HLTH 4511: Introduction to Problematic Substance Use and Approaches for its Prevention and Treatment

Section Seven: Prevention and Treatment: Preventing Substance Abuse

By

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CHAPTER 17

PREVENTING SUBSTANCE ABUSE

OBJECTIVES

When you have finished this chapter, you should be able to

- Distinguish between education and propaganda programs based on their goals and approaches.
- Describe two systems for classifying prevention programs: one based on stages of involvement, the other based on target populations defined by risk for drug use.
- Describe the historical shifts in substance abuse prevention programs from the knowledge-attitudes-behaviour model to affective education to antidrug norms.
- Explain how the social influence model for smoking prevention led to the development of DARE and similar programs.
- Describe the outcome of research on DARE's effectiveness and how DARE proponents have responded.
- Give some examples of peer, family, and community approaches to prevention.
- Describe the most consistent feature of workplace prevention programs.

Why can't we *do* something to keep people from ruining their lives with drugs? As our society seeks to prevent drug abuse by limiting the availability of such drugs as heroin and cocaine, we are forced to recognize several other facts. First, as long as there is a sizable market for these substances, there will be people to supply them. Thus, only if we can teach people not to want the drugs can we attack the source of the problem. Second, these substances will never disappear, so we should try to teach people to live in a world that includes them. Third, our society has accepted the continued existence of tobacco and alcohol, yet some people are harmed by them. Can we teach people to coexist with both legal and illegal substances and to live in such a way that their lives and health are not impaired by them?

Defining Goals and Evaluating Outcomes

Think about the process you are engaged in while reading and studying this book. The text is aimed at teaching its readers about drugs: their effects, how they are used, and how they relate to society. The goal of the authors is *education*. A person who understands all this information about all these drugs will perhaps be better prepared to make decisions about personal drug use, more able to understand drug use by others, and better prepared to participate in social decisions about drug use and abuse. We hope that a person who knows all this would be in a position to act more rationally, neither glorifying a drug and expecting miraculous changes from using it nor condemning it as the essence of evil. But our ultimate goal is not to change readers' behaviour in a particular direction. For example, the chapter on alcohol, although pointing out the dangers of its use and the problems it can cause, does not attempt to influence readers to avoid all alcohol use. The success of this book is measured by how much a person knows about alcohol, hallucinogens, marijuana, opioids, stimulants, and tobacco, not whether he or she is convinced never to use any of these substances.

Conversely, a tradition exists, going back to the "demon rum" programs of the late 1800s, of presenting negative information about alcohol and other drugs in the public schools with the clear goal of *prevention* of use. Some of these early programs presented information that was so clearly one-sided that they could have been classified as propaganda rather than education. We would not measure the success of such a program by how much objective information the students gained about

DRUGS IN THE MEDIA

To Be a Patsy or Not

A few years ago, prevention program advocates began running an advertisement campaign called "Don't be a Patsy." During these spots, Patsy, a mother of teenage children, confidently advises viewers on how to determine if their children are using drugs. In one advertisement, she clumsily demonstrates the "Patsy pat-down." As her daughter descends the stairs before leaving the house, Patsy asks for a hug with the supposedly hidden purpose of conducting a frisk search. Of course, the daughter looks bewildered by her mother's strange demonstration of affection. Nonetheless, Patsy looks into the camera and claims that this is an effective way to check your kids for drugs without their knowledge. Then, toward the end of the commercial, a voice-over announces, "Don't be a Patsy. Learn a better way at drugfree.org."

The Patsy spots were intended to get viewers' attention through humour and not to exaggerate the harms associated with drug use. This is quite a departure from previous prevention campaigns. Some may recall public service announcements in the late 1980s, "This is your brain on drugs." During the original spot, a man holds up an egg and says, "This is your brain." Then, he picks up a frying pan and says, "This is drugs." Then, he cracks open the egg, fries the contents, and says, "This is your brain on drugs." Finally, he asks, "Any questions?" While this is perhaps the most memorable anti-drug-use advertisement, it is frequently ridiculed because it overstates the potential harmful effects of drugs used by its target audience, namely young people. Indeed, a major concern of drug educators is that these types of embellishments decrease their credibility and may lead some young people to reject all drug-related information from so-called informed sources.

Perhaps the Patsy advertisements signal that the prevention advocates have learned to frame their drug use prevention message in more realistic terms. In this way, they decrease the likelihood of alienating their target audience. What do you think? Should drug prevention efforts exaggerate drug effects to discourage their use? Or should such efforts be more realistic, even if the positive effects of a drug outweigh the negative ones?

the pharmacology of cocaine, for example. A more appropriate index might be how many of the students did subsequently experiment with the drugs against which the program was aimed. Until the early 1970s, it was simply assumed that these programs would have the desired effect, and few attempts were made to evaluate them.

Types of Prevention

The goals and methods of a prevention program also depend on the drug-using status of those served by the program. The programs designed to prevent young people from starting to smoke might be different from those used to try to prevent relapse in smokers who have quit, for example. Until recently, drug-abuse prevention programs have been classified according to a public health model:

- *Primary prevention* programs are those aimed mainly at young people who have not yet tried the substances in question or who may have tried tobacco or alcohol a few times. As discussed in the section "Defining Goals and Evaluating Outcomes," such programs might encourage abstinence from specific drugs or might have the broader goal of teaching people how to view drugs and the potential influences of drugs on their lives, emotions, and social relationships. Because those programs are presented to people who have little personal experience with drugs, they might be expected to be especially effective. But, there is the danger of introducing large numbers of children to information about drugs that they might otherwise never have heard of, thus arousing their curiosity.
- *Secondary prevention* programs can be thought of as designed for people who have tried the drug in question or a variety of other substances. The goals of such programs are usually the prevention of the use of other, more dangerous substances and the prevention of the development of more dangerous forms of use of the substances they are already experimenting with. We might describe the clientele here as more "sophisticated" substance users who have not suffered seriously from their drug experiences and who are not obvious candidates for treatment.

Many postsecondary students fall into this category, and programs aimed at encouraging responsible use of alcohol among postsecondary students are good examples of this stage of prevention.

- *Tertiary prevention*, in our scheme, is relapse prevention, or follow-up programs. For alcohol- or heroin-dependent individuals, treatment programs are the first priority. However, once a person has been treated or has stopped the substance use without assistance, we enter another stage of prevention.

The Institute of Medicine has proposed a new classification of the continuum of care, which includes prevention, treatment, and maintenance.[1] Prevention efforts are categorized according to the intended target population, but the targets are not defined only by prior drug use:

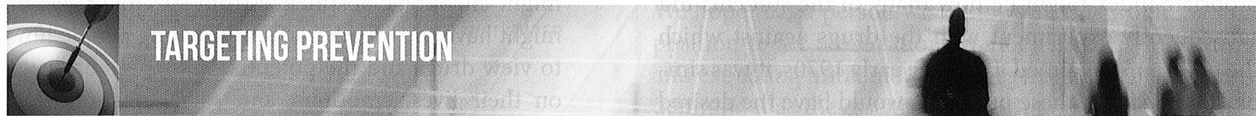
- *Universal prevention* programs are designed for delivery to an entire population—for example, all schoolchildren or an entire community.
- *Selective prevention* strategies are designed for groups within the general population that are deemed to be at high risk—for example, students who are not doing well academically or the poorest neighbourhoods in a community.
- *Indicated prevention* strategies are targeted at individuals who show signs of developing problems, such as a child who began smoking cigarettes at a young age or an adult arrested for a first offence of driving under the influence of alcohol.

