



COMMONWEALTH of VIRGINIA

Department of Criminal Justice Services

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December 12, 2017

The Honorable Brian J. Moran, Secretary of Public Safety and Homeland Security
Daniel Timberlake, Director, Department of Planning and Budget
The Honorable S. Chris Jones, Chairman, House Appropriations Committee
The Honorable Thomas J. Norment, Co-Chairman, Senate Finance Committee
The Honorable Emmett W. Hanger, Jr., Co-Chairman, Senate Finance Committee

Dear Sirs:

Item 398(F)(2)(b) of the 2017 Appropriations Act (Chapter 836), directs the Department of Criminal Justice Services to conduct an evaluation of the effectiveness of the Drug Abuse Resistance Education (DARE) program. Specifically:

- b. The Center for School Safety shall provide a grant of \$85,000 in the second year to the York County-Poquoson Sheriff's Office for the statewide administration of the Drug Abuse Resistance Education (DARE) program. The Center for School Safety shall conduct an evaluation of the effectiveness of the program, along with an assessment of other evidence-based drug education programs, and shall provide a report on its findings to the Secretary of Public Safety and Homeland Security, the Director of the Department of Planning and Budget, and the Chairmen of the House Appropriations and Senate Finance Committees by January 1, 2018.*

In response to this directive, I have enclosed a report entitled: *Effectiveness of the Drug Abuse Resistance Education (D.A.R.E.) Program and Assessment of Other Evidence Based Drug Education Programs*. Please let me know if you have any questions.

Sincerely,

A handwritten signature in black ink, appearing to read "Francine C. Ecker".

Francine C. Ecker
Director

Enclosure

c: Victoria H. Cochran, Deputy Secretary of Public Safety and Homeland Security

Virginia Department of Criminal Justice Services

EFFECTIVENESS OF THE DRUG ABUSE
RESISTANCE EDUCATION (D.A.R.E.) PROGRAM
AND ASSESSMENT OF OTHER EVIDENCE BASED
DRUG EDUCATION PROGRAMS

To

The Secretary of Public Safety and Homeland Security

Director, Department of Planning and Budget

Chairman of the Senate Finance Committee

Chairman of the House Appropriations Committee



Commonwealth of Virginia

Richmond, January 1, 2018

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Executive Summary

Item 398 #3s of the 2017 Budget Bill directed the DCJS Center for School and Campus Safety to “conduct an evaluation of the effectiveness of the [Drug Abuse Resistance Education, or D.A.R.E.] program, along with an assessment of other evidence based drug education programs.” This report reviews D.A.R.E. in Virginia, the most recent research on D.A.R.E. effectiveness, and provides an assessment of various other substance abuse prevention programs that have been shown to be evidence based.

D.A.R.E. Programs in Virginia

Data from the DCJS 2016-2017 Annual School Safety Survey, which covers all K-12 public schools in Virginia, shows that 20% (396) of Virginia’s 1,956 public schools offered the D.A.R.E. curriculum to students. D.A.R.E. is most frequently offered in elementary schools (28% of schools), with some programs offered in middle school (12% of schools), high schools (5%) and other schools (13%).

Among the 396 schools offering D.A.R.E., about two-thirds (64%) of the schools reported that the program was taught by a D.A.R.E. officer who was not a School Resource Officer (SRO) assigned to the school. About one-third (31%) reported that D.A.R.E. was taught by an SRO assigned to the school who was not a D.A.R.E. officer. Elementary schools were most likely to report having D.A.R.E. taught by a D.A.R.E. officer (70%), and high schools were most likely to report having D.A.R.E. taught by an SRO rather than a D.A.R.E. officer (59%).

The Virginia D.A.R.E. Association, which provides D.A.R.E. training through the Virginia D.A.R.E. Training Center, reported that in FY2017 D.A.R.E. was offered in 393 public schools across Virginia, with more than 75% of these offered in elementary schools. Nearly 48,000 students completed the D.A.R.E. program in FY2017. The D.A.R.E. Community Education Adult Program provided 21 parent/community programs/presentations to 611 parents in FY2017. Overall, Virginia D.A.R.E. officers provided 397 group presentations/workshops to 9,430 attendees.

Findings on the Effectiveness of D.A.R.E.

There is little agreement among researchers about D.A.R.E.’s effectiveness in preventing or reducing substance abuse. Since its beginning in 1983, D.A.R.E. has evolved to encompass many different programs which have different names, philosophies, practices, and target audiences. Published research on D.A.R.E. effectiveness frequently notes that this has historically made it difficult to determine and evaluate which version of D.A.R.E. is actually being used in the settings being studied. Also, because D.A.R.E. has become so well-known and widely used, it has various constituencies that, for several decades, have lobbied both for and against the program’s effectiveness. This has further complicated efforts to assess D.A.R.E.’s effectiveness, because it often can be difficult to distinguish between what is objective research about D.A.R.E. and what is D.A.R.E. program advocacy material.

To locate the best *scientific* assessments of D.A.R.E., DCJS examined data from two of the federal government’s major resources for identifying effective substance abuse prevention and reduction programs: CrimeSolutions.gov, maintained by the National Institute of Justice (NIJ), and the National

Registry of Evidence-based Programs and Practices (NREPP), maintained by the Substance Abuse and Mental Health Services Administration (SAMHSA). Each of these resources is designed to provide scientifically valid, evidence based assessments of substance abuse prevention and reduction programs.

Both CrimeSolutions.gov and the NREPP contained studies indicating that some D.A.R.E.-related programs appear *Promising* for preventing or reducing substance abuse. However, neither of these resources contained any studies that rated D.A.R.E. as *Effective* in preventing or reducing substance abuse.

