

# ISSUE BRIEF

## Substance Abuse Prevention: Could an Improved D.A.R.E. Program Help Bridge the Gap between Research and Practice?

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A discussion featuring

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## Substance Abuse Prevention

Abuse of alcohol, tobacco, and other drugs is costing the nation more than \$300 billion a year. After years of attention to this problem, national and statewide substance abuse prevention programs are renewing their focus on adolescents. Spurring this renewal are both evidence that many adults who are dependent on those substances began using them as teenagers<sup>1</sup> and reports by middle and high school students that alcohol, tobacco, and other drugs are their biggest concern.<sup>2</sup> In addition, despite the uneven track record of many prevention efforts, prevention researchers and federal and state officials say they have had success with programs in model settings and now know better how to protect children from alcohol, tobacco, and other drugs.

Although the success of these model programs is good news, interviews with federal and state officials and with some of the best-known researchers reveal difficulties with bringing research findings to the field. Among the barriers, they cite turf battles between the federal agencies that support research and those that support community prevention efforts and between state and local education departments and those in charge of public health. And researchers note that, because of spotty and inconsistent implementation, successful dissemination of promising strategies may not be enough to improve the quality of prevention programs.

Somewhat unexpectedly, a solution is being sought in drug abuse resistance education, or D.A.R.E., the popular school-based prevention program that has been criticized as ineffective in recent, widely reported studies. The most recent surge in adolescent drug use in the 1990s had led researchers and policymakers to turn a critical eye on D.A.R.E., and researchers released influential studies that questioned the program's effectiveness. The authors of a 1998 report concluded, for example, that "students who participated in D.A.R.E. were no different from students in the control group with regard to their recent and lifetime use of drugs and alcohol."<sup>3</sup>

Despite its apparent flaws, the D.A.R.E. program has strengths that are cited by both policymakers and members of the research community. Designed to address violence, as well as alcohol, tobacco, and other drug use, the program is administered in 75 percent of the nation's school districts. In 1996, 25 million children—most of them in elementary schools—were taught some aspect of the program by local police officers in communities throughout the United States.<sup>4</sup>

The authors of a 1994 study note that not only is the D.A.R.E. program popular, it also "is distinguished by the fidelity and consistency with which its curricula are administered."<sup>5</sup> These are qualities that have eluded many other efforts to implement prevention programs.<sup>6</sup>

In 1997, at the urging of members of D.A.R.E.'s scientific advisory committee, Congress directed the Department of Justice to hold a series of meetings between prevention researchers and D.A.R.E. officials to discuss how to make the program more effective. In October 1998, after meeting twice, D.A.R.E. officials and prevention researchers overcame their mutual distrust, according to observers, and agreed to work together and with representatives of the foundation community to design a two-phase study that would evaluate D.A.R.E.'s middle-school curriculum and include researchers in the planned revision of the program's core elementary school curriculum. The proposed longitudinal, random-assignment study of the middle-school program would use the D.A.R.E. delivery system to test two or three promising prevention strategies, in addition to the D.A.R.E. curriculum. The study would also experiment with using teachers rather than police officers to deliver the D.A.R.E. program in the middle-school setting.<sup>7</sup> Given the tremendous challenges that face federal, state, and local efforts to implement science-based prevention programs, as well

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as a history of strained relations between several key researchers and D.A.R.E. officials, the agreement is being called a dramatic breakthrough.

Improving the D.A.R.E. program has important implications for the nation's schools because the U.S. Department of Education (DOE) issued a directive, effective July 1, 1998, that within two years school districts must show evidence of using programs "that have demonstrated that they can be effective in preventing or reducing drug use, violence, or disruptive behavior."<sup>8</sup> This is the first time school districts have been asked to provide evidence that their prevention programs work. Schools that do not comply risk losing funds distributed under the Safe and Drug-Free Schools and Communities Act, which was originally enacted in 1987 to strengthen the country's efforts to prevent the use of alcohol, tobacco, and other drugs among adolescents.