Prevention Programs in Schools

After the increase in the use of illegal drugs by young middle-class people in the 1960s, there was a general sense that society was not doing an adequate job of drug education, and most school systems increased their efforts. However, there was confusion over the methods to be used. Traditional antidrug programs had relied heavily on representatives of the local police, who went into schools and told a few horror stories, describing the legal trouble due anyone who got caught with illegal drugs. Sometimes the officers showed what the drugs looked like or demonstrated the smell of burning marijuana, so that the kids would know what to avoid. Sometimes, especially in larger cities, a former user described how easy it was to get "hooked," the horrible life of the junkie, and the horror of withdrawal symptoms. The 1960s saw more of that, plus the production of a large number of scary antidrug films.

The Knowledge-Attitudes-Behaviour Model

Teachers and counsellors knew little about illegal drugs, and many teachers attended courses taught by experts. Some of the experts were enforcement-oriented and presented the traditional scare-tactics information, whereas



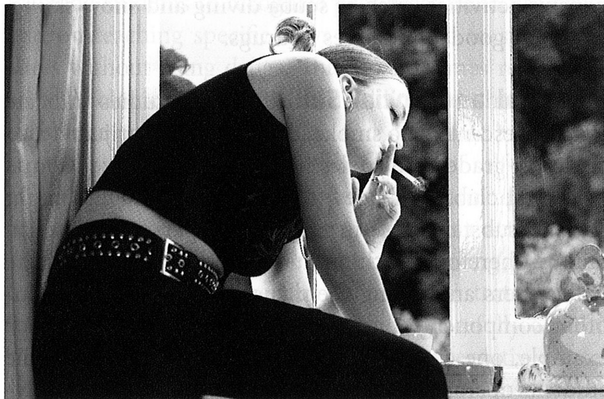
Preventing Inhalant Abuse

The abuse by children of spray paints and other products containing solvents appears to have increased somewhat in recent years (see Chapter 7). Several characteristics of this type of abuse make it an interesting problem for prevention workers. First, the variety of products and their ready availability in stores, the home, and even in schools make preventing access to the inhalants impossible. Second, most of the kids who use these substances probably know it's unhealthy and dangerous to do so, and further information of that sort may not add much in the way of preventing their use. Third, this use is very "faddish"–a group of students in grade 8 in one school might start inhaling cleaning fluid; a group of students in grade 6 in another neighbourhood might be into gold paint (in distinct preference to black, yellow, or white).

Given these characteristics, where does a school-based prevention education program begin to attack the problem? Does it focus on a particular product and try to talk kids out of using gold paint? Does it talk about a whole variety of products and thereby perhaps introduce the kids to new things they hadn't thought of? One videotape (*Inhalants: Kids in Danger, Adults in the Dark*) took the approach of attempting to inform parents and teachers of the varieties of paints, perfumes, solvents, and other spray products used by abusers and to inform them of some of the subterfuges used by some of the kids (carrying a small cologne vial to school, spraying paint into empty soft drink cans, etc.). However, this video is not meant to be shown to children, because it describes exactly what to do and how to do it. Probably the best idea in prevention classes is to reinforce to children in general terms the dangers of inhalants without describing a particular substance or method of use.

others were pharmacologists who presented the "dry facts" about the classification and effects of various drugs. The teachers then brought many of these facts into their classrooms. It was later pointed out that the programs of this era were based on an assumed model: that providing information about drugs would increase the students' *knowledge* of drugs and their effects, that this increased knowledge would lead to changes in *attitudes* about drug use, and that these changed attitudes would be reflected in decreased drug-using *behaviour*.[2]

In the early 1970s, this model began to be questioned. A 1971 study indicated that students who had more knowledge about drugs tended to have a more positive attitude toward drug use.[3] Of course, it may have been that pro-drug students were more interested in learning about drugs, so this was not an actual assessment of the value of drug education programs. A 1973 report by the same group indicated that four different types of drug education programs were equally effective in producing increased knowledge about drugs and equally ineffective in altering attitudes or behaviour.[4] Nationwide, drug use had increased even with the greater emphasis on drug education. Concern arose about the possibility that drug education may even have contributed to increased drug use. Before the 1960s, the use of marijuana and LSD was rare among school-age youngsters. Most of them didn't know much about these things, had given them little thought, and had probably never considered using them. Telling them over and over not to use drugs was a bit like telling a young boy not to put beans in his nose. He probably hadn't thought of it before, and your warning gives him the idea. These concerns led many governments to stop supporting the production of drug-abuse films and educational materials until it could determine what kinds of approaches would be effective.



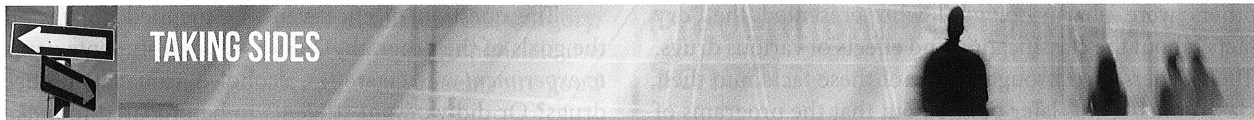
Helping young people learn to deal with emotions in healthy ways and giving them successful experiences may reduce their rates of smoking, drinking, and drug use.

The question of effectiveness depended greatly on the goals of the program. Did we want all students *never to experiment* with cigarettes, alcohol, marijuana, or other drugs? Or did we want students to be prepared to *make rational decisions* about drugs? For example, a 1976 report indicated that students in drug education programs did increase their use of drugs over the two years after the program, but they were less likely to show drastic escalation of the amount or type of drug use over that period when compared with a control group.[5] Perhaps by giving the students information about drugs, we make them more likely to try them, but we also make them more aware of the dangers of excessive use. For a time in the 1970s, it seemed as though teaching students to make rational decisions about their own drug use with the goal of reducing the overall harm produced by misuse and abuse could be a possible goal of prevention programs.

Affective Education

Educators have been talking for several years about education as including both a "cognitive domain" and an "affective domain," the domain of emotions and attitudes. One reason that young people might use psychoactive drugs is to produce certain feelings: of excitement, of relaxation, of power, of being in control. Or perhaps a child might not really want to take drugs but does so after being influenced by others. Helping children know their own feelings and express them, helping them achieve altered emotional states without drugs, and teaching them to feel valued, accepted, and wanted are all presumed to be ways of reducing drug use.

