

The Economic Costs of D.A.R.E.

Edward M. Shepard III

November 2001

**Institute of Industrial Relations
Research Paper Number 22
Le Moyne College,
1419 Salt Springs Road
Syracuse, NY 13214-1399**

Contact information

e-mail: (Shepard@mail.lemoyne.edu)

telephone: 315-445-4235

Table of Contents	Page
1. Introduction	3
2. Background	5
3. The economic costs of D.A.R.E.: conceptual framework.	7
4. National estimates of the economic costs of D.A.R.E	9
5. Summary of economic costs	16
6. Concluding remarks	17
7. Tables	18

1. Introduction

This paper presents preliminary estimates of the economic costs of the D.A.R.E. (Drug Abuse Resistance Education) program using information provided by D.A.R.E. America, the U.S. Department of Justice, several state annual reports, and investigative reports from communities and cities across the country.¹ Other studies have addressed important concerns about the structure, operations, and effectiveness of the program.² A comprehensive economic evaluation of D.A.R.E. must consider not just effectiveness or societal benefits but also the costs. Prior estimates of the annual costs of D.A.R.E. reported in the press are mostly based on research by investigative reporters (e.g. USA Today, the New York Times, Reason Magazine, and others). These estimates have varied widely from about 200 million to around 1 billion dollars annually. The D.A.R.E. organization (D.A.R.E. America) estimates the annual costs of the officer services to be about 215 million.³

There is uncertainty about the real costs of D.A.R.E. because there is no centralized accounting of the funds, expenditures, and resources used to support the program. The decision to use D.A.R.E. is made by local school districts, and the needed resources are provided for in local city or town budgets, by local school districts, or by local police departments. These local offices, in turn, have access to state or federal support through a variety of programs. D.A.R.E. programs are implemented at the local level and receive support from many sources including the federal government (U.S. Department of Education safe schools grants, and the U.S. Department of Justice grants for officer training), state and local governments, individual school districts, local and state police departments, corporate donations, asset seizures, and various fund raising events.⁴ According to the Office of National Drug Control Policy (ONDCP), 41 million dollars in federal support was provided to the D.A.R.E. program in a recent year. Law enforcement assistance grants are also provided by the U.S. Department of Justice,

¹ Helpful suggestions for this research were received from Paul Blackley and Cliff Donn of LeMoyne College, Nicolas Eyle and Alexandra Eyle of ReconsiDer, Mike Roona, Joel Brown, and Rodney Skager. D.A.R.E. officers and state coordinators in several states and staff of D.A.R.E. America provided valuable information used in this study. William Modzeleski and David Quinlin of the U.S. Department of Education, and Doug McVay of Common Sense for Drug Policy were also helpful in identifying information sources for this research.

² For example, see “Project D.A.R.E.: No effects at 10-year follow-up,” Lynam, Milich, et al., *Journal of Consulting and Clinical Psychology*, August 1999, Vol. 67, No. 4, 590-93. The authors examine the existing long-term studies and find that “the preponderance of evidence suggests that D.A.R.E. has no long-term effect on drug use.”

³ Conversations with staff at D.A.R.E. America.

⁴ Information on funding sources for local D.A.R.E. programs is from a report by the Research Triangle Institute, *Past and Future Directions of the D.A.R.E. Program: An Evaluation Review*, Draft Final Report, September 1994, for the U.S. Department of Justice, and from numerous newspaper reports identified through a search of the Media Awareness Project on-line archives (mapinc.org).

which can be used to provide resources needed by local law enforcement to support the D.A.R.E. program.⁵ Officials in the U.S. Department of Education, who administer over 500 million dollars of safe schools federal grant money to state education and governors offices, do not know and do not keep records of how much goes to support the D.A.R.E. program.⁶ A 1992 survey of local D.A.R.E. administrators indicated that almost 50 percent of local D.A.R.E. administrators obtained some funding from the Department of Education.⁷ However, state and local government officials may now be reluctant to use Safe Schools grants to support D.A.R.E., partly because it is not among the programs demonstrated to be effective, based on the Department's "Principles of Effectiveness."⁸