NIJ’s CrimeSolutions.gov reviewed two D.A.R.E. programs: the Drug Abuse Resistance Education + Play and Learn Under Supervision (D.A.R.E. + PLUS) program, and the keepin’ it REAL program. It rated D.A.R.E. + PLUS as *Promising* for reducing alcohol, tobacco and multidrug use, and it rated the keepin’ it REAL program as *Promising* for reducing alcohol and marijuana use.

SAMHSA’s National Registry of Evidence-based Programs and Practices contained a review of the keepin’ it REAL program and rated it as *Promising* for preventing alcohol use and disorders and tobacco use and disorders, but *Ineffective* regarding cannabis use and disorders and knowledge, attitudes, and beliefs about substance use. However, in late September of 2017, the listing for the keepin’ it REAL program was removed from the NREPP listing at the request of the program’s sponsor. To date, the program has not been returned to the NREPP listing.

Taken together, the evidence from NIJ and SAMHSA indicates that, at best, some components of D.A.R.E. (primarily Keepin’ it REAL) show promise for preventing or reducing substance abuse, but there is little evidence that D.A.R.E. is actually effective in preventing or reducing substance abuse.

Given this, DCJS also reviewed research that asked the question: “Why do school districts continue to participate in D.A.R.E. when its effectiveness is questionable?” This research indicates that D.A.R.E. remains popular because, despite evidence that it actually reduces substance abuse, people generally have positive *perceptions* of D.A.R.E. D.A.R.E. practitioners and participants cited other positive D.A.R.E. program benefits which they point out are usually not addressed in formal evaluation studies. These benefits include enhancing communications about drugs between children, parents, school personnel, and law enforcement. The Virginia D.A.R.E. Association also stated regarding D.A.R.E. that “The impact is noticeable and the positive relationship with the community is unmeasurable.”

Findings on Other Evidence Based Drug Education Programs

NIJ’s CrimeSolutions.gov contained reviews of 98 studies on substance abuse/prevention programs. Of these 98 programs, 18 programs were rated as *Effective* in reducing substance abuse based on scientific, evidence based studies:

• Adults in the Making (AIM)	• Multidimensional Family Therapy
• Big Brothers Big Sisters (BBBS) Community-Based Mentoring (CBM) Program	• Multisystemic Therapy–Substance Abuse
• Brief Alcohol Screening and Intervention of College Students (BASICS)	• Nurse–Family Partnership
• Checkpoint Tennessee	• Positive Action
• Family Matters	• Positive Family Support (PFS)

<ul style="list-style-type: none"> • Guiding Good Choices 	<ul style="list-style-type: none"> • San Diego (Calif.) Drug Abatement Response Team (DART)
<ul style="list-style-type: none"> • LifeSkills® Training 	<ul style="list-style-type: none"> • Strengthening Families Program: For Parents and Youth 10–14
<ul style="list-style-type: none"> • Linking the Interests of Families and Teachers (LIFT) 	<ul style="list-style-type: none"> • Strong African American Families (SAAF)
<ul style="list-style-type: none"> • Midwestern Prevention Project (MPP) 	<ul style="list-style-type: none"> • Teams–Games–Tournaments (TGT) Alcohol Prevention

SAMHSA’s National Registry for Effective Programs and Practices reviewed 58 studies on the effectiveness of substance abuse prevention/reduction programs, and identified 13 programs with *Effective* outcomes:

<ul style="list-style-type: none"> • AlcoholEdu for College 	<ul style="list-style-type: none"> • Family Matters
<ul style="list-style-type: none"> • Building Assets, Reducing Risks (BARR) 	<ul style="list-style-type: none"> • Hip-Hop 2 Prevent Substance Abuse and HIV (H2P)
<ul style="list-style-type: none"> • Child FIRST 	<ul style="list-style-type: none"> • Keep a Clear Mind
<ul style="list-style-type: none"> • Child FIRST 	<ul style="list-style-type: none"> • Kognito At-Risk in Primary Care
<ul style="list-style-type: none"> • Collaborative Opioid Prescribing Education (COPE) 	<ul style="list-style-type: none"> • Parenting From Prison
<ul style="list-style-type: none"> • Coping With Work and Family Stress 	<ul style="list-style-type: none"> • Youth Message Development
<ul style="list-style-type: none"> • Creating Lasting Family Connections (CLFC)/ Creating Lasting Connections (CLC) 	

More detailed information on the above programs rated as *Effective* can be found in Section III of this report and at the National Institute of Justice (<https://www.crimesolutions.gov/>) and at the Substance Abuse and Mental Health Services Administration (<http://nrepp.samhsa.gov/landing.aspx>.)

Section I: D.A.R.E. Programs in Virginia

Drug Abuse Resistance Education (D.A.R.E.) is an in-school drug and violence prevention education program for children in kindergarten through the 12th grade. In addition to the student curriculum, D.A.R.E. also offers a parent-training program. D.A.R.E.'s primary goals are to prevent substance abuse among school children and help them develop effective violence resistance techniques. The core curriculum targets young children to prepare them to avoid substance abuse and violence as they enter adolescence. D.A.R.E. does this using a curriculum that includes recognizing and resisting peer pressure, learning alternatives to substance abuse, developing skills to reduce anger, conflict and violence, and developing positive interpersonal and decision-making skills. D.A.R.E. is typically taught by a law enforcement officers specifically trained to provide D.A.R.E. education.

To determine the number of Virginia schools that do and do not now offer the D.A.R.E. program to students, DCJS examined preliminary data from the 2016-2017 school year Annual School Safety Audit Survey. The survey is conducted annually by DCJS and is administered to all K-12 public schools in Virginia. The survey included several questions to gather information about the use of D.A.R.E. in schools, and the responses are shown below.