Values Clarification The values clarification approach makes the assumption that what is lacking in drug-using adolescents is not factual information about drugs but, rather, the ability to make appropriate decisions based on that information.[6] Perhaps drug use should not be "flagged" for the students by having special curricula designed just for drugs but, instead, emphasis should be placed on teaching generic decision-making skills. Teaching students to analyze and clarify their own values in life is accomplished by having them discuss their reactions to various situations that pose moral and ethical dilemmas. Groups of parents or other citizens who are concerned about drug abuse sometimes have great difficulty understanding and accepting these approaches because they do not take a direct antidrug approach. In the 1970s, when these programs were developed, it seemed important that the schools not try to impose a particular set of values but, rather, allow for differences in religion, family background, and so on. For this reason,



Are "Alternatives to Drugs" Really Alternatives?

As one part of many drug education programs, students are taught that they can produce natural highs–that is, altered states of consciousness similar to those produced by drugs, but without using drugs.

One such alternative that has been mentioned in these programs is skydiving. Obviously an activity of that sort has all the glamour, danger, and excitement most of us would want. Maybe if the kids could do this whenever they wanted, they wouldn't want to try cocaine or marijuana. But let's examine this as an alternative for a bunch of junior high school kids. First, there's the matter of cost and availability. How realistic is it to think that most of these kids would have access to skydiving? Second, there's the issue of convenience. Even if you were a rich kid, with your own airplane, parachute, and pilot, it's unlikely that you'd be able to go skydiving every afternoon after school. Drugs and alcohol may not provide the best highs in the world, but often they are easy to get and use, compared with such activities as skydiving.

Maybe skydiving isn't a *practical* alternative to drugs for many people. Still, it seems more wholesome and desirable. Let's become social philosophers and ask ourselves why the image of a person skydiving is more positive than the image of a person snorting cocaine. After all, skydiving doesn't make any obvious contributions to society. Let's play devil's advocate and propose that skydiving is not preferable to taking cocaine. Either way, the person is engaged in dangerous, expensive, self-indulgent activity. Contrast skydiving with cocaine, and see if you can answer for yourself why skydiving has a more positive image than cocaine use. You may have to talk about this with several people before you get a consistent feeling for why our society respects one of these activities so much more than the other. What about skiing? bungee jumping?

the programs were often said to be *value free*. To many parents, the purpose of **values clarification** training is not immediately clear, and teaching young children to decide moral issues for themselves may run contrary to the particular set of values the parents want their children to learn. The Canadian Home and School Federation supports the application of formal values clarification programs in all Canadian schools. It has recommended that such programs be developed, in consultation with parents, and as teachers become available who are qualified in values clarification techniques.[7]

Alternatives to Drugs Along with values clarification, another aspect of affective education involves the teaching of **alternatives** to drug use. Under the assumption that students might take drugs for the experience, for the altered states of consciousness that a drug might produce, students are taught about so-called natural highs, or altered states, that can be produced through relaxation exercises, meditation, vigorous exercise, or an exciting sport. Students are encouraged to try these things and to focus on the psychological changes that occur. These alternatives should be discussed with some degree of sensitivity to the audience; for example, it would make little sense to suggest to many inner-city 13-year-olds that expensive activities, such as scuba diving and snow skiing, would be good alternatives to drugs.

Personal and Social Skills Several studies indicate that adolescents who smoke, drink, or use marijuana also get lower grades and are less involved in organized sports or school clubs. One view of this is that students might take up substance use in response to personal or social failure. Therefore, teaching students how to communicate with others and giving them success experiences is another component of affective education approaches. For example, one exercise that has been used is having the students operate a school store. This is done as a group effort with frequent group meetings. The involved students are expected to develop a sense of social and personal

values clarification: teaching students to recognize and express their own feelings and beliefs.

alternatives: alternative nondrug activities, such as relaxation exercises or dancing.

competence without using drugs. Another approach is to have older students tutor younger students, which is designed to give the older students a sense of competence. An experiment carried out in Napa, California, combined these approaches with a drug education course, small-group discussions led by teachers, and classroom management techniques designed to teach discipline and communication skills and to enhance the students' self-concepts.[8] Although a small effect on alcohol, marijuana, and cigarette use was found among the girls, the effects were gone by the one-year follow-up.

Antidrug Norms

A 1984 review of prevention studies concluded the following:

> (1) Most substance abuse prevention programs have not contained adequate evaluation components; (2) increased knowledge has virtually no impact on substance abuse or on intentions to smoke, drink, or use drugs; (3) affective education approaches appear to be experiential in their orientation and to place too little emphasis on the acquisition of skills necessary to increase personal and social competence, particularly those skills needed to enable students to resist the various interpersonal pressures to begin using drugs; and (4) few studies have demonstrated any degree of success in terms of actual substance abuse prevention.[9]

This last point is not entirely a criticism of the programs themselves but reflects the difficulty of demonstrating statistically significant changes in behaviour over time after the programs.

Refusal Skills In response to the third point, that affective education approaches were too general and experiential, the next efforts at preventing drug use focused on teaching students to recognize peer pressure to use drugs and on teaching specific ways to respond to such pressures without using drugs. This is sometimes referred to as psychological inoculation. In addition to the focus on substance use, "refusal skills" and "pressure resistance" strategies are taught in a broader context of self-assertion and social skills training. The first successful application of this technique was a film in which young actors acted out situations in which one person was being pressured to smoke cigarettes. The film then demonstrated effective ways of responding to the pressure gracefully without smoking. After the film, students discuss alternative strategies and practise the coping techniques presented in the film. This approach has been demonstrated to be successful in reducing cigarette smoking in adolescent populations. It has been adapted for use with groups of various ages and for a wider variety of drugs and other behaviours.

National Anti-Drug Strategy Canada's approach to prevention is directed through the National Anti-Drug Strategy, which was launched October 2007. The Strategy is a collaborative effort among Health Canada, the Department of Justice, and Public Safety Canada. It includes three action plans: preventing illegal drug use, treating those with illegal drug dependencies, and combating the production and distribution of illegal drugs.[10] As part of the prevention plan, Health Canada has developed a campaign, called DrugsNot4Me, aimed at equipping young people (ages 15–24) with coping and refusal skills to support their decision not to experiment with illegal drugs. In addition to an interactive and informative Web site, http://www.not4me.ca, the campaign includes television and movie theatre commercials; advertisements in buses, trains, subways, and shopping malls across Canada; and Internet banners on Web sites popular with teens. The DrugsNot4Me commercials entitled "Fast Forward" and "Mirror" aim to make youth consider the stark reality of experimenting with drugs and to recognize that addiction can happen to anyone—even them. The commercials lead viewers to the DrugsNot4Me Web site, where they are given an opportunity to learn more about the effects of drugs and how to say no. The effectiveness of this program in achieving its prescribed outcomes is yet to be evaluated.

