficient. System-wide policy guidance, leadership, and assistance are required. In establishing comprehensive approaches and partnerships, a system-wide *policy* commitment represents an essential starting point. Then, system-wide mechanisms must be established and must reflect a clear conception of how each supports local activity. Several system-wide mechanisms seem essential for coherent oversight and leadership in developing, maintaining, and enhancing comprehensive approaches involving school-community-home partnerships. One is a *system-wide leader* with responsibility and accountability for the system-wide vision and strategic planning related to (a) developing collaborations to evolve comprehensive approaches and (b) ensuring coordination and integration of activity among localities and system-wide. The leader's functions also encompass evaluation, including determination of equity in program delivery, quality improvement reviews of all mechanisms and procedures, and ascertaining results.

Two other recommended mechanisms at this level are a *system-wide leadership group* and *a resource coordinating body* (for a school district/community). The former provides expertise and leadership for the ongoing evolution of an initiative; the latter provides operational coordination and integration across the system. The composition for these should have some overlap. The system-wide resource coordinating body should include representatives of multi-locality councils and planning bodies. The leadership group should include (a) key administrative and line staff with relevant expertise and vision, (b) staff who can represent the perspectives of the various stakeholders, and (c) others whose expertise (e.g., public health, mental health, social services, recreation, juvenile justice, post secondary institutions) make them invaluable contributors.

School Boards

Matters related to comprehensive approaches and school-community-home partnerships appear regularly on the agenda of local school boards. The problem is that each item tends to be handled in an ad hoc manner, without sufficient attention to the whole picture. One result is that the administrative structure in the school district is not organized in ways that coalesce its various functions (programs, services) for addressing barriers and promoting healthy development. The piecemeal structure reflects the marginalized status of such functions and both creates and maintains fragmented policies and practices. Analyses suggest that Boards of Education need a standing committee that deals indepth and consistently with these matters so they are addressed in more cohesive and effective ways that fully reflect how various resources and functions relate to each other (Center for Mental Health in Schools, 1998).

Adopting a Results-Orientation that Encompasses Both Evaluation of Impact and Process Research

The increasing emphasis on implementation research described above provides an opportunity to expand the research agenda for substance abuse prevention. Another concern in accomplishing such an enhanced agenda, however, involves bringing pressures for accountability and a results-orientation into alignment with high standards for evaluative research. Such a policy alignment is essential to development and eventual scale-up of comprehensive approaches and partnerships.

Accountability demands can and do reshape the essence of prevention research and practice (Adelman, 1986; Adelman & Taylor, 1994; Burchard & Schaefer, 1992; Cuban, 1990). Evidence of the negative impact of pressure for quick evidence of results is well illustrated by the narrow focus of data reported on prevention and early intervention programs (e.g., see Albee & Gullotta, 1997; Bond & Compas, 1989; Dryfoos, 1990; Durlak, 1995; Durlak & Wells, 1997; Elias, 1997; Slavin, Karweit, & Wasik, 1994; Weissberg, Gullotta, Hamptom, Ryan, & Adams, 1997).

There are undeniable benefits from a results-orientation (e.g., Karoly, Greenwood, Everingham, et al., 1998). However, if one is not careful, the desire for information on outcomes can redesign a program's underlying rationale in ways that inappropriately reduce its breadth of focus. It is essential not to lose sight of the fact that many specific objectives are relatively small, unrepresentative, and often unimportant segments of the most valued aims society has for its citizens—and that citizens have for themselves. Unfortunately, in the translation to short-range, measurable objectives, the essence of some intended outcomes can be distorted and the breadth of intervention focus can be narrowed.

Even when an outcome is not easily measured, if it is important, it must be evaluated as well as feasible and kept in the forefront of discussions about intended results. For example, efforts to prevent substance abuse encompass concern for both reducing problems and enhancing wellness with minimal negative side effects (Cowen, 1997). Wellness outcomes and negative side effects do not receive the attention they warrant, in part because they are not easy to measure, and this situation is unlikely to change unless a concerted effort is made to evaluate relevant variables.