Local D.A.R.E. administrators sometimes rely on corporate donations and fund raising events to help cover costs or to pay for promotional merchandise, such as the D.A.R.E. automobile, and the bumper stickers, T-shirts, caps, jackets, and bags available from vendors licensed by D.A.R.E. America. Some police departments consider D.A.R.E. to be an important part of community policing or community relations, and this leads them to contribute officer services for the program. A 1997 report by the Research Triangle Institute, which surveyed local districts during the early to mid 1990's, found that "for most districts in the study . . . D.A.R.E. programs were supported wholly or in part by the local or state enforcement agencies."⁹ Because D.A.R.E. is implemented at the local level (using the D.A.R.E. America curriculum and instructional training for officers), information required to quantify the economic costs are not readily available. Thus far, major research has focused on other aspects of the program and there is little information about economic costs. This report provides preliminary estimates of the economic costs of the program to fill that gap.

⁵ Remarks of Barry R. McCaffrey, Director, Office of National Drug Control Policy, at the 13th Annual National D.A.R.E. Officers Association Dinner, July 7, 2000.

⁶ Conversations with officials in the U.S. Department of Education

⁷ Research Triangle Institute, *Past and Future Directions of the D.A.R.E. Program: An Evaluation Review*. Draft Final Report, Sept. 1994.

⁸ The U.S. Department of Education adopted the "Principles of Effectiveness" that set standards governing the use of Department grants for drug education programs for 1998 and future years. Among other things, grant recipients are required to use the funds only for programs that have been found to be effective based on research and scientific evaluations. D.A.R.E. is not included among the programs found to be effective. For more information about the "Principles of Effectiveness", see "Reconsidering D.A.R.E., A Report for School Superintendents" by Dr. Gene Tinelli at www.reconsider.org.

⁹ *School-Based Drug Prevention Programs, A Longitudinal Study in Selected School Districts, Executive Summary*, Final Report, page e-25, Research Triangle Institute, February 1997, prepared for the U.S. Department of Education.

2) Background

D.A.R.E. was started by Los Angeles Police Chief Gates in 1983. The program expanded rapidly and by the late 1990s reached an estimated 80 percent of the school districts across the country. According to D.A.R.E. America and the U.S. Department of Justice, almost 50,000 police officers have been trained for the program since its inception, and D.A.R.E. programs are in place in over 10,000 communities and in over 300,000 classrooms in all 50 states around the country.¹⁰ A fact sheet prepared by D.A.R.E. for the U.S. Department of Justice reported that D.A.R.E. expected to reach about 8.5 million elementary school children in the year 1999. Twenty-five million additional children were expected to benefit from a range of D.A.R.E. activities, including visits to other grades, after-school activities, and parent programs. D.A.R.E. America currently reports that within the United States more than 26 million children will benefit from D.A.R.E. programs, with approximately one quarter (or 6.5 million), participating in the core elementary school program. These estimates appear to be exaggerated, however. Information about the school-age population provided by the U.S. Department of Education and the U.S. Census suggests that 4 million is probably a more reasonable estimate of the number of children in the core program within the United States.¹¹ D.A.R.E. has also reportedly expanded worldwide reaching 10 million additional children in 52 other countries around the world.

D.A.R.E. America is a non-profit tax-exempt organization that controls the training and curriculum for law enforcement officers to provide education in the schools about illicit drugs. D.A.R.E. America also markets and provides support and technical assistance for the program, licenses

¹⁰D.A.R.E. information reports provided by D.A.R.E. America.

¹¹ The *U.S. Census, Census 2000*, Table DP-1, shows that the total number of children in the 10–14 age group is about 20,500,000, which suggests that the number of school-age children in the 5th or 6th grade age group is probably close to 4 million. *The Digest of Education Statistics, 1999*, of the National Center for Education Statistics indicates that as of fall 1997 there were about 3.5 million in the 5th or 6th grade. The estimated number of 5th or 6th grade private school students is close to 500,000, bringing the total number, in 1997, to around 4 million. Enrollments increased by about 3% between 1997 and 2001, bringing the total to slightly over 4 million in the 5th or the 6th grades. Enrollments are expected to grow slightly over the next 5 years. D.A.R.E. programs are over-represented in urban and suburban areas (with larger school-age populations), and D.A.R.E. programs reportedly are in over 80 percent of school districts nationwide. Therefore, 4 million appears to be the maximum number of children that D.A.R.E. programs can be expected to reach, assuming information on program growth provided by D.A.R.E. America is accurate. For extensive information on school-age populations and projections, see the *Digest of Education Statistics* at <http://nces.ed.gov/pubs2000/digest99>.