Drug-Free Schools In the 1980s the U.S. federal government created a program to support "drug-free schools and communities." Among other things, the government provided millions of dollars' worth of direct aid to local school districts to implement or enhance drug-prevention activities. Along with this, the Department of Education produced a small book called *What Works: Schools Without Drugs*,[11] which made specific recommendations for schools to follow. This book did not recommend a specific curriculum; its most significant feature was the emphasis on factors other than curriculum, such as school policies on drug and alcohol use. It suggested policies regarding locker searches, suspension, and expulsion of students. The purpose was not so much to take a punitive approach to alcohol or drug use as to point out through example and official policy that the school and community were opposed to drug and alcohol use by minors. Following this general drug-free lead, schools adopted "tobacco-free" policies, stating that not only the students but also teachers and other staff people were not to use tobacco products at school or on school-sponsored trips or activities.

According to this approach, the curriculum should include teaching about the laws against drugs and about school policies. In other words, as opposed to the 1970s values clarification approach of teaching students how to make responsible decisions for themselves, this approach wants to make it clear to the students that the society at large, the community in which they live, and the school in which they study have already made the decision not to condone drug use or underage alcohol use. This seems to be part of a more general educational trend away from "value-free" schools toward teaching values that are generally accepted in our society. For schools to be eligible for federal U.S. Drug-Free Schools funding, they must certify that their program teaches that "illicit drug use is wrong and harmful."

Development of the Social Influence Model

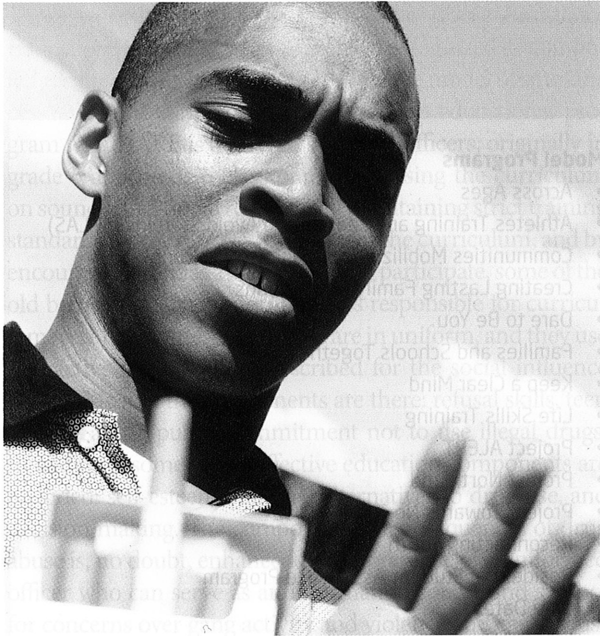
Some of the most sophisticated prevention research in recent years has been focused directly on cigarette smoking in adolescents. This problem has two major advantages over other types of drug use, as far as prevention research is concerned. First, a large enough fraction of adolescents do smoke cigarettes so that measurable behaviour change is possible in a group of reasonable size. In contrast, we would have to perform an intervention with tens of thousands of people before significant alterations in the proportion of heroin users would be statistically evident. Second, the health consequences of smoking are so clear with respect to cancer and heart disease that there is a fairly good consensus over goals: We'd like to prevent adolescents from becoming smokers. One research advantage is the relatively simple verification available for self-reported use of tobacco: Saliva samples can be measured for cotinine, a nicotine metabolite.

Virtually all the various approaches to drug-abuse prevention have been tried with smoking behaviour; in fact, Evans's 1976 smoking prevention paper introduced the use of the psychological inoculation approach based on the **social influence model**.[12] Out of all this research, certain consistencies appear. The most important of these is that it *is* possible to design smoking prevention programs that are effective in reducing the number of adolescents who begin smoking. Some practical lessons about the components of those programs have also emerged.[13] For example, presenting information about the delayed consequences of smoking (possible lung cancer many years later) is relatively ineffective. Information about the immediate physiological effects (increased heart rate, shortness of breath) is included instead. Some of the most important key elements that were shown to be effective were the following:

- *Training refusal skills* (for example, eight ways to say no). This was originally based on films demonstrating the kinds of social pressures that peers might use to encourage smoking and modelling a variety of appropriate responses. Then the students engage in role-playing exercises in which they practise these refusal skills. By using such techniques as changing the subject or having a good excuse handy, students learn to refuse to "cooperate" without being negative. When all else fails, however, they are taught to be assertive and insist on their right to refuse.
- *Public commitment.* Researchers found that having each child stand before his or her peers and promise not to start smoking and sign a pledge not to smoke are effective prevention techniques.
- *Countering advertising.* Students are shown examples of cigarette advertising, and then the "hidden messages" are discussed (young, attractive, healthy, active models are typically used; cigarette smoking might be associated with dating or with sports). Then the logical inconsistencies between these hidden messages and the actual effects of cigarette smoking (e.g., bad breath, yellow teeth, shortness of breath) are pointed out. The purpose of this is to "inoculate" the children against cigarette advertising by teaching them to question its messages.
- *Normative education.* Adolescents tend to overestimate the proportion of their peers who smoke. Presenting factual information about the smoking practices of adolescents provides students with a more realistic picture of the true social norms regarding smoking and reduces the "everybody is doing it" attitude. When possible, statistics on smoking from the specific school or community should be used in presenting this information.
- *Use of teen leaders.* Presenting dry facts about the actual proportion of smokers should ideally be reinforced by example. If you're presenting the program to junior high students, it's one thing to *say* that fewer than one-fifth of the high school students in that community smoke, but it's another to bring a few high school students into the room and have them discuss the fact that neither they nor their friends smoke, their attitudes about smokers, and ways they have dealt with others' attempts to get them to smoke.

Possible improvements to those approaches are offered by the *cognitive developmental* approach to smoking behaviour. McCarthy criticized the social influence or

social influence model: a prevention model adopted from successful smoking programs.



Training in refusal skills, including role-playing exercises, is a key component of the social influence model.

social skills training model for assuming that all students should be taught social skills or refusal skills without regard to whether they need such training.[14] The model "is that of a defenceless teenager who, for lack of general social skills or refusal skills, passively accedes to social pressures to smoke." Alternative models have been proposed in which the individual makes active, conscious decisions in preparation for trying cigarettes or trying smoking and becoming an occasional or regular user. The decision-making processes, and thus the appropriate prevention strategy, might be different at each of these "stages of cognitive development" as a smoker. Furthermore, smokers who begin smoking very young behave differently from smokers who begin as older adolescents (e.g., those who start young show more unanimity in selecting the most popular brand). Unfortunately, adolescents continue to initiate smoking, and the risk and protective factors reviewed in Chapter 1 have more influence on smoking behaviour (and on alcohol and other drug use) than any information or education programs yet devised.[15]

Prevention Programs that Work

Current research indicates that prevention strategies that employ multifaceted approaches are the most effective (i.e., strategies in which media messages are delivered in tandem with prevention programs in schools, communities, and families, sustained over time).[16] In 2010 the Canadian Centre on Substance Abuse released the *Portfolio of Canadian Standards for Youth Substance Abuse Prevention*. This document was constructed to guide schools, communities, and families in the prevention and reduction of illegal drug use by Canadian youth ages 10–24.[16] The *Portfolio* comprises standards for prevention in schools (Building on Our Strengths) and communities (Stronger Together), along with guidelines for families (Strengthening Our Skills). This resource addresses everyday environments and provides teams with step-by-step guidance, based on the best available evidence, for the planning, implementation, and evaluation of their prevention efforts. The portfolio is funded through Canada's National Anti-Drug Strategy.