Does Your School Offer the D.A.R.E. (Drug Abuse Resistance Education)/keepin' it REAL Curriculum to Students?					
	Elementary	Middle	High	Other	Total
Yes	311/28%	42/12%	17/5%	26/13%	396/20%
No	793/72%	296/88%	300/95%	171/87%	1,560/80%
Total	1,104/100%	338/100%	317/100%	197/100%	1,956/100%

Out of 1,956 schools surveyed, a total of 396 (20%) reported that the school offers the D.A.R.E./keepin' it REAL curriculum to students, while 1,560 (80%) reported that they do not offer D.A.R.E. Elementary schools reported the most frequent offering of D.A.R.E. (28% of schools); followed by Other Schools (13%), middle schools (12%) and high schools (5%).

For the 20% of schools that reported offering the D.A.R.E. program, the survey asked each school to indicate who teaches the program in the school.

Who Teaches the D.A.R.E./keepin' it REAL Curriculum in Your School?					
	Elementary	Middle	High	Other	Total
SRO assigned to school, not a D.A.R.E. officer	78/25%	23/55%	10/59%	10/40%	121/31%
D.A.R.E. officer, not an SRO assigned to school	217/70%	19/45%	3/18%	14/56%	253/64%
Other	16/5%	0/0%	4/23%	1/4%	21/5%
Total	311/100%	42/100%	17/100%	25/100%	395/100%

About two-thirds (64%) of the schools offering D.A.R.E. reported that the program was taught by a D.A.R.E. officer who was not a School Resource Officer (SRO), and about one-third (31%) reported that D.A.R.E. was taught by an SRO assigned to the school who was not a D.A.R.E. officer. Elementary schools

were most likely to report having D.A.R.E. taught by a D.A.R.E. officer (70%), and high schools were most likely to report having D.A.R.E. taught by an SRO rather than a D.A.R.E. officer (59%).

Additional information on the D.A.R.E. program in Virginia was provided by the Virginia D.A.R.E. Association. The Virginia D.A.R.E. Association provides D.A.R.E. training through the Virginia D.A.R.E. Training Center. Virginia D.A.R.E. was established as a cooperative program by the Virginia Department of State Police, the Virginia Department of Education and local law enforcement agencies and school divisions to provide Virginia D.A.R.E. officers with standardized D.A.R.E. training which may include the following:

- An initial 80-hour D.A.R.E. training course for law enforcement officers who will teach the D.A.R.E. curriculum in elementary and middle schools.
- An additional 40 hours of training for law enforcement officers who will teach the D.A.R.E. Senior High School Curriculum.
- Training for officers who will teach the D.A.R.E. Community Education Adult Program.
- D.A.R.E. mentor training, an additional 40 hours of D.A.R.E. instruction and 80 hours of apprenticeship for officers who will work with and train other officers as instructors (available through D.A.R.E. America with approval by the Virginia D.A.R.E. Training Center).
- Additional D.A.R.E. in-service training to update officers and education personnel on D.A.R.E. information, materials, and evaluation results.
- Educational/Curriculum updates required by curriculum changes and as mandated by D.A.R.E. America.

According to figures from the Virginia D.A.R.E. Training Center, in FY2017 D.A.R.E. was offered in 393 public schools across Virginia. About 77% of these programs were taught in elementary schools, 21% in middle/junior high schools, and 1% in senior high schools. These D.A.R.E. programs were taught by 184 D.A.R.E. officers, with 75% of them in elementary, 20% in middle/junior high, and 4% in senior high schools.

Nearly 48,000 Virginia school students completed the D.A.R.E. program in FY2017, with more than 75% of these students in elementary schools. About 21% of the students were in middle/junior high, and only about 1% in senior high school.

The D.A.R.E. Community Education Adult Program provided 21 parent/community programs/presentations to 611 parents in FY2017. Statewide, Virginia D.A.R.E. officers provided 397 group presentations and/or workshops to a total of 9,430 attendees.

Section II: Overview of D.A.R.E. Evaluation Research

Despite being one of the most well-known and widely used drug prevention programs in the U.S., determining the effectiveness of the D.A.R.E. program has – and continues to be – a challenge for academic researchers, government evaluators, and D.A.R.E. practitioners.

There are several reasons for this. First, although D.A.R.E. is a copyrighted program name, defining D.A.R.E. programs has historically been very difficult. Since its inception in 1983, the name “D.A.R.E.” has evolved to encompass many different programs, often with different names, philosophies, practices, and target audiences. Most studies that have tried to evaluate D.A.R.E. programs have had difficulty defining which aspects of the various versions of D.A.R.E. are operating in the programs they have examined. They are often combinations of different programs falling under the label “D.A.R.E.”. Second, because D.A.R.E. has become so well-known and widely used, it has constituencies that lobby both for and against D.A.R.E.’s effectiveness, which has complicated studying its effectiveness.

There is no evaluation research available on Virginia-specific D.A.R.E. programs. However, there is great deal of research on D.A.R.E. nationally. This section of the report provides a summary of the history of D.A.R.E. evaluation findings, and provides the latest D.A.R.E. evaluation effectiveness ratings from the National Institute of Justice’s CrimeSolutions.org and the Substance Abuse and Mental Health Services Administration’s National Registry of Evidence-based Programs and Practices.

The Original D.A.R.E. Program

The original D.A.R.E. program was developed in 1983 in Los Angeles through a combined effort by the Los Angeles Police Department and the Los Angeles Unified School District. The original mission was to provide elementary, middle, and high school students the appropriate skills to resist substance abuse, violence, and gangs while improving community-police relations (Gist, 1995).