merchandise vendors, and conducts assessment and research. D.A.R.E. America reports that each year approximately 3,000 police officers are trained to administer the D.A.R.E. program. D.A.R.E.'s four regional training centers are funded by an annual \$1.7 million U.S. Department of Justice grant. In addition, 46 states have their own training centers that have received funding from different sources.¹²

The 17-week course for elementary (5th or 6th grade) school students uses trained law enforcement officers to teach D.A.R.E. lessons in the classroom. The lessons present a negative view of illicit drugs and drug users, reinforce a no use message, and provide tools for building self-esteem and resisting peer pressure. The D.A.R.E. curriculum has been revised several times, and has added components for violence, gangs, and tobacco. At the end of the 17 weeks there is a "graduation" where prizes, such as jackets or duffel bags with the D.A.R.E. logo, are provided to D.A.R.E. essay contest winners. Middle and high school D.A.R.E. courses have been introduced in many communities to reinforce the core messages first taught in the 5th or 6th grades. To teach in the core program, an officer must be trained and certified by attending a two-week training program at a state or regional training center. To participate in the middle school (10-week) or high school (9-week) program, officers must have additional training provided through three- to four-day training courses. D.A.R.E. officers also visit grades K-4 to introduce the program to young children and warn them about strangers and illegal drugs, and participate in other D.A.R.E. events, including after-school programs, parent programs, fund-raising dinners and dances, events with recreation or entertainment, presentations, and picnics.

There is anecdotal evidence that D.A.R.E. may have slowed or declined in recent years, but the evidence is mixed. According to officials at the U.S. Department of Education, state and local government officials may be reluctant to support D.A.R.E. partly because it is not among the programs demonstrated to be effective based on the Departments "Principles of Effectiveness". There have been a series of negative scientific evaluations of the program, and recently, high profile communities such as Oakland, CA, Seattle, WA., Salt Lake City, Utah, and Rochester, NY. have dropped the program. At the same time, D.A.R.E. has expanded into other areas and added middle school and high school programs. In addition, sales of D.A.R.E. merchandise have reportedly not fallen off in recent years. D.A.R.E. remains extremely popular, and a shortfall in state or federal funding is made up from other sources, including local police departments, local school districts, or city, town, or county budgets. In some communities officers have used their own vehicles to provide transportation for the program; in other communities seized vehicles have been reconditioned to become the officers' D.A.R.E. car. The program's popularity with parents, students, and local law enforcement makes it difficult to drop once adopted. According to D.A.R.E. America, a few communities may have dropped the program, but others have picked it up.

¹² Information about D.A.R.E. training programs was provided by D.A.R.E. America and by staff at the regional training centers.

3. The economic costs of D.A.R.E.: conceptual framework.

Measurement of the economic costs of a program requires an evaluation of the value of resources that are devoted to it instead of the "next best" alternative uses (the opportunity cost principle). Thus, actual expenditures and accounting costs of a program will normally comprise a part but not all of the economic costs. For the purpose of estimating economic costs, it does not matter whether charges or compensation were provided for a resource or whether there were donated services or contributions. In economics there is never a free lunch, and resources being used for one purpose cannot then be used for another. For example, when a local police department offers the services of an officer to D.A.R.E., or when a local school provides class time for D.A.R.E. programs, that officer cannot be out on patrol, and that classroom cannot be used for art, music, or other educational purposes. Given the proliferation of D.A.R.E. programs over the past two decades, with activities inside and out of school, and during and after school hours, it would be difficult to estimate all of the associated economic costs. If a local group sponsors a D.A.R.E. dance on a weekend, charges admission and sells D.A.R.E. merchandise to raise funds for the local school program, should that count (the value of the facilities and time spent by volunteer organizers) as part of the overall cost of D.A.R.E.? Or when the President of the United States uses time, staff, and federal resources to participate in a National D.A.R.E. Day proclamation? The answer depends on the purpose of the research. Here the primary goal is to quantify the economic costs of D.A.R.E. in the nation's schools, which requires estimating the economic costs associated with developing, administering, and operating the program in and for the schools. Some of the extra D.A.R.E. activities (such as those described above) no doubt fall between the cracks, but their costs are likely to be small in comparison to the costs of D.A.R.E. in school districts nationwide. Furthermore, whether D.A.R.E. should be retained in our schools depends on the costs and benefits of D.A.R.E. in that setting. The costs of the D.A.R.E. program outside the USA in the other 52 countries around the world are also not considered.