School-Based Prevention Programs

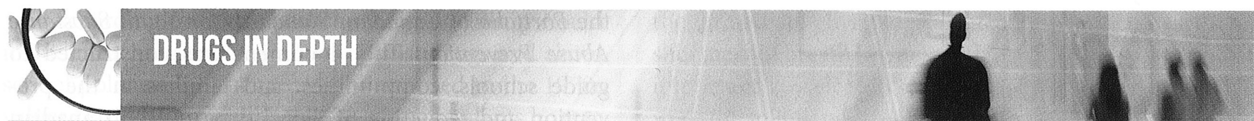
Most programs for the prevention of illegal drug use are school-based. Schools are considered an appropriate setting for drug use prevention programs. Reasons for this include the following:

- As we have seen repeatedly throughout this text, illicit drug use is highly prevalent before adulthood.[17] Therefore, prevention programs for substance use must focus on school-age children and adolescents, before their beliefs and expectations about substance use are established.
- School systems theoretically provide a systematic and efficient way for reaching the majority of young persons, every year.
- Schools are generally well equipped for adopting and enforcing a broad spectrum of educational programs.[18]

Many school-based drug-use prevention programs have been modelled after the successful social influence model. Some of these programs have been evaluated for their effectiveness in reducing the incidence of first-time use, the frequency and amount of illegal drug use, and the prevalence of use among youth. Others have been evaluated for their ability to deliver knowledge or promote change in attitudes and behaviours. Some studies have demonstrated beneficial effects of these programs; others have not.[18,19,20,21,22] It should be noted that the vast majority of peer-reviewed programs are from the United States and are therefore influenced by social context and drug policies of that country.

Project ALERT

Project ALERT was first tested in 30 junior high schools in California and Oregon.[23] The program targeted cigarette smoking, alcohol use, and marijuana use. Before the program, each student was surveyed and classified as a

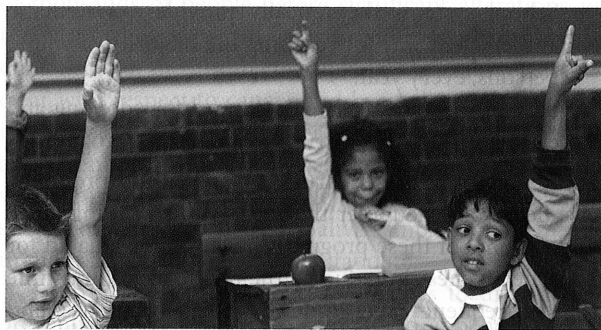


Effective Prevention Programs

Canada does not have a program for the routine evaluation and publication of exemplary prevention programs for youth. The most recent comprehensive review of Canadian and international programs, *Preventing Substance Use Problems Among Young People: A Compendium of Best Practices,* was published in 2001.[24] However, the Center for Substance Abuse Prevention, a branch of the Substance Abuse and Mental Health Services Administration (SAMHSA) in the U.S. Department of Health and Human Services, maintains an ongoing program for the evaluation of research on effective prevention programs. It has developed a National Registry of Evidence-Based Programs and Practices (NREPP). Some of the programs on this partial list are described within this chapter, and more information on the others can be obtained from the SAMHSA Web site. As new programs are approved, they are added to the registry, so for the most current list, check on the Web at http://nrepp.samhsa.gov.

Model Programs

- Across Ages
- Athletes Training and Learning to Avoid Steroids (ATLAS)
- Communities Mobilizing for Change on Alcohol
- Creating Lasting Family Connections
- Dare to Be You
- Families and Schools Together
- Keep a Clear Mind
- Life Skills Training
- Project ALERT
- Project Northland
- Project Towards No Tobacco Use
- Reconnecting Youth
- Residential Student Assistance Program
- Safe Dates
- SMART Team
- Strengthening Families Program
- Too Good for Drugs



Some school-based drug-use prevention programs have been shown to reduce initiation and levels of drug use; others have not.

nonuser, an experimenter, or a user for each of the three substances. The curriculum was taught either by health educators or by educators with the assistance of trained teen leaders. Control schools simply continued whatever health or drug curriculum they had been using. The program was delivered in grade 7, and follow-up surveys were done 3, 12, and 15 months later. Three "booster" lessons were given in grade 8.

DARE: Drug Abuse Resistance Education, the most popular prevention program in schools.

The program surprisingly had no measurable effect on initiation of smoking by nonusers. However, those who were cigarette experimenters before the program began were more likely to quit or to maintain low rates of smoking than the control group. The group with teen leader support showed the largest reduction: 50% fewer students were weekly smokers at the 15-month follow-up.

The experimental groups drank less alcohol soon after the program was presented, for previous alcohol nonusers, experimenters, and users. However, this effect diminished over time and disappeared by the end of the study.

The most consistent results were in reducing initiation of marijuana smoking and reducing levels of marijuana smoking. For example, among those who were not marijuana users at the beginning, about 12% of the control-group students had begun using marijuana by the 15-month follow-up. In the treatment groups, only 8% began using during that time, representing a one-third decrease in initiation to marijuana use.

Drug Abuse Resistance Education (DARE)

Perhaps the most substantive educational phenomenon in a long time had fairly modest beginnings in 1983 as a joint project of the Los Angeles police department and school district.

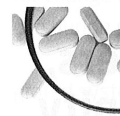
Those who are familiar with the Drug Abuse Resistance Education (**DARE**) program will have recognized its components described under the social influence model of smoking cessation. The difference here is that the educational program with DARE is delivered by police officers, originally in grade 5 and grade 6 classrooms. By basing the curriculum on sound educational research, by maintaining strict training standards for the officers who present the curriculum, and by encouraging the classroom teacher to participate, some of the old barriers to having non-teachers responsible for curriculum were overcome. The officers are in uniform, and they use interactive techniques as described for the social influence model. Most of the components are there: refusal skills, teen leaders, and a public commitment not to use illegal drugs. In addition, some of the affective education components are included: self-esteem building, alternatives to drug use, and decision making. The component on consequences of drug abuse is, no doubt, enhanced by the presence of a uniformed officer who can serve as an information source and symbol for concerns over gang activity and violence and can discuss arrest and incarceration. The 17-week program is capped by a commencement assembly at which certificates are awarded.