This Forum session will briefly review the problem of adolescent substance abuse, as well as provide a discussion of the barriers that prevent promising prevention research from becoming widely adopted. More specifically, it will focus on the D.A.R.E. program and on efforts to correct its reported flaws.

## BACKGROUND

The investigators of the 1998 Monitoring the Future Study of American secondary school reported in December that adolescents are increasingly disapproving of drug and alcohol use, a key indicator because attitudes have been shown to be predictive of use. The researchers also noted a "very modest" downturn in illicit drug use among adolescents, after six years of regular increases. But Lloyd D. Johnston, Ph.D., the principal investigator of the study and a research scientist at the University of Michigan Institute of Social Research, which conducts the study annually for the National Institute for Drug Abuse (NIDA), warns that a downward trend in the use of substances should not lull the country into thinking the problem of substance abuse has been addressed.

"These epidemics come and go, but you have to take the long view," Johnston says.

The country must begin to institutionalize prevention in the schools and in education, and to motivate the parents and use the media. Otherwise you will have another generation passing under the bridge and not being exposed to the information they need to stay away from these substances.<sup>9</sup>

There seems to be an almost universal recognition that American children and adolescents are at risk for substance abuse. In a national survey released in 1997, the public overwhelmingly identified drugs as the major health care problem afflicting the nation's children.<sup>10</sup> In February, when Vice President Gore released the administration's 1999 National Drug Control Strategy, he said the administration's "number one priority" is prevention. "That is why the first goal of the Strategy is to educate and enable kids to reject drugs," Gore said. Reducing substance abuse among adolescents by 50 percent is the first of five goals that the White House Office of National Drug Control Policy (ONDCP) has asked federal agencies to reach by the year 2007, an objective that includes the dissemination of effective prevention research programs nationwide.<sup>11</sup>

According to the 1998 national survey results from the Monitoring the Future Study of American secondary school students, 29 percent of eighth graders said they had tried an illicit drug, as had 49 percent of 10th graders and 54.1 percent of 12th graders. One-third of all high school seniors reported being drunk at least one time in the two weeks that preceded the survey. The survey also reported that nearly two-thirds of 12th graders said they had smoked cigarettes before, and 22.4 percent said they were daily users, as were 15.8 percent of 10th graders and 8.8 percent of 8th graders.

The job of developing and coordinating the nation's response to adolescents' high rate of drug, tobacco, and alcohol use falls to the ONDCP, which Congress created in 1988. Congress recently approved a five-year budget for all the agencies responsible for reducing illegal drug use, alcohol consumption, and tobacco use among adolescents. ONDCP officials point to their ability to decertify agency budgets and to the long-term budget and its accompanying "performance measures of effectiveness" as powerful tools for bringing about more cooperation among federal agencies.

For fiscal year (FY) 1999, Congress authorized almost \$18 billion for drug control spending, an increase of more than \$1.8 billion over the 1998 appropriation. Funding for prevention and treatment activities, including research, increased from \$3 billion in 1990 to almost \$6 billion in 1999. Approximately \$2.5 billion was earmarked for prevention in 1999, almost \$300 million more than in 1998. There are 18 agencies and bureaus and divisions within agencies that receive funding for activities related to prevention of substance abuse among adolescents. Under the Department of Health and Human Services, the Substance Abuse and Mental Health Administration (SAMHSA) and the

National Institutes of Health (NIH) will together receive about \$730 million for prevention in 1999, including \$310 million for research; the DOE will receive \$590 million for its Safe and Drug-Free Schools and Communities (SDFSC) program. Included in the ONDCP's budget for this year is almost \$200 million for the second year of a national antidrug advertising campaign whose impact is still being measured. The administration is requesting a modest increase in prevention funds in its budget request for FY 2000.