According to the National Institute of Justice, the original 1983 curriculum was designed for use with elementary-aged students (5th or 6th grade), and included 17 one hour-long weekly lessons. Middle and high-school components were later added in 1986 and 1988. The original curriculum, modeled after the University of Southern California’s project SMART, was a “broad-based social skills training program targeted at children aged about 10 or 11 years. Social skills training programs combine elements of the ‘affective’ approach to drug use prevention that was popular in the 1970s (e.g., self-esteem enhancement, decision-making skills) with the resistance skills training approach” (Gorman, 1995). The program was to be taught only by D.A.R.E.-trained, full-time, uniformed police officers selected by the local police department. These officers were required to attend an intensive 2-week course of at least 80 hours of training (Ringwalt, Greene, Ennett, Iachan, Clayton, & Leukefeld, 1994).

D.A.R.E. gained immediate and widespread popularity through word-of-mouth and by its extensive and expensive advertising campaign (West & O’Neal, 2004). At its peak, 80% of U.S. schools implemented the D.A.R.E. curriculum and it was the nation’s “largest single school-based prevention program in terms of federal expenditures, with an average of three-quarters of a billion dollars spent on its provision annually” (West & O’Neal, 2004). The national D.A.R.E. program was and continues to be run by D.A.R.E. America, a non-profit administrative organization.

Although “user satisfaction” remained high among students, faculty, parents, and the community well into the 1990s, criticism from the scientific research community surfaced as the results from numerous scientific studies came to light (*The D.A.R.E. Program*, DOJ, 1994). By the end of the 1990s nearly a dozen studies had been published indicating that the D.A.R.E. program had little to no measurable effect on drug use (Clayton, Cattarello, & Johnstone, 1996; Rosebaum & Hanson, 1998; Ennett, Tobler, N. Ringwalt & Flewelling, 1994). In 2000, D.A.R.E. was forced to make changes to the original curriculum after the U.S. Department of Education conducted an audit of drug education programs where “only evidence-based programs would be eligible for funding....D.A.R.E. did not make the cut” (Cima, 2016).

The “New D.A.R.E.” - Take Charge of Your Life (TCY)

In 2001, D.A.R.E. America partnered with the University of Akron on a five-year project to develop a new D.A.R.E. curriculum with help from a \$13 million grant provided by the Robert Wood Johnson Foundation (West & O’Neal, 2004). The result was a middle-school focused program called Take Charge of Your Life (or New D.A.R.E.). This program consisted of 10 lessons delivered in 7th grade and an additional seven lessons in 9th grade.

The New D.A.R.E. was evaluated in a national randomized control trial by the University of Colorado’s Center for the Study and Prevention of Violence (2010). Results of the study showed: 1) No difference for any substance used in the past 12 months; 2) No difference for marijuana use during the past 30 days; 3) For those not using any substance at the start of the study, higher rates of smoking and alcohol use for those in the Take Charge of Your Life program; 4) For those already using marijuana at the start of the study, greater reductions in subsequent use than for those in the control group (11th graders only; no other grades); 5) Overall, the program had no effect on general substance use, and, in fact, participation in the program was associated with higher levels of alcohol and cigarette use.

keepin’ it REAL (KiR)

The program now known as *keepin’ it REAL* originated from research conducted for the Drug Resistance Strategies (DRS) project by Drs. Michelle Miller-Day and Michael Hecht in the late 1980s. Funded by the National Institute of Drug Abuse (NIDA), the DRS project “grew out of the need to understand the adolescent perspective on drugs and drug offers as well as how they assess risks and make good decisions.”). Using a narrative-based design, DRS research examined how adolescents refused offers of alcohol, tobacco, and other drugs

The KiR research team developed two adaptations, expanding to reach 5th graders, allowing the program developmental appropriateness: KiR-Plus and KiR-Acculturation Enhanced (KiR-AE) (Caputi & McLellan, 2017). However, Hecht et al., (2008) reported that analysis of the *Keepin’ it REAL* (KiR) intervention further demonstrates the confusion connected with identifying an effective program. The KiR middle school intervention was originally tested in three different versions: KiR white/black, KiR Hispanic, and KiR multicultural. Only KiR Hispanic and KiR multicultural showed any significant results; the black/white version was ineffective (Hecht, Graham, & Elek, 2006). Years later, KiR developed two elementary school adaptations, KiR-Acculturation Enhanced (KiR-AE) and KiR-Plus. When tested, both of these versions were found to be ineffective or even counterproductive.

When D.A.R.E. adopted KiR in 2009, the KiR developers created a new version, KiR D.A.R.E. (and eventually KiR D.A.R.E. Elementary), which combined elements of the KiR middle school interventions and the original D.A.R.E. program (Hecht, Colby, & Miller-Day, 2010). KiR D.A.R.E. and KiR D.A.R.E. Elementary have not been tested in randomized trials. The research indicates that some versions of KiR

work (e.g. Hispanic/Latino, multicultural), others do not (e.g. Black/White, KiR-AE, KiR-Plus), and some are unstudied (e.g. KiR D.A.R.E. and KiR D.A.R.E. Elementary).

keepin' it REAL D.A.R.E.

In 2009, D.A.R.E. America licensed *keepin' it REAL* from Pennsylvania State University. A D.A.R.E. version of the curriculum was developed cooperatively, including three sets of new, national videos for rural, suburban and urban schools. KiR D.A.R.E. was formed as a version of the KiR middle school intervention (the original curriculum). However, a major difference (and point of contention amongst researchers) was who is in the front of the classroom implementing the program: who is the teacher? The evidence-based original kiR program is implemented by teachers and/or other school professionals, whereas kiR D.A.R.E. is taught by uniformed law enforcement officers.