This program happened to be in place at just the right time, both financially and politically. With the assistance of drug-free schools money and with nationwide enthusiasm for new drug-prevention activities in the 1980s, the program spread rapidly across the United States. By the early 1990s DARE programs were found in every state and all Canadian provinces, except Quebec. Currently, there are approximately 75 000 students being taught the DARE program in 1600 Canadian schools by 855 active DARE Officers.[25]

This program was accepted quickly by many schools, and endorsed enthusiastically by educators, students, parents, and police participants, even though its effectiveness in preventing drug use was not evaluated extensively until 1994.

In 1994, two important, large-scale studies of the effects of DARE were reported. One was based on a longitudinal study in rural, suburban, and urban schools in Illinois, comparing students exposed to DARE with students who were not.[26] Although the program had some effects on reported self-esteem, there was no evidence for long-term reductions in self-reported use of drugs. The other report was based on a review of eight smaller outcome evaluations of DARE, selected from 18 evaluations based on whether the reports had a control group, a pretest-posttest design, and reliable outcome measures.[27] The overall impact of these eight programs was to increase drug knowledge and knowledge about social skills, but the effects on drug use were marginal at best. There was a very small but statistically significant reduction of tobacco use and no reliable effect on alcohol or marijuana use.

A more recent review of 20 studies on DARE published in peer-reviewed journals found an average effect size that was small and not statistically significant.[28] The repeated failures to demonstrate a significant impact of the DARE program on drug use remain a dilemma in light of its widespread popularity. Communities have not abandoned the program. Instead, the DARE organization has developed additional programs, including DARE 1 PLUS (Play and Learn Under Supervision) as an extension to the elementary program, and curriculum for middle school and high school DARE programs designed to follow up with these older adolescents. We cannot yet evaluate the effectiveness of these additional programs.



DRUGS IN DEPTH

How Much Do You Know about DARE?

1. Many Canadians have heard of DARE. What do the letters stand for?
2. One component of DARE is practising how to refuse using drugs. Do you know the origin of DARE's eight ways to say no?
3. DARE has been implemented in more schools than any other substance-abuse prevention program. Does research on its effectiveness show that it's one of the best at preventing drug abuse?
4. Besides school-based programs, what other kinds of substance-abuse prevention programs have been developed?
5. The Institute of Medicine has a relatively new way of categorizing prevention programs into various types. Do you know what factor is used to differentiate among the types?

Answers

1. Drug Abuse Resistance Education
2. This and most components of DARE were adopted from smoking prevention programs developed in the 1970s.
3. Research on the effectiveness of DARE has not demonstrated a strong impact on preventing drug use. Other programs described in this chapter appear to be more effective.
4. Parent, family, and community programs and public media campaigns have also been developed to prevent drug abuse.
5. The target population (the entire population, at-risk populations and individuals with early signs of problems) is the factor used.

Project Life Skills Training

Another program, the Life Skills Training program, has been subjected to several tests and has shown long-term positive results. This three-year program is based on the social influence model and teaches resistance skills, normative education, and media influences. Self-management skills and general social skills are also included. One study of this program found significantly lower use of marijuana, alcohol, and tobacco after six years. A subsequent application of this program among ethnic minority youth (Latino and African American) in New York City found reduced use on a two-year follow-up.[29]

Programs that Target Peers, Parents, and the Community

Our country's schools are clearly the most convenient conduit for attempts to achieve widespread social changes among young people, and that is why most efforts at drug-abuse prevention have been carried out there. However, peers, parents, and the community at large also exert powerful social influences on young people. Because these groups are less accessible than the schools, fewer prevention programs have been based on using parent and community influences. Nevertheless, important efforts have been made in all these areas.[30,31,32,33,34]

Peer Programs

Most peer programs have occurred in the school setting, but some have used youth-oriented community service programs (such as YMCA, YWCA, and recreation centres) or have focused on street youth by using them in group community service projects.

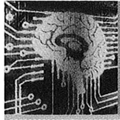
- *Peer influence* approaches start with the assumption that the opinions of an adolescent's peers are significant influences on the adolescent's behaviour. Often using an adult group facilitator or coordinator, the program's emphasis is on open discussion among a group of children or adolescents. These discussions might focus on drugs, with the peer group discussing dangers and alternatives, or they might simply have the more general goal of building positive group cohesiveness, a sense of belonging, and communication skills.
- *Peer participation* programs often focus on groups of youth in high-risk areas. The idea here is that young people participate in making important decisions and in doing significant work, either as "peers" with cooperating adults or in programs managed almost entirely by the youth themselves. Sometimes participants are paid for community service work, in other cases they engage in money-making businesses, and sometimes they provide youth-oriented information services. These groups almost never focus on drug use in any significant way; rather, the idea is to help people become participating members of society.

The benefits of these "extracurricular" peer approaches are measurable in terms of acquired skills, improved academic success, higher self-esteem, and a more positive attitude toward peers and school. As to whether they alter drug use significantly, the data either are not available or are inconclusive for the most part.

Parent and Family Programs

The various programs that have worked with parents have taken at least one of four approaches.[35] Most of the programs include more than one of these approaches.

- *Informational* programs provide parents with basic information about alcohol and drugs, as well as information about their use and effects. Although the parents often want to know simply what to look for, how to tell if their child is using drugs, and what the consequences of drug abuse are, the best programs provide additional information. One important piece of information is the actual extent of the use of various types of drugs among young people. Another goal might be to make parents aware of their own alcohol and drug use to gain a broader perspective of the issue. A basic rationale is that well-informed parents will be able to teach appropriate attitudes about drugs, beginning when their child is young, and will be better able to recognize potential problems relating to drug or alcohol use.
- *Parenting skills* might be taught through practical training programs. Communication with children, decision-making skills, how to set goals and limits, and when and how to say no to your child can be learned in the abstract and then practised in role-playing exercises. One risk factor for adolescent drug and alcohol use is poor family relationships, and improving family interaction and strengthening communication can help prevent alcohol and drug abuse.
- *Parent support groups* can be important adjuncts to skills training or in planning community efforts. Groups of parents meet regularly to discuss problem solving, parenting skills, their perceptions of the problem, actions to be taken, and so on.
- *Family interaction* approaches call for families to work as a unit to examine, discuss, and confront issues relating to alcohol and drug use. Other exercises might include more general problem solving or



MIND/BODY CONNECTION

Integrating Treatment and Prevention with Pregnancy Services

Does your community provide needed services and compassionate support for pregnant women who use alcohol and drugs? An emerging consensus views alcohol, tobacco, and other drug use during pregnancy as a community problem. During this period when women anticipate major life change, prevention initiatives can enhance their motivation to have a healthy baby. And for women with substance-abuse problems, pregnancy provides a similarly strong motivation to seek help.

Fear of blame, legal intervention, and loss of child custody prevent many women from getting help. To counteract these barriers to services, prevention initiatives should promote services that are safe and confidential. Services should be not only physically accessible but also culturally accessible. Efforts that recognize the importance of relationships to women can call on the support of family members and others for alcohol-free and other drug-free pregnancies. Prevention strategies that combine information with options for change have shown promising results in reducing drug use during pregnancy.