Congress channels almost all federal prevention funds for research into the National Institute for Drug Abuse, which accounts for about 85 percent of the research funds spent worldwide on the impact of drugs and addiction.<sup>12</sup> In the May/June 1997 issue of *NIDA Notes*, NIDA director Alan I. Leshner wrote that researchers have made "great strides in developing both the knowledge and the tools that can stem the tide of drug abuse and curb its devastating effects on our Nation's young people." Researchers have found, for example, that a number of factors put children at risk for substance abuse, while other factors protect them. Among the protective factors are strong bonding with community, school, and family; good parental supervision; and friends who have values that help them avoid illegal substances. Among the factors that put children at risk are "chaotic family environments, ineffective parenting, poor academic performance, and deviant peer influences."<sup>13</sup>

Prevention researchers now have a growing body of work that indicates children can be protected from substance abuse. Promising prevention research currently focuses on two areas: The first, or psychosocial, approach targets school-based prevention programs, provides drug resistance skills, training in solving problems and making decisions, and changes in the attitudes and norms that encourage drug use. The second approach delivers comprehensive prevention programs in multiple settings—family, community, and schools.<sup>14</sup>

Barriers remain, however, in the effort to translate knowledge into programs at the national, state, and local levels. In the past, federal prevention funds for both schools and communities have encouraged experimentation with no set goals for outcome or evaluation. Promising research programs have been poorly marketed. And, even when school districts have adopted proven strategies, "inconsistent or incomplete delivery of the prevention curriculum is one of the main reasons why even those approaches that have proven effective under test conditions may not show positive results when implemented elsewhere," concluded the authors

of "School-Based Drug Prevention Programs: A Longitudinal Study in Selected School Districts," the report of a study conducted by the Research Triangle Institute.<sup>15</sup> Their findings seem to provide the context for the interest in improving the D.A.R.E. program. While it has been found lacking in key areas, D.A.R.E. is seen as offering at least two of the elements identified as important for the success of prevention strategies—a comprehensive training program and a system characterized by consistency and stability.

### **School-Based Prevention and D.A.R.E.**

D.A.R.E. was started in 1983 by the Los Angeles Police Department (LAPD), in cooperation with the city's school district. News of the program spread so quickly throughout U.S. communities that the LAPD was soon overwhelmed with requests for information and training. By 1985, a private foundation, D.A.R.E. America, had been set up to train police officers and to raise funds for the five regional training centers that were eventually established across the country. D.A.R.E. also offers a program for seventh graders and another one for ninth graders, but its most popular offering has been its program of 17 one-hour sessions for elementary school students. D.A.R.E. officials estimate that their middle-school program has been adopted in only about 25 percent of the communities that administer the elementary school curriculum.

Unlike most other prevention programs, D.A.R.E. has several sources of funds. This makes D.A.R.E. attractive to school districts, but the program is also popular because it enjoys a great deal of support in local communities, according to the 1994 Research Triangle Institute study.<sup>16</sup> The program receives \$1.7 million directly from the U.S. Department of Justice Bureau of Justice Assistance, which covers the cost of D.A.R.E.'s five regional training centers; \$15 million a year from corporate sponsors; and \$215 million in indirect benefits from the salaries that communities pay the thousands of police officers who take part in the program. D.A.R.E. officials say it is unclear how much federal money supports their programs. The authors of the 1994 study note, however, that the SDFSC program plays a major role in funding D.A.R.E., although not as great a role as it plays in funding other prevention programs. In addition to receiving SDFSC funds at the local level, D.A.R.E. also benefits from a clause in the DOE legislation that now requires governors to spend about \$12 million—10 percent of their cut of the \$600 million in SDFSC funds—on prevention efforts sponsored by law enforcement entities. Until 1994, those funds were specifically earmarked for D.A.R.E., but the

legislation was changed to give states more options. “We thought that was fair because most of the law enforcement prevention efforts are sponsored by D.A.R.E.,” says Scott Green, a lobbyist who represents D.A.R.E. and other nonprofit clients in their dealings with Congress.