Due to the number of variations and adaptations of KiR making it difficult to research, Caputi and McLellan (2017) reviewed all effectiveness studies related to all KiR curriculums, with the caution that program variations could have different effects. Their results focused on KiR middle school interventions, on which KiR D.A.R.E. and KiR D.A.R.E. Elementary were based, as well as elementary school adaptations. Arguing that differences in the versions of KiR are not easily quantifiable, they instead chose a quantitative review. Their research concluded that the evidence basis for the D.A.R.E. version of KiR is weak, and there is substantial reason to believe that KiR D.A.R.E. may not be suited for nationwide implementation.

Given the variety of inconclusive research that has been published regarding D.A.R.E.'s effectiveness (the studies cited above are only a sample of such studies), DCJS examined data from two of the federal government's major resources for identifying effective substance abuse prevention and reduction programs: CrimeSolutions.gov, maintained by the National Institute of Justice (NIJ), and the National Registry of Evidence-based Programs and Practices (NREPP), maintained by the Substance Abuse and Mental Health Services Administration (SAMHSA). Each of these resources is designed to provide scientifically valid, evidence-based assessments of substance abuse prevention and reduction programs. Evaluation findings from these two resources are described below.

D.A.R.E. Research from the National Institute of Justice

The National Institute of Justice's Office of Justice Programs maintains the CrimeSolutions.gov website, which serves as a clearinghouse for information on programs and practices that have undergone rigorous evaluations and meta-analyses.

The site uses experts to assess the strength of the evidence about whether these programs achieve criminal justice, juvenile justice, and crime victim services outcomes to inform practitioners and policy makers about what works, what doesn't, and what's promising. Based on its review of a program's evaluation evidence, CrimeSolutions.gov categorizes a program as either: 1) *Effective*; 2) *Promising*; or 3) *No Effects*. As of November 15, 2017 CrimeSolutions.gov contained assessments of two D.A.R.E. programs: the Drug Abuse Resistance Education + Play and Learn Under Supervision (D.A.R.E. + PLUS) program, and the keepin' it REAL program.

D.A.R.E. + PLUS

D.A.R.E. + PLUS is a school-based drug use education prevention program taught by police officers in schools. The program targets junior-high/middle school students and is a booster or complement to the D.A.R.E. program.

Based on one 2003 study (Perry, C., Komro, K. & Veblen–Mortenson, S., et. al.), the program was rated as *Promising*. Boys in D.A.R.E. + PLUS schools were less likely to show increases in alcohol, tobacco or multidrug use, and girls were less likely to report increases in ever having been drunk, compared to D.A.R.E.-only schools. Program children also reported less violent behavior. D.A.R.E. + PLUS school children also reported less violent behavior and intentions than those in the delayed-program schools. Boys in D.A.R.E. + PLUS schools were also less likely to report an increase in normative estimates of drug use, expectations of drug use, and violence, when compared with boys in the delayed-program schools.

keepin' it REAL

keepin' it REAL is a culturally focused youth drug-prevention program designed to increase resistance skills. It is a video-enhanced intervention that uses a culturally grounded resiliency model to incorporate traditional ethnic values and practices that protect against drug abuse.

Based on one 2003 study (Hecht, M., Marsiglia, F., and Elek, E. et. al., 2003), the program was rated as *Promising*. The group receiving the program reported less alcohol and marijuana use 14 months after the intervention. There were no differences in substance resistance strategies, descriptive norms, or intent to accept and self-efficacy. Over time, the control group had more positive views of substance use. The type of cultural version (distinct Mexican-American, non-Latino and multi-cultural versions) used had an impact on personal norms and substance use.

D.A.R.E. Research from the Substance Abuse and Mental Health Services Administration

The Substance Abuse and Mental Health Services Administration (SAMHSA) maintains the National Registry of Evidence-based Programs and Practices (NREPP), an evidence based repository and review system designed to provide reliable information on mental health and substance use interventions. All interventions in the registry have met NREPP's minimum requirements for review, and the programs' effects on individual outcomes have been independently assessed and rated by certified NREPP reviewers. NREPP ratings take into account the methodological rigor of evaluation studies, the size of a program's impact on an outcome, the degree to which a program was implemented as designed, and the strength of a program's conceptual framework. Based on its review of a program's evaluation evidence, the NREPP categorizes a program as: 1) *Effective*, 2) *Promising*, 3) *Ineffective*, or 4) *Inconclusive*.

As of September 15, 2017, the NREPP contained only one assessment of a D.A.R.E. program - the keepin' it REAL program. keepin' it REAL (kiR) is designed to reduce substance use among middle- and high-school students. The program teaches relationship skills (assertiveness, conflict management, empathy, and emotion management), problem-solving skills (risk assessment, decision making), normative knowledge, and resistance skills. The acronym REAL (Refuse, Explain, Avoid, and Leave) is the central message of the kiR program and teaches ways to refuse alcohol, tobacco, and other drug offers.

Based on three studies (Hecht, M., Graham, J., & Elek, E. (2006), Hopson, L. & Steiker, L. K. H. (2010), and Marsiglia, F., Booth, J., & Ayers, S., et. al (2014), the keepin' it REAL program was found to be *Promising*

for preventing Alcohol Use and Disorders and Tobacco Use and Disorders, but *Ineffective* regarding Cannabis Use and Disorders and Knowledge, Attitudes, and Beliefs About Substance Use.