Find out if women in your area have access to an integrated system of alcohol, tobacco, and other drug treatment and maternal and child health care.

response to emergencies. Not only do these programs attempt to improve family communication, but they also place parents in the roles of teacher of drug facts and coordinator of family action, thus strengthening their knowledge and skills.

One selective prevention program, called Strengthening Families for the Future (SFF) targets elementary school children (between the ages of 7 and 11) and their parents who may be at risk for substance abuse, depression, violence, delinquency, and school failure. The children's risks of these problems may be due in part to their parents' substance use or mental health problems.[36] This program has been successfully implemented several times within diverse populations. It has three major goals: improving parenting skills, increasing children's skills (such as communication skills, refusal skills, awareness of feelings, and emotion expression skills), and improving family relationships (decreasing conflict, improving communication, increasing parent-child time together, and increasing the planning and organizational skills of the family). Children and parents attend evening sessions weekly for 14 weeks to learn and practise these skills. Evaluations of this program indicate that it reduces tobacco and alcohol use in the children and reduces substance abuse and other problems in the parents.[35,37] SFF can also serve as a primary prevention for families.

Community Programs

Two basic reasons exist for organizing prevention programs at the community level. The first is that a coordinated approach using schools, parent and peer groups, civic organizations, police, newspapers, radio, and television can have a much greater impact than an isolated program that occurs only in the school, for example. Another reason is that drug-abuse prevention and drug education are controversial and emotional topics. Parents might question the need for or the methods used in drug education programs in the schools. Jealousy and mistrust about approaches can separate schools, police, church, and parent groups. A program that starts by involving all these groups in the planning stages is more likely to receive widespread community support. Clearly, the spread of the DARE program in the schools is based partly on the fact that it demonstrates and encourages cooperation between the police and the schools, and encourages parental involvement.

Community-based programs can bring other resources to bear. For example, the city council and local businesses can be involved in sponsoring alcohol-free parties, developing recreational facilities, and arranging field trips so that when the school-based program talks about alternatives, the alternatives are available. The media can be enlisted not only to publicize public meetings and programs but also to present drug- and alcohol-related information that reinforces what is learned in the other programs.

Communities Mobilizing for Change on Alcohol is a prevention program developed at the University of Minnesota and included in the SAMHSA NREPP. The program works for change in alcohol ordinances in the community and alcohol policies of schools, universities, and civic organizations. It encourages parents, faith organizations, the police, city government, and all businesses

Prevention in First Nations and Inuit Communities

Approximately 1 million people in Canada (3%) identify themselves as Aboriginal. For generations Canada's Aboriginal peoples have faced a variety of significant health issues, and although recent years have seen improvements in many areas of Aboriginal health, specific challenges remain. Of these challenges substance abuse appears paramount.

Obtaining a truly representative view of substance use problems across Canada's Aboriginal peoples has proven difficult and data that currently exist have their limitations. The challenge in collecting truly representative data is fuelled in part by the broad diversity of ancestry, history, residence, and culture of Canada's Aboriginal population. For example, there are 630 First Nation bands, comprising 52 nations and 50 languages. Furthermore, 70% of Aboriginal peoples live off reserve, making them difficult to follow. Despite the lack of clear national statistics, regional and population-specific data do exist. Surveys in Nunavik, conducted by the Nunavik Inuit Health Society, have shown that Inuit communities have been seriously affected by illicit drugs, namely cannabis, cocaine, and solvents. The 2004 *Inuit Health Survey* estimated that 60% of people had used cannabis in the past year, a use four times the Canadian national average.[38,39] Higher than national use was also reported for cocaine (7.5%), solvents (5.9%), hallucinogens (2.7%), and injection drugs (2%). The survey data also revealed that the use of cannabis, cocaine, and solvents increased considerably between 1992 and 2004, going from 38% to 60% for cannabis, from 5.1% to 7.5% for cocaine, and from 3.0% to 5.9% for solvents. In a recent study, researchers compared the use of tobacco (nontraditional), alcohol, and other drugs, among 2620 Aboriginal youth living off reserve against 26 223 non-Aboriginal youth (grades 9–12). This work demonstrated that the prevalence of current smoking among the Aboriginal youth was more than double that among non-Aboriginal youth (24.9% versus 10.4%). Furthermore, Aboriginal youth were more likely than non-Aboriginal youth to have tried marijuana and other illicit drugs, and to have engaged in binge drinking.[40]

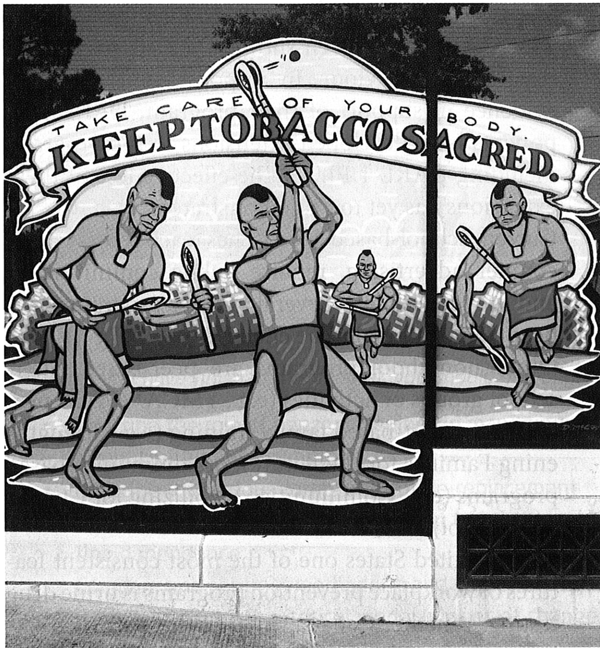
Numerous risk factors have been identified as contributors to the level of substance abuse in Aboriginal populations. Issues of poverty, low education, unemployment, unstable family structure, physical abuse, lack of social support networks, barriers to health care, the effects of residential schools, and discrimination have created significant challenges for Canada's Aboriginal peoples. To put the level of risk into perspective, consider the following Canadian facts:

- One in four Aboriginal children lives in poverty compared with the non-Aboriginal rate of one in six.
- Twenty-three percent of Aboriginal people live in houses in need of major repairs, compared with 7% for the non-Aboriginal population.
- More than half of Aboriginal people are not employed, and the unemployment rate for Aboriginal people was 13.9% in 2009, compared with 8.1% for non-Aboriginal people.
- High school graduation rates for Aboriginal youth are half the Canadian rate.
- Twelve percent of Aboriginal people, ages 15 years and older, reported an incident involving sexual assault, robbery, or physical assault committed by someone other than a spouse or common-law partner. This proportion is more than double that reported by non-Aboriginal people (5%).[41,42]

Substance use often becomes a coping mechanism for dealing with these challenges. Logically, any drug-use prevention strategy must begin by eradicating risk factors that contribute to a population's substance abuse.