Despite many unresolved concerns, scholarly work has advanced the way evaluative research is conceived in education and psychology, and thus there are ample methodological guidelines (Adelman & Taylor, 1994; Chen & Rossi, 1992; Hollister & Hill, 1995; Knapp, 1995; Pogrow, 1998; Scriven, 1993; Sechrest & Figueredo, 1993; Weiss, 1997). First and foremost, is the emphasis on data gathering and analyses that can help improve the intervention. In designing such *formative* evaluations, the methodology also should address immediate accountability demands and anticipate long-term *summative* evaluations of efficacy and effectiveness (Adelman, 1986; Adelman & Taylor, 1994). This will foster intervention development, increase implementation integrity, and encourage broader evaluation of benefits and costs.

Some Guidelines for Creating Partnerships

Based on our understanding of the state of the art related to the body of literature that has relevance for creating school-home-community partnerships, we can extrapolate some guidelines. Our intent in doing so is to further underscore the type of policy and systemic changes that researchers and practitioners must be prepared to address if they want to significantly reduce the rates of psychosocial problems that permeate school and community.

- Move existing *governance* toward shared decision making and appropriate degrees of local control and private sector involvement—a key facet of this is guaranteeing roles and providing incentives, supports, and training for effective involvement of line staff, families, students, and other community members.
- Create *change teams and change agents* to carry out the daily activities of systemic change related to building essential support and redesigning processes to initiate, establish, and maintain changes over time.
- Delineate high level *leadership assignments* and underwrite essential *leadership/management training* regarding vision for change, how to effect such changes, how to institutionalize the changes, and generate ongoing renewal.
- Establish institutionalized *mechanisms to manage and enhance resources* for school-community partnerships and related systems (focusing on

analyzing, planning, coordinating, integrating, monitoring, evaluating, and strengthening ongoing efforts).

- Provide adequate funds for *capacity building* related to both accomplishing desired system changes and enhancing intervention quality over time—a key facet of this is a major investment in staff recruitment and development using well-designed, and technologically sophisticated strategies for dealing with the problems of frequent turnover and diffusing information updates; another facet is an investment in technical assistance at all levels and for all aspects and stages of the work.
- Use a sophisticated approach to *accountability* that initially emphasizes data that can help develop effective approaches for collaboration in providing interventions and a results-oriented focus on short-term benchmarks and that evolves into evaluation of long-range indicators of impact. (Here, too, technologically sophisticated and integrated management information systems are essential.).

All this, of course, is complicated and will take time. In the interim, what is the most responsible and effective role adults in the school, home, and community can play? Given that substance abuse is multi-determined, the most straightforward advice remains to take the problem seriously, have and provide accurate information (but be careful not to undermine one's credibility through use of unbelievable scare messages), and implement interventions that go well beyond providing information, skill training, surveillance, and punishment. And, as with all interventions, programs to prevent substance abuse must be designed to fit the various groups and individuals who populate a school and neighborhood and whose relationship to substance use differs markedly.

CONCLUDING COMMENTS

This article has highlighted the importance of a comprehensive, multifaceted approach that meshes together the resources of school, home, and community to minimize substance abuse. In doing so, we have sketched out some future directions for advancing research and practice in ways that broaden the focus to encompass policy and systemic changes. Widespread abuse of substances and other related psychosocial problems are unlikely to be addressed effectively in the absence of such a broadened focus based on an understanding of the psychological and socio-cultural factors that motivate youngsters' behavior. In this last respect, it is imperative to appreciate the degree to which substance use reflects the experimentation and risk taking that is so much a part of the developmental process of moving toward individuation and independence. Characteristic behaviors during this process include skepticism about the warnings and advice given by adults, as well as reactions against rules and authority. The very fact that they are illegal and forbidden often adds to the allure. Fortunately, most youngsters

navigate developmental transitions without serious upheaval. For too many others, however, the lack of good alternative ways to feel competent, self-determining, and connected to others leads to problems (Deci & Ryan, 1985). One of these can be substance abuse. As our review of the state of the art indicates, clearly there is still a lot to learn about how to prevent such problems on a large-scale. It seems unlikely that more of the same will do the trick. It is time for bold new directions.

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