However, later in September 2017 SAMHSA had removed the listing for the keepin' it REAL program from the NREPP. DCJS contacted SAMSHA and inquired about why keepin' it REAL was listed in the NREPP early in September, but no longer listed later in September. SAMHSA responded with the following:

“The keepin' it REAL (kiR) program profile has been temporarily removed from the site at the request of the program developer. However, we anticipate reposting the profile once several questions have been resolved. We apologize for the inconvenience.”

As of November 15, 2017, the keepin' it REAL program had not been reposted in the NREPP.

Why D.A.R.E. Continues to be Used

DCJS sought research to address the question of why D.A.R.E. remains so popular despite the lack of scientific evidence that the program is effective in reducing substance abuse. Several studies have addressed this question.

Singh, Jimerson, Renshaw, Saeki, Hart, Earhart and Stewart (2011) reviewed previous studies of D.A.R.E. and asked the question “Why do school districts continue to participate in D.A.R.E. when its effectiveness is unclear?” One answer they proposed was that, despite the conflicting empirical research, *perceptions* of D.A.R.E. were generally positive. Among the several studies they reviewed that studied perceptions of the D.A.R.E. program, they cited the following findings:

“... parents perceived the program to be useful in helping children understand and resist drugs, increasing both parents'/children's awareness of drug problems, and increasing parent-child conversations about drug problems.”

“... school districts decided to continue participation in D.A.R.E., despite its questionable effectiveness, because school officials believed the evaluations were not sensitive to improvements in relationships between police and students.”

“... participants assigned favorable ratings to each of the following: Teacher/officer interactions, role playing exercises, the graduation ceremony, program quality, and program impact on students.”

A similar conclusion about why D.A.R.E. remains popular despite little evidence that it reduces substance abuse was described by Birkeland, Murphy-Graham and Weiss (2005) in their study “Good reasons for ignoring good evaluation: The case of the drug abuse resistance education (D.A.R.E.) program.” In describing why communities continue to participate in D.A.R.E., they note:

“While D.A.R.E. does not do what it is marketed to do, it does bring benefits to communities – benefits they value even in the face of pressure to drop the program.... Police officers and school officials do see a value in the ‘connectedness’ that D.A.R.E. fosters between children and police and police and schools.... The most valuable outcome

of D.A.R.E., according to these respondents, is the relationship it fosters among police, families and schools.”

The Virginia D.A.R.E. Association has also pointed out the value of D.A.R.E. in that it “builds relationships between law enforcement and children, families and community..... All in all, D.A.R.E. Officers across the Commonwealth connected with nearly 300,000 citizens. The impact is noticeable and the positive relationship with the community is unmeasurable.”

Section III: Assessment of Other Evidence Based Drug Education Programs

In addition to reviewing evaluation studies of the D.A.R.E. program, the budget bill language directed DCJS to assess other evidence based drug education programs. To do this, DCJS again consulted NIJ's CrimeSolutions.gov, and SAMHSA's National Registry of Evidence-based Programs and Practices.

NIJ CrimeSolutions.gov Programs Identified as Effective

CrimeSolutions.gov reviewed 98 substance abuse prevention programs and found 18 programs that were rated as *Effective*, 59 programs rated as *Promising* and 21 programs rated as having *No Effect*. The 18 programs identified as *Effective* are summarized below.

Adults in the Making (AIM)

A family-centered preventive intervention designed to enhance the family protective process and self-regulatory competence to deter escalation of alcohol use and development of substance use problems. The program targeted African-American youth in the last two years of secondary school. Overall, the preponderance of evidence indicates that the program has a positive impact on deterring the use of alcohol, drugs, and involvement in other risky behaviors among participants.

Big Brothers Big Sisters (BBBS) Community-Based Mentoring (CBM) Program

This program offers one-to-one mentoring in a community setting for at-risk youth between the ages of six and 18. It was associated with a significant reduction in initiating drug and alcohol use and antisocial behavior among mentored youth. Also, mentored youth had significantly better relationships with parents and emotional support among peers. The program, however, did not have a significant effect on youths' academic performance (grades and absences) or self-worth.

Brief Alcohol Screening and Intervention of College Students (BASICS)

A preventive intervention for college students designed to help students make better decisions about using alcohol. The intervention group significantly reduced the negative consequences related to drinking, lowered drinking quantities over the 4-year period, and had significantly fewer drinks per weekend than the control group. There were no significant differences in the quantities of alcohol consumed during the week between the two groups.

Checkpoint Tennessee

Checkpoint Tennessee is intended to combat impaired driving and reduce alcohol-related car crashes. Researchers observed a 20.4% reduction over the projected number of drunk-driving fatal crashes that would have occurred with no intervention. There was a statistically significant reduction in nighttime single-vehicle injury crashes after the start of the program, positive public opinion and awareness of the program.

Family Matters

A family-directed program to reduce tobacco and alcohol use among 12- to 14-year-olds. There was a statistically significant program effect for smoking and drinking which suggest that the program reduced the prevalence of both behaviors.

Guiding Good Choices

A multimedia family competency training program that promotes healthy, protective parent-child interactions and addresses children's risk for early substance use. The program targets families of children in grades 4–8. There were significant positive effects of the interaction on proactive communication, decreased negative interactions between mothers and their children, improved quality relationships, and positive effects surrounding substance use (i.e. initiation and progression).

LifeSkills® Training

A classroom-based tobacco-, alcohol-, and drug abuse-prevention program for upper elementary and junior high school students. The training had positive effects on the treatment groups showing reduced growth of substance initiation, lowered cigarette and alcohol use, and some differences for self-reported marijuana and polydrug use.