D.A.R.E. uses trained law enforcement officers to teach the program in the schools, and so the value of officer services and the value of the educational resources used are part of the economic cost. The economic costs also include the costs of training these officers in the regional or state training centers. The program is controlled by D.A.R.E. America; they market the program, license the D.A.R.E. vendors, modify or refine the curriculum over time, coordinate the training of officers, conduct research and assessment, and provide technical assistance and instructional materials to communities to help implement D.A.R.E. at the local level. The resources used by D.A.R.E. America in performing

these functions are also part of the economic cost. The administration and coordination of D.A.R.E. also involves state agencies, and most states have one or more state D.A.R.E. coordinators. Most states have D.A.R.E. training center as well. The costs of these state D.A.R.E. coordinators and their use of office and staff resources should also be counted as part of the economic cost of the program. Finally, there are economic costs associated with the materials and supplies--students receive D.A.R.E. workbooks and other items such as t-shirts, caps, pencils or bumper stickers. Larger items, such as bags or jackets are provided at D.A.R.E. graduations to prizewinners.

The economic costs of D.A.R.E. can be grouped into 5 basic categories:

1. D.A.R.E. uses trained law enforcement officers to teach the program in the schools, and so the *costs of officer services* are part of the economic costs. The costs of officer services include the wages and salaries and benefits of D.A.R.E. officers (such as insurance, retirement, vacations, health coverage, etc.) as well as the costs of equipment, transportation, administration, and supervision.

2. There are *costs of training the D.A.R.E. officers* in the four regional and 46 state training centers. The economic costs of the training include the costs of the trainers, materials and equipment, rental of training areas, and the salaries and hotel and living expenses of the officers during the training program. In recent years it is estimated that about 3000 officers per year took part in the training. Hotels with conference facilities are often selected as the location for a D.A.R.E. training.

3. There are *general and administrative costs* associated with program development, refinement, coordination, research and assessment, and supervision. The program is controlled by D.A.R.E. America, which markets the program, licenses the D.A.R.E. vendors, modifies or refines the curriculum over time, coordinates the training of officers, conducts research and assessments, and provides technical assistance and instructional materials to communities. The resources used by D.A.R.E. America in performing these functions are part of the economic costs. The administration and coordination of D.A.R.E. also involves state agencies, and most states have one or more D.A.R.E. coordinators as well as a D.A.R.E. training center. These costs must also be included.

4. There are *costs of materials and supplies* — D.A.R.E. workbooks and items such as T-shirts, caps, pencils, bumper stickers, and other items that can be purchased from licensed D.A.R.E. vendors and provided to students in the program.

5. Finally, there are *costs associated with the educational resources* that are used in the program. D.A.R.E. lessons are taught in schools with the classroom teacher normally present. Hours in the classroom that are devoted to D.A.R.E. lessons cannot be used for other educational purposes. The average annual cost of a public education is approaching \$7,000 per student. Information on the per-student cost of a school year provides a way to estimate the cost of educational resources because this cost should include the costs of all of the resources that are used to provide the educational services (e.g. buildings and grounds, maintenance and utilities, teaching and administration, transportation and

after-school programs, and other activities associated with school). Information on the average cost of a school year provides a way to estimate this cost.

In the following section preliminary estimates of the economic costs of each of these 5 parts are developed using information obtained from several sources.

