

## **SECTION II**

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# **Considering Strength and Reach in Selecting Prevention Strategies**

# Selecting From Among Prevention Strategies

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A wide variety of prevention strategies have some level of scientific support. On what basis can prevention planners make decisions regarding choices from among these strategies? Many different considerations enter into such a selection. Some of the key local considerations include:

- the nature of the most serious and/or prevalent problems to be addressed;
- the strategies that will be most appropriate for and acceptable to the target populations;
- the political, cultural, and social priorities and sensitivities of the locale; and
- the resources available.

In addition, however, there are two extremely important considerations that apply to every locale and that should definitely be included in the decision-making process. These are assessments of the potential strength and the potential reach of strategies.

## **Strength**

In this context, we define strength as the magnitude of the effects of a strategy. Many prevention strategies have demonstrated effects that are called “statistically significant.” It is important not to confuse statistical significance with practical significance.

Statistical significance can be achieved if a particular intervention has a tiny effect consistently. For example, a program that caused 20 percent of its participants to delay initiation of marijuana use by one month might have an effect that is highly statistically significant. But would this effect really have social and health outcomes that are worth the cost of the program? While measures of statistical significance tell us whether a program has any effect at all, we must also consider whether the results of the program are strong enough to bring about the goals we are striving for.

Unfortunately, when researchers and evaluators report the results of studies, they do not always make clear the actual magnitude of the effects. Sometimes, we must look at studies in more detail to answer the important questions about the strength of the effects.

When considering questions related to the strength of a strategy’s effect, it is important to examine effects on the actual outcomes of concern to prevention – substance use and

related problems. Unfortunately, to date, many strategies only demonstrate effects on intervening variables, or what are assumed to be risk factors for substance use or problems. In some cases, the intervening variables selected for intervention have not proved to be causally related to substance use. Programs designed to increase self-esteem, for example, were effective in changing this intervening variable but did not decrease substance use.

In many cases, practical considerations make measuring actual outcomes infeasible. For example, interventions aimed at young children require long-term following in order to determine the effects on substance use and problems.

When effects are demonstrated for intervening variables only, expectations about the ultimate effects on substance use and problems must be diluted by the extent to which the intervening variable actually causes the problems of interest. For example, many programs designed to increase parenting skills can demonstrate effects on discipline practices and levels of family bonding that have been found to be associated with substance use. In a recent survey of young people that measured a variety of variables related to family characteristics, all of the family variables combined could account for only 6 percent to 9 percent of the variability in substance use. This means that even if these family variables were found to actually cause substance use (rather than all being caused by some third variable), a perfect program that made every family operate in an optimum fashion for prevention could only be expected to reduce substance use by 6 percent to 9 percent. The actual results we might expect would be much more modest.

Whenever researchers or evaluators report effects on intervening variables only, we must examine both the strength of the effect on the intervening variable and the potential strength of the effect on the prevention outcomes we are concerned about.

### **Reach**

Reach is defined as the number of people affected by a prevention strategy. Some strategies, by their very nature, affect only a small number of people. As an example, the sort of parenting program discussed above is likely to be made available to a limited number of families. Fewer still are likely to participate in or to complete the program. By contrast, an increase in the excise tax on tobacco affects every smoker and every person who is contemplating smoking.

Sometimes, strategies that have a broad reach have only small effects on any one person. A tobacco tax may be just one consideration among many that affects whether and how much people smoke. But because a tax affects so many people, small individual effects with broad reach can have very powerful effects on public health.

Sometimes strategies with broad reach also have strong effects – and the strongest effects on the very people most at risk. For example, thousands of people may hear about a widely publicized sobriety checkpoint. Most people, including those who do not drink or who never drink and drive, will ignore it. The ones most likely to pay attention to the

existence of the checkpoint and to change their behavior are the people most likely to drink and drive.

Whether they actually see the checkpoint or are stopped by it may not matter at all.

### **Balancing Strength and Reach**

Obviously, strength and reach have different weights in different situations. Some organizations and agencies have a mission to make a meaningful impact on a small group of people. Others must demonstrate a public health impact that implies a measurable effect on whole populations. Most prevention planners and decision-makers have an obligation to demonstrate efficient use of public resources. This requires awareness of the strength and reach of the prevention strategies under consideration and a critical assessment of their efficacy and efficiency.