Linking the Interests of Families and Teachers (LIFT)

The program is designed to prevent the development of aggressive and antisocial behaviors in elementary children. The intervention group showed less child physical aggression, a reduction in substance use initiation; and although the entire sample showed significant mean increases in substance use growth over time, the intervention slowed down the rate.

Midwestern Prevention Project (MPP)

A school-based comprehensive program intended to promote an antidrug message throughout communities and prevent substance use (alcohol, tobacco, and marijuana) among middle school students. The program significantly reduced cigarette smoking prevalence among treatment youths relative to the control group. There was no significant sustained effect for alcohol or marijuana use at follow-up.

Multidimensional Family Therapy

A manualized family-based treatment and substance abuse prevention program developed for adolescents with drug and behavior problems. The program is typically delivered in an outpatient setting, but it can also be used in inpatient settings. The program resulted in the greatest and most consistent improvements in adolescent substance abuse and associated behavior problems.

Multisystemic Therapy—Substance Abuse

A version of Multisystemic Therapy targeted to adolescents with substance abuse and dependency issues. The treatment group was found to have less criminal behavior, alcohol and marijuana use. However, overall, there were no significant differences between the different treatment groups and the comparison group for mental health and psychiatric symptoms.

Nurse—Family Partnership

A home visitation program for low-income, first-time mothers to improve family functioning. Program children had less substance use, reported fewer internalizing problems, and had higher child academic achievement. At the 15-year follow-up, less child abuse and neglect involving the mother as the perpetrator or involving the study child for families receiving home visitations during pregnancy and infancy.

Positive Action

The program is designed to improve youth academics, behavior, and character, and can be used by schools, families, or communities. Treatment students reported less substance use, problem behaviors,

and violent behavior than the control group. There was a 41% reduction in bullying behaviors. Findings regarding sexual activity and disruptive behaviors were not statistically significant.

Positive Family Support (PFS)

The program is a multilevel, family-centered intervention targeting children at risk for problem behaviors or substance use and their families (formerly known as Adolescent Transitions Program). Students in the treatment group reported significantly less substance use in grade nine than students in the control group. They also used less tobacco, alcohol, and marijuana; exhibited less antisocial behavior; and had fewer arrests.

San Diego (Calif.) Drug Abatement Response Team (DART)

This program is designed to reduce drug dealing at residential rental properties by encouraging improved property management practices. Properties that received the full intervention (letter from police department, meeting with police and code enforcement, and threatened nuisance abatement) experienced a significant reduction in crime at rental properties with drug problems and more drug offender evictions.

Strengthening Families Program: For Parents and Youth 10–14

This is an adaptation of the Strengthening Families Program. It aims to reduce substance use and behavior problems using improved skills in nurturing and child management by parents and improved interpersonal and personal ones among youths. The program's impact on improved parenting competencies and reduced students' substance-related risk in the 6th grade, and on increased school engagement in the 8th, led to increased academic success in the 12th.

Strong African American Families (SAAF)

A 7-week alcohol-, drug use-, and early sexual activity–reduction program concentrating on rural African American youths. Treatment group mothers reported more communicative parenting, and that the targeted children had more protective factors than those in the control group. Children in the treatment group were also less likely to use alcohol. The change in parenting behaviors resulted in youths' avoiding engaging in risk behavior.

Teams–Games–Tournaments (TGT) Alcohol Prevention

An approach to alcohol prevention, typically delivered to high school students, which combines peer support with group reward structures. Participants showed gains in alcohol-related knowledge at posttest, relative to both the traditional and no-instruction control groups. They experienced a decrease in alcohol consumption, better attitudes toward drinking and driving, and lower rates of reported impulsive behavior maintained through follow-up.

Further details on the programs above rated as *Effective*, as well as programs rated as *Promising* or *No Effect* can be found at <https://www.crimesolutions.gov/>.

SAMHSA NREPP Programs Identified as Effective

The NREPP listing for “Substance use disorder prevention” programs (as of November 15, 2017) contained reviews for 58 Newly Reviewed Programs (i.e., programs evaluated using criteria effective after September of 2015).

Of the 58 programs reviewed, 13 programs showed *Effective* outcomes, 48 programs showed *Promising* outcomes, 21 programs showed *Ineffective* outcomes, and eight programs showed *Inconclusive* outcomes. The 13 programs demonstrating *Effective* outcomes are summarized below.

AlcoholEdu for College

AlcoholEdu for College is an online alcohol education, misuse prevention, and harm reduction course for undergraduate students in colleges and universities. The course takes 2 to 3 hours to complete and is delivered in two parts. The course uses a multimedia approach, including text with graphics, video streaming, and interactive Web pages to deliver material.

ATLAS (Athletes Training and Learning to Avoid Steroids)

Athletes Training and Learning to Avoid Steroids (ATLAS) is a school-based, alcohol- and drug-prevention program for male high school athletes. The program is designed to reduce or stop adolescent male athletes' use of anabolic steroids, sport supplements, alcohol, and illegal drugs, while improving nutrition and exercise practices. Participants learn how to achieve their athletic goals by using state-of-the-art sports nutrition and strength training and how to avoid using harmful substances that will impair their physical and athletic abilities.

Building Assets, Reducing Risks (BARR)

Building Assets, Reducing Risks (BARR) is a comprehensive, strengths-based prevention model aimed at addressing nonacademic barriers to learning in high school by reducing risky behavior, such as drug and alcohol use, and by increasing protective factors, such as student supports and school connectedness. Specifically, the goals of the model are to decrease alcohol, tobacco, and other drug use; reduce academic failure; reduce truancy rates; and decrease disciplinary incidents among students.