At the national level, all D.A.R.E. operations are supervised by D.A.R.E. America, a nonprofit organization located in Los Angeles that monitors and promotes the program. There are also state and regional organizations, including the Regional Training Center (RTC) Advisory Board that oversee state-level training and make sure that the curriculum is being faithfully taught at the local level. Modifications to the D.A.R.E. curricula are made with the guidance of education specialists, staff from the Los Angeles United School District, and a scientific advisory committee.

D.A.R.E.’s presence in 75 percent of the nation’s 15,000 school districts seems to add urgency to the efforts to give the program scientific validity. Because of new federal regulations that will be in place in 2000, school districts will not be able to use federal funds to pay for D.A.R.E. unless they provide science-based evidence that the program is effective.

### Study of School-Based Prevention

Of the almost \$600 million in federal funds distributed under the Safe and Drug-Free Schools and Communities Act, approximately \$450 million goes directly to the nation’s schools. Each school district receives an average of \$8.50 per student from the federal government for prevention activities, according to William Modzeleski, director of the SDFSC program.

In “School-Based Drug Prevention Programs: A Longitudinal Study in Selected School Districts,” researchers found that few schools used their prevention funds to pay for proven programs and that program delivery was “variable and inconsistent, even within schools.” The results of the study encouraged the DOE to issue the July 1998 ruling that gave the states two years to demonstrate that every school district has adopted an effective prevention strategy, as well as a proven method for evaluating the success of that strategy.

“Teachers simply did not have enough time, support, training, or motivation to provide all the instruction or other services and activities that they had planned to provide,” concluded the authors of the study. They noted the importance of considering “larger social influences” in designing prevention efforts and that

addressing those influences might require integrating the efforts of school and community.

The following were among the findings the authors noted in a summary of their report:

- Some drug prevention programs improved student outcomes, but effects were small.
- Few schools employed program approaches that have been found effective in previous research.
- Student outcomes were better in schools that had stable programs that offered extra components, such as student support services.
- Fewer than half the school districts surveyed used formal evaluations to help them decide how to choose or alter their prevention programs.
- Programs were delivered without consistency in terms of amount and content, even within schools.

“The report validated on a research basis everything that we thought was occurring,” says Modzeleski. “Lots of schools are doing a lot of things that are untested, in a hurried time frame, and without proper training. And the results are what is to be expected. No reductions in alcohol and drug use.”<sup>17</sup>

### FOCUS ON DOE ACTIVITIES

Although it now requires a solid scientific foundation for the prevention services it funds, the DOE must continue to allow school districts to determine what programs best suit their needs. “But money gets frittered away,” says Modzeleski. “Without telling schools what to do, we have to push for more accountability.” In early June 1998, the DOE held a meeting for 400 state prevention officials sent to study the new guidelines. They were taught that school programs must include at least the following: a scientifically proven curriculum, professional development, training, peer counseling, and student assistance programs.

According to a number of prevention researchers, the current message from the DOE is radically different from the approach that once encouraged schools and communities to experiment with different methods, demanding no proof that those methods were effective or based on scientific principles.

“Without support from above, science-based programs rarely get adopted,” says William B. Hansen, Ph.D., a prevention researcher and president of Tanglewood Research, Inc., in Clemmons, North Carolina.

Now local school districts are being asked to do needs assessments, and their funding is going to be tied to demonstrating that something works. This is something school districts fully comprehend. . . . But it is a radical change and make a take a while to sink in.<sup>18</sup>

To help communities choose appropriate research-based prevention programs, the DOE had requested \$50 million to support 1,300 prevention coordinators, each of whom would be responsible for five middle schools. But Congress funded only \$35 million of the amount requested for 1999. Without proper guidance, Modzeleski says, schools may have a hard time picking a program that is based on solid scientific principles. He notes that the president's budget for 2000 includes a request for another \$15 million in funding for the coordinators.

The DOE is taking part in meetings to plan improvements to the D.A.R.E. program, but Modzeleski says that, under the new DOE regulations, school districts will be able to pay for D.A.R.E. materials with funds from the SDFSC program only if they are willing to collect data to show that the program is achieving measurable results in their schools.