4. National estimates of the economic costs of D.A.R.E..

In order to estimate the economic costs of D.A.R.E., it is necessary to have reliable estimates of the number of participating officers and school children nationwide, the number of school classroom hours devoted to D.A.R.E. activities, and the costs per student of any materials, supplies, and merchandise provided. D.A.R.E. reports to be in over 80 percent of school districts nationwide and to reach over 6 million children through the core elementary school program and 20 million additional children through other programs and activities. Information provided by the U.S. Department of Education, the U.S. Census Bureau, and several states suggests that these numbers are probably exaggerated; the total number of students nationwide in the 5th (or the 6th) grade is closer to 4 million.¹³ There are over 8 million school children in the 5th and 6th grade combined, but the D.A.R.E. elementary school lessons are designed to be taught to a child once, in either the 5th, or the 6th grade. It is possible that D.A.R.E. is over-represented in larger urban and suburban school districts, and it is also possible that when D.A.R.E. came into communities, the officers taught both the 5th and 6th grades. For measurement of economic costs, 4 million appears to be a more reasonable estimate. (However, if D.A.R.E. is in decline or if government and D.A.R.E. America significantly overestimate the prevalence of D.A.R.E. across communities, this estimate could still be too high.)

D.A.R.E. America also reports that 20 million additional children benefit from D.A.R.E. programs, including the K-4 visits, the middle school and high school programs, after-school programs, and parents programs; that is hard to verify because comprehensive information about participation in these other D.A.R.E. programs has not been collected and records appear to be incomplete. The state D.A.R.E. coordinators collect information from local law enforcement agencies and provide information in a survey report to D.A.R.E. America. Based on information obtained from a few states thus far, the level of information reporting varies, and some states provide more comprehensive information.

¹³ See note 11.

Reports from New York and Maryland for the last academic year, and Florida (for 1998) provide statistical information on the number and percentage of students who were in the core elementary, K-4, middle, and high school programs. Most did not provide information about participation in some of the other D.A.R.E. programs (such as the parent program or D.A.R.E. PLUS, an after-school program). Of the three states, only Maryland reported some participation in the D.A.R.E. parent program, and the number was only 34. Overall Maryland provided the most comprehensive information. In Maryland about 70 percent of the participants were in the core elementary program, 17% in the K-4, and only 10 and 4 percent for the middle and high school programs. Maryland appears to have less participation than other states in D.A.R.E. programs other than the main elementary program, unless other D.A.R.E. programs are underreported or not reported. In New York and Florida there were significantly more K-4 visitations, accounting for 45 percent of participation in New York in 2000, and for 58 percent of the program participants in Florida (in 1998). The Maryland and the New York State information on program participation is summarized in Table 1. Based on an average class size of 26 in Maryland and 24 in New York, the estimated number of D.A.R.E. classes and hours in the classroom for each for each state is also provided.¹⁴ These state reports also suggest that D.A.R.E. America and the U.S. Justice Department may be overestimating participation in some of the D.A.R.E. programs, unless D.A.R.E. is significantly more widespread in other states or participation is underreported. Further data is needed to resolve this issue; a survey of state D.A.R.E. coordinators would provide some of the information needed to evaluate D.A.R.E.'s claims.

Maryland also provided comprehensive data on officer services in the D.A.R.E. program. 138 law enforcement agencies from 40 law enforcement agencies provided instruction for the 69,451 participants across the state in the 1999-2000 school year. The percentage of work time that the officers devoted to D.A.R.E. was also reported and this allowed for measurement of the number of full-time equivalent officers. Many communities have full-time (except for summer) D.A.R.E. officers and in Maryland a majority of the officers (55 percent) spent 75 to 100 percent of their time on the D.A.R.E. program; about 40 percent of the officers spent less than half their work time as D.A.R.E. officers. Using the information provided by the Maryland State coordinator, the number of full-time equivalent officers was estimated to be 87.5. Information from Table 1 can be used to show that each full-time equivalent D.A.R.E. officer spent an average of 421 hours in the classroom. The economic costs of the D.A.R.E. program are likely to be closely related to the number of full-time officers and the number of hours that D.A.R.E. is in the classroom.¹⁵ The Maryland case study provides a basis for estimating the

¹⁴The core elementary program uses about 18 hours of the officers time in the school (the 17 lessons plus the initial meeting). The middle school program involves 10 classroom hour lessons to reinforce the training; the high school program has 6 lessons by the officer and 3 by the regular classroom teacher. The K-4 program involves brief (15-20 minute) visits to elementary school classes to introduce the child to D.A.R.E. and tell them about the lessons they will later be taking. Considering time to and between classes, it probably takes about one hour to visit and introduce the program to two classes at a school.