Child FIRST

Child FIRST (Child and Family Interagency, Resource, Support, and Training) is a home-based, psychotherapeutic intervention for children (birth to six years) and families, including expectant mothers. The program seeks to prevent or reduce children's emotional, behavioral, developmental, and learning problems, and prevent or reduce abuse and neglect by their caregivers.

Child FIRST identifies children at risk of behavioral or learning problems and works with their families to address multiple risk factors such as poverty, trauma and exposure to violence, abuse and neglect, depression, substance use, and homelessness. Child FIRST is based on two core components: 1) a comprehensive and coordinated system-of-care approach to provide individualized support and services to the child and family, and 2) relationship-based approaches to enhance nurturing and positive development.

Collaborative Opioid Prescribing Education (COPE)

The Collaborative Opioid Prescribing Education (COPE) program is an online training course designed to increase physicians' knowledge, competence, and satisfaction in using opioid medications to manage patients' chronic noncancer pain. COPE is based on the chronic care model, in which healthcare providers and patients make treatment decisions collaboratively to achieve positive health outcomes. COPE teaches physicians communication skills for physician-patient goal setting in relation to starting, stopping, or continuing opioid therapy.

Coping with Work and Family Stress

Coping with Work and Family Stress is a workplace intervention designed to teach employees, 18 years and older, how to deal with stressors at work and at home. Sixteen, 90-minute sessions are typically provided weekly to groups of 15-20 employees. The sessions focus on reducing risk factors (stressors and avoidance coping) and enhancing protective factors (active coping and social support) through behavior modification (e.g., methods to modify or eliminate sources of stress); information sharing (e.g., didactic presentations, group discussions); and skills development (e.g., learning effective communication and problem-solving skills, expanding use of social network). The curriculum emphasizes the role of stress, coping, and social support in relation to substance use and psychological symptoms.

Creating Lasting Family Connections (CLFC)/Creating Lasting Connections (CLC)

Creating Lasting Family Connections (CLFC) is a family-focused program that aims to increase parenting skills and family-relationship skills to build the resiliency of youths aged 9 to 17 years, and to reduce the frequency of their alcohol and other drug use. CLFC is designed to be implemented through community systems such as churches, schools, recreation centers, and court-referred settings.

Family Matters

Family Matters is a family-directed program to prevent adolescents 12 to 14 years of age from using tobacco and alcohol. The intervention is designed to influence population-level prevalence and can be implemented with large numbers of geographically dispersed families. The program encourages communication among family members and focuses on general family characteristics (e.g., supervision, communication skills) and substance-specific characteristics (e.g., family rules for tobacco and alcohol use, media/peer influences).

Hip-Hop 2 Prevent Substance Abuse and HIV (H2P)

Hip-Hop 2 Prevent Substance Abuse and HIV (H2P) is a program designed to improve knowledge and skills related to preventing and reducing the use of drugs and preventing HIV/AIDS among youths ages 12 to 16. The goals of this program are to: 1) reduce substance use and early sexual activity, 2) increase family interactions, and 3) increase constructive recreational activity among participating youth.

Keep a Clear Mind

Keep a Clear Mind (KACM) is a take-home, alcohol and drug education and prevention program for fourth- through sixth-grade students and their parents. Developed in 1988, KACM is based on a social-skills training model. KACM is designed to help children develop specific skills to refuse and avoid use of “gateway” drugs such as alcohol, tobacco, and marijuana. The take-home format is intended to extend these concepts to the home and incorporate parental involvement.

Kognito At-Risk in Primary Care

At-Risk in Primary Care is an online professional development simulation for primary healthcare professionals intended to improve their skill, knowledge, and attitudes in addressing behavioral and mental health with their patients. The simulation is designed to improve users’ knowledge and skill when screening and assessing patients for substance use, depression, PTSD, and suicidal thoughts.

Parenting from Prison

Parenting from Prison is a parent education program for inmates. The program curriculum teaches inmates skills to strengthen family functioning, increase positive behaviors, decrease substance use, and increase their knowledge of risk and resilience factors. The 20-session curriculum includes topics such as self-esteem, risk and resilience factors, communication, discipline, problem solving, decision making, and substance abuse.

Youth Message Development

The Youth Message Development (YMD) media-literacy curriculum aims to prevent adolescent substance use among 13- to 15-year-olds by increasing their knowledge of advertising techniques used to sell alcohol, tobacco, and other drug products; developing their counter-arguing and critical-thinking skills in response to drug messages; and helping them actively apply these skills and techniques to create youth-driven, anti-drug messages. Youths learn about advertising and how it is designed to influence behavior, then critically analyze existing ads and produce their own counter-advertising ads.

Further details on the programs above rated as *Effective*, as well as programs rated as *Promising*, *Ineffective*, or *Inconclusive* can be found at <http://nrepp.samhsa.gov/landing.aspx>.

Section IV: Conclusion

The D.A.R.E. program is currently offered in about 20% of Virginia's public schools, primarily in elementary schools. Although the program is popular nationwide, the research regarding whether or not D.A.R.E. is actually effective in reducing substance abuse is mixed at best. The National Institute of Justice and the Substance Abuse and the Mental Health Services Administration have identified what they consider to be the most scientifically rigorous evaluations of the D.A.R.E. program. These evaluations found evidence that some D.A.R.E. programs are considered *Promising* for reducing substance abuse, but no evidence confirming that D.A.R.E. is actually *Effective* in reducing substance abuse. However, D.A.R.E. participants and practitioners argue that the program provides benefits that are not typically addressed in formal evaluation studies, primarily in building and fostering drug awareness and positive relationships between law enforcement and children, families, schools and the community.

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