D.A.R.E.'s supporters from around the country have written to the DOE, many of them arguing that they "feel" that the program is effective. But "the feeling that it works" is no longer enough, says Modzeleski. "You have to conduct an evaluation."

### **D.A.R.E. Assessments**

The D.A.R.E. program had first come under broad scrutiny following a 1994 study commissioned by the Department of Justice. Based on a review of eight evaluations of D.A.R.E.'s core curriculum, which is given to elementary school children, the authors questioned the effectiveness of the program. Some research had shown improvements in attitudes against drugs among children exposed to D.A.R.E. Such an effect was shown to be short-lived, however, and had dissipated by the end of a long-term study published in 1998. In "Assessing the Effects of School-Based Drug Education: A Six-Year Multilevel Analysis of Project D.A.R.E.," Dennis P. Rosenbaum, Ph.D., professor and head of the Criminal Justice Department at the University of Illinois, Chicago, followed students for six years after they had been through the D.A.R.E. program. He concluded that the program had relatively little impact on the drug use of adolescents who had been exposed to D.A.R.E. in elementary schools in rural, urban, and suburban settings. Of particular concern was the finding that among the suburban students who took part in the program there were "small, but significant increases in drug use."<sup>19</sup>

"My research kind of overturned the applecart," says Rosenbaum, whose findings were widely disseminated through the media in the spring of 1998. In his study, Rosenbaum concludes that "parents, educators, and police officers have confused program popularity with program effectiveness."

The academic community's criticism of D.A.R.E. in recent years had led to bitter feelings on both sides, according to Herbert D. Kleber, M.D., chairman of D.A.R.E.'s scientific advisory committee and medical director of the Center on Addiction and Substance Abuse at Columbia University (CASA). During the last year, however, in meetings attended by representatives of private foundations and federal agencies, D.A.R.E. officials and prevention researchers have agreed to jointly design a study whose goal is to identify ways of improving the program's middle-school curriculum and, perhaps, its delivery system. The Robert Wood Johnson Foundation has begun negotiations with D.A.R.E. America to discuss funding the proposed study, according to foundation staff.

"This is a major paradigm shift—a major rapprochement between D.A.R.E. and the scientific community," says Richard Clayton, Ph.D., a prevention researcher and professor of sociology at the University of Kentucky.

They (D.A.R.E.) have the infrastructure, but no effective programs. We, the researchers, have proven, effective programs, but we don't know if they will work under real world conditions. This is a nice marriage. If we can bring into this process the best prevention science has to offer, we can make prevention accountable to the entire country.<sup>20</sup>

The proposed study would test at least three middle-school curricula, including the one D.A.R.E. currently uses, and would also compare the effectiveness of three ways of delivering the programs—using police officers alone, teachers alone, and a combination of the two. A selection of middle schools whose officials have agreed to delay implementing prevention programs will serve as the control group. The first challenge will be to choose the proven programs that will be studied along with the D.A.R.E. curriculum, according to Clayton, who wrote the grant that the Robert Wood Johnson Foundation has approved, pending successful negotiations with D.A.R.E. "We know we will propose more than one program because there is still not enough agreement as to which is the most effective program," Clayton says.

To maintain the objectivity of the process, the design of the study will be discussed further in meetings convened under the auspices of a foundation or other

nongovernmental organization, Kleber says. Federal officials and the researchers who attended the October 1998 meeting say they are greeting D.A.R.E.'s decision to take part in the proposed study with "cautious optimism." But Charlie Parsons, D.A.R.E. America's executive director, argues that his organization is open to change.

"Our position is that we have this great delivery system in place that will probably never be replicated," says Parsons. "If the researchers can tell us how to improve the message we deliver, we're open to it. Everything is on the table, and that is our position."<sup>21</sup>

## THE FORUM SESSION

This session will examine the latest research on prevention and discuss ways of overcoming the barriers that are keeping carefully evaluated research programs from making their way from the experimental setting to the school setting. To illustrate both the hope and the challenge inherent in the dissemination process, the session will focus on recent efforts to transform the D.A.R.E. program.