Since the 1970s the Government of Canada has supported the National Native Alcohol and Drug Abuse Program.[43] This program, now largely controlled by First Nations communities, has worked to assist communities to create and operate treatment and prevention programs for reducing high levels of alcohol, drug, and solvent abuse. Today the program supports more than 550 prevention programs whose activities include public awareness campaigns, public speaking, developing school prevention programs, news media work, and cultural and spiritual events. These programs, which have received considerable monies, time, and efforts, have seen little formal evaluation of their abilities to achieve their objective: preventing illicit drug use.

In 2008 the Government of Canada, as part of its National Anti-Drug Strategy, committed $141.5 million dollars, delivered over five years, to improve the effectiveness of, and access to, addiction prevention and treatment services for First Nations and Inuit. What impact do you think enhanced treatment and prevention services will have, given the multitude and degree of risk factors faced by Aboriginal peoples? What approach might you recommend?



Community-based programs work best when they have widespread community support. This anti-tobacco mural is tied to the values of a local community and focuses on the traditional sacred origins of tobacco use among many First Nations peoples.

and organizations within the community to promote the idea of limiting alcohol availability for 13- to 18-year-olds. The program was studied in 15 communities over a five-year period and resulted in decreased alcohol sales to minors, decreases in friends providing alcohol to minors, and decreases in self-reported drinking in the targeted age group.

Prevention in the Workplace

As a part of its efforts to reduce the demand for drugs, the federal government has encouraged private employers, especially those who do business with the government, to adopt policies to prevent drug use by their employees. One area of debate is the possibility of legislation for compulsory employee drug testing, as a means of ensuring workplaces are drug and alcohol free, especially in safety-sensitive sectors.[44] Whether Canada takes the path of the United States, where the most consistent feature of these programs is random urine screens, remains to be seen. At a minimum, the Government of Canada expects employers to state clearly that drug use on the job is unacceptable and to notify employees of the consequences of violating company policy regarding drug use. The ultimate goal is not to catch drug users and fire them but to prevent drug use by making it clear that it is not condoned.

What Should We Be Doing?

By now you have picked up some ideas for things to do to reduce drug use, as well as some things to avoid doing. But the answer as to what needs to be done in a particular situation depends on the motivations for doing it. All provinces and territories support drug- and alcohol-abuse prevention education as part of a health curriculum, for example. If that is the primary motive for doing something, and if there doesn't seem to be a particular problem with substance abuse in the schools, then the best thing would be to adopt one of the modern school-based programs that have been developed for this purpose, to make sure the teachers and other participants are properly trained in it, and to go ahead. In selecting from among the curricula, a sensible, balanced approach that combines some factual information with social skills training, perhaps integrated into the more general themes of health, personal values, and decision making, would be appropriate. The ones mentioned in the section "Prevention Programs That Work" fit this general description, and each deserves a careful look. Above all, avoid sensational scare stories, preachy approaches from the teacher to the student, and untrained personnel developing their own curricula. Another good thing to avoid is the inadvertent demonstration of how to do things you don't want students to do.

If, however, there is a public outcry about the "epidemic" of drugs and alcohol abuse in the community, speakers have inflamed passions, and there is a widespread fervour to do something about it, this presents both a danger and an opportunity. The danger is that this passionate group might attack and undermine the efforts already being made in the schools, substituting scary, preachy, negative approaches, which can have negative consequences. The opportunity lies in the possibility that this energy can be organized into a community planning effort, out of which could develop cooperation, increased parent understanding, a focus on family communication, interest in the lives of the community's young people, and increased recreational and creative opportunities.

The key to making this happen is convincing the aroused citizenry of the possibly negative consequences of doing what seems obvious and selling them on the idea of studying what needs to be done. A good place to start is by visiting the Web site of the Canadian Centre on Substance Abuse (http://www.ccsa.ca/Eng/Priorities/YouthPrevention/CanadianStandards/Pages/default.aspx) or the U.S. Substance Abuse and Mental Health Services Administration (http://www.samhsa.gov/prevention). These agencies produce updated materials for groups interested in developing drug- and alcohol-abuse prevention

programs and provide technical assistance and training to communities interested in developing programs.

Summary

- We can distinguish between education and propaganda approaches to prevention. Traditionally, prevention programs took the form of propaganda in that they focused solely on the presentation of negative information about alcohol and other drugs. Education programs strive to teach individuals about drugs: the good and bad effects, how they are used, and how they relate to society. The goal of education is to prepare people to make appropriate decisions about personal drug use and abuse.
- Most of the research over the past 30 years has failed to demonstrate that prevention programs can produce clear, meaningful, long-lasting effects on drug-using behaviour.
- The affective education programs of the 1970s have been criticized for being too value free.
- Two systems are used for classifying prevention programs. One is based on stages of involvement and includes primary prevention programs aimed mainly at young people who have not yet tried the substances in question; secondary prevention programs designed for people who have tried the drug in question or a variety of other substances; and tertiary prevention programs or relapse prevention and follow-up programs. The second includes prevention efforts categorized according to the intended target population, but the targets are not defined only by prior drug use. They include universal prevention programs designed for delivery to an entire population, selective prevention strategies designed for groups within the general population that are deemed to be at high risk, and indicated prevention strategies targeted at individuals who show signs of developing problems.
- Early drug prevention programs were based primarily on a knowledge-attitudes-behaviour model. By the 1970s studies began to show the effectiveness of such programs in altering attitudes and behaviour about drugs. This led to the development of interest and research in affective education.
- Based on the success of the social influence model in reducing cigarette smoking, a variety of school-based prevention programs have used the same techniques with illegal drugs.
- The DARE program has been adopted rapidly and widely, despite research showing limited impact on drug-using behaviour. In response to the lack of evidence in support of their program, DARE proponents have developed extensions to the program, including DARE 1 PLUS. The effectiveness of these extensions has yet to be demonstrated.
- Current school-based approaches teach refusal skills, counter advertising, require public commitments, and use teen leaders. Several of these programs have been demonstrated to be effective.
- Other nonschool programs are peer-based, after-school groups or activities (e.g., YMCA/YWCA programs), parent-based family training (e.g., Strengthening Families for the Future), or community-based programs (e.g., Communities Mobilizing for Change on Alcohol).
- In the United States one of the most consistent features of workplace prevention programs is urine drug testing. Whether Canada will take this path, legislating workplace drug testing in security-sensitive sectors, remains to be seen.

Review Questions

1. What is the distinction between secondary and tertiary prevention?
2. What is the knowledge-attitudes-behaviour model, and what information first called it into question?
3. Explain what is meant by "value-free" values clarification programs and why they fell out of favour in the 1980s.
4. When the Drug-Free Schools programs began in 1986, the emphasis shifted away from curriculum to what?
5. What were the five successful components of the social influence model for smoking prevention?
6. In Project ALERT, what was the impact of using teen leaders to assist the instructors?
7. What distinguishes DARE from other similar programs based on the social influence model?
8. What do ALERT and Life Skills Training have in common, besides their effectiveness?
9. What are some of the parenting skills that might be taught and practised in a prevention program?
10. What is the most common component of U.S. drug-free workplace plans?