¹⁵ Some of the other D.A.R.E. programs such as the parent program or the D.A.R.E. PLUS after-school program do not take place during regular school hours and almost no data on the use of these programs has been

number of officers needed to administer the program nationwide, using estimates about participation and class hours in the D.A.R.E. lessons. The 421 hours is significantly less than a full work year, but that is not surprising because educators generally spend more of their work time outside of formal classroom sessions. Undoubtedly these officers were also traveling to and from classes, meeting with school officials, participating in other D.A.R.E. educational programs, preparing lectures, grading homework and essays, planning graduations, and talking with parents and others in the community about the D.A.R.E. program. These numbers are useful because they provide information based on an entire state with urban, suburban, and rural communities. Case studies of individual cities or towns are less likely to reflect averages. In Maryland, the average full time D.A.R.E. officer spent 421 hours in the classroom, taught about 550 students in 21 core elementary classes, and reached about 800 students overall through participation in K-4, middle school, and high school programs.

The participation rate of Maryland in the other D.A.R.E. programs was less than that found for Florida or New York. In New York participation in both the K-4 and middle school programs was more substantial and this might better reflect the national average, considering claims made by D.A.R.E. America and the U.S. Justice Department about overall participation in D.A.R.E. programs. In New York, as noted in Table 1, 36 percent of participants were in the core program, 45 percent in the K-4, 16 percent in the middle school, and 2 percent in the high school program. A comparison of the classroom hours required for different levels of participation in D.A.R.E. programs for the two states provides information about how many additional classroom hours are used by the other reported D.A.R.E. programs. In New York the total number of D.A.R.E. classroom hours was 30 % more than the number needed for the core elementary school program. In Maryland, because of a lower participation rate with the other D.A.R.E. programs, the total number of additional D.A.R.E. classroom hours was only 10 percent.

These case studies provide important information because the number of D.A.R.E. officers needed nationwide is likely to be closely related to the number of D.A.R.E. classes and classroom hours. The Maryland case study provides the basis for estimating the number of full time (equivalent) officers, based on estimates of the number of classroom hours nationwide. The New York and Maryland case studies suggest that the total number of hours that D.A.R.E. is in the classroom is about 10-30 percent more than those needed for the core elementary school program. With an estimated 4 million children in the elementary program each year, this means that about 72 million hours of children school hours are devoted to D.A.R.E. lessons in the elementary program. With an average class size of about 24, this translates into about 3 million classroom hours for the D.A.R.E. elementary program. Scaling these numbers up by 10 to 30 percent to account for the other D.A.R.E. school programs yields an estimated 3.3 to 3.9 million total D.A.R.E. classroom hours annually nationwide. Each full-time equivalent D.A.R.E. officer is believed to spend about 421 hours in the classroom, and so the estimated number of full time equivalent D.A.R.E. officers nationwide is estimated to be between 7,838 and

found.

9,264. These may be conservative estimates. If the information provided by D.A.R.E. America is accurate, the number could be even higher. A higher number is certainly possible, because 49,000 officers reportedly have been trained to teach the D.A.R.E. lessons since the program began. If better information from state surveys about participation in the D.A.R.E. programs becomes available, this number can be correspondingly adjusted.

Estimates of the number of D.A.R.E. students and classroom hours also provide a basis for estimating the value of educational resources. As noted above, the total number of children enrolled in the elementary program is estimated to be about 4 million which means an estimated 3.3 to 3.9 million classroom hours are devoted to D.A.R.E.. This information can be combined with information about the cost of education to estimate the value of educational resources devoted to the D.A.R.E. program. In addition, it provides a basis for estimating the costs of materials and supplies provided by the D.A.R.E. program, when combined with information on the average amount spent per child. Table 2 summarizes information used to derive national estimates of the economic costs.

National estimates of the economic costs of the 5 main components of D.A.R.E. are presented below.

Cost of officer services: As shown above, the number of full time equivalent D.A.R.E. officers nationwide is estimated to be between 7,838 and 9,264. According to the U.S. Bureau of Labor Statistics data, the average wages and salaries of full-time patrol officers nationwide is approaching \$40,000 per year.¹⁶ Benefits for insurance, retirement, health coverage, etc. usually are about 30 percent of total compensation, or \$17,143, for an estimated total compensation of \$57,143.¹⁷ General and administrative expenses, including supervisory, overhead, and equipment and transportation costs, are likely to add at least 20 percent to total compensation, or \$11,429. Thus, the full cost of a D.A.R.E. officer is \$68,572 per year.