Among the key questions such a discussion raises are the following:

- What are the most promising of the research models developed, and what is being done to take the findings and apply them more broadly?
- What is known about the effectiveness of D.A.R.E. from research studies?
- What is being done to disseminate information in a timely and practical fashion?
- What can be learned from the cooperative process that has been created to improve the D.A.R.E. program?
- Who should be trained to carry out the prevention programs?
- How should prevention be incorporated into schools whose schedules have little time for new programs?
- How can Congress continue to encourage the cooperative spirit that is beginning to characterize relations among the agencies responsible for the prevention of substance abuse?
- What can be done to bridge the worlds of school and community in implementing comprehensive prevention programs for children?

## Speakers

Several experts will set the stage for the discussion. **Herbert D. Kleber, M.D.**, is chair of the scientific advisory committee for D.A.R.E. America and has been involved in efforts to improve the program's curricula. He is also executive vice president and medical director of the Center on Addiction and Substance Abuse at Columbia University. A professor of psychiatry at the Columbia University College of Physicians and Surgeons and the New York State Psychiatric Institute, Dr. Kleber heads a division on substance abuse within the psychiatry department. Previously, he served as deputy director for demand reduction in the White House Office of National Drug Control Policy, where he was responsible for that part of the national strategy having to do with reducing the demand for illegal drugs. Dr. Kleber has been carrying out pioneering work in research and treatment of narcotic and cocaine abuse for more than 25 years and is the author or co-author of more than 205 papers dealing with psychologic, epidemiologic, biologic, and treatment aspects of substance abuse.

**William F. Alden**, who served as deputy director of D.A.R.E. America in the organization's Washington, D.C., office from January 1994 through September 1998, will discuss efforts to overcome the conflict between D.A.R.E.'s organizational needs and the demands of research. He is now president of the Intelligence Support Group, Ltd., in Oakton, Virginia, but continues to work as a consultant to D.A.R.E. America. Mr. Alden began his federal law enforcement career as a customs port investigator in Cleveland, Ohio. He then took a position as a narcotics agent with the Federal Bureau of Narcotics. Mr. Alden was later appointed deputy chief of heroin investigations at Drug Enforcement Agency (DEA) headquarters and was eventually named chief of the DEA's office of congressional and public affairs. He also managed the DEA's Demand Reduction Program that focused on effective drug abuse education and prevention.

**Dennis P. Rosenbaum, Ph.D.**, is professor of criminal justice and psychology and head of the Department of Criminal Justice at the University of Illinois, Chicago. Dr. Rosenbaum's contribution to the discussion will focus on what is known about promising prevention efforts, as well as on his six-year study (published in 1998) of the short- and long-term effects of D.A.R.E. on the attitudes, beliefs, social skills, and drug use of groups of students from rural, urban, and suburban schools. Dr. Rosenbaum is also co-director of

the Institute for Public Safety Partnerships, a regional community policing institute, and has conducted a number of evaluations and research projects that focus on police and community efforts to prevent substance abuse, violence, and delinquency. He is the author of eight books, which include *The Challenge of Community Policing* (1994), and *Preventing Crime* (1998).

**W. Michael Bigner**, director of special programs at the Venice Foundation, Inc., in Venice, Florida, will recount his efforts to identify a model prevention program that could address the substance abuse problem among adolescents in his community. A retired business executive who had headed his own technology company in Cincinnati until 1994, Mr. Bigner began his foundation career as a volunteer. He was hired full-time in 1997 and assigned to work on community issues related to substance abuse, education, and transportation. The Venice Foundation is a community foundation with assets of \$140 million. Started in 1995 with the proceeds from the sale of a local hospital, it distributes about \$4 million in grants every year to local organizations to fund education, culture, civic affairs, and health and human services.

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