Multiplying this value by the estimated number of full-time equivalent D.A.R.E. officers nationwide yields an estimated value of officer services between 537 million and 635 million dollars per year. This number is more than double the value estimated by D.A.R.E. America. When the annual cost of officers is divided by the estimated number of students served in the elementary, middle, and high school programs, the estimated costs range between \$90 and \$127 per student. This is consistent with reports from communities around the country, but accounts for only about half of the economic costs

¹⁶ *Occupational Employment Statistics, Bureau of Labor Statistics, 1999 National Occupational Employment and Wage Estimates, Protective Service Occupations, SOC Code 33-3051, Police and Sheriffs Patrol Officers.* The estimated mean annual estimated wages for 1999 was about \$39,000. Therefore \$40,000 is a reasonable estimate for 2001.

¹⁷ Bureau of Labor Statistics, U.S. Department of Labor, *Employment Cost Trends*, Table 4, State and Local Government, by occupational and industry group, March 2000.

associated with the D.A.R.E. program.¹⁸

Officer training costs. The training of D.A.R.E. officers is an essential part of the program because only D.A.R.E. trained officers are authorized to teach the D.A.R.E. lessons. Officers teaching in the core program must graduate from a two-week training course at a regional or state training center. The U.S. Department of Justice provides \$1.7 million each year to D.A.R.E. America, which uses the funds for training at four regional training centers located throughout the country. In addition, 46 states have established their own training centers. The estimated cost of training a D.A.R.E. officer is estimated to be about \$4,000.¹⁹ In many cases the training is paid for, at least in part, by federal or state funds. Officers who attend the regional training centers must pay their hotel and living expenses during the two-week training, but the tuition for the training is paid for out of federal funds. With an estimated 3,000 officers trained during each of the last few years, training costs are estimated to be about \$12 million annually.²⁰ Because this is a comparatively minor amount, an error in this estimate will not significantly influence total estimated costs.

General and administrative costs. D.A.R.E. America has a staff of about two dozen professionals who are responsible for designing, implementing, overseeing, licensing, and marketing the program. D.A.R.E. America is a non-profit, tax-exempt organization that is supported primarily by corporate donations, contributions, royalties from the sales of D.A.R.E. merchandise, and a small amount of federal funds. The overall operating budget for D.A.R.E. America provides a good basis for estimating its costs. According to D.A.R.E. America, the overall budget is about \$9 million.²¹ During a

¹⁸ In Cincinnati, newspapers reported that 700,000 had been allocated to provide officer services in the D.A.R.E. program for 6000 students, with a per-student cost of about 117. In Houston, TX, newspapers reported that 3.5 million was allocated to provide the D.A.R.E. program to about 30,000 students in the core program, which also comes to about 117 per student. In Miami-Dade County, FL, newspapers reported that 2.3 million had been provided for officer services for 21000 students, for a cost per student of about 110. In New York City, 8.5 million was allocated for officer services to provide the program to about 55,000, which means a per -student cost close to 150. Some rural communities appear to have lower costs, and areas that only provide the core program or use part-time officers may have lower costs as well. Information from case studies of individual states, however, is likely to be more representative of D.A.R.E. programs nationwide because states includes urban, suburban, and rural areas. Anecdotal evidence of program costs were obtained through conversations with D.A.R.E. program providers, and through a search of newspaper reports identified through the Media Awareness Project (mapinc.org).

¹⁹ The cost of training a D.A.R.E. officer includes the opportunity costs of lost work time, travel to and from the training, hotel and living expenses during the training period, rent of facilities used for the training, purchase or rent of equipment and materials used in the training, and the compensation (salaries and benefits) of the training program officials. The economic value of two weeks of an officer's time is estimated to be approximately \$2600 (based on the fully loaded cost of an officer's compensation of about \$68,000.) Hotel and living expenses are likely to add about \$100 per day over a 10 day period for an additional \$1,000. Travel to and from the training, rental of training facilities, and other program costs are likely to add at least \$400 more bringing the total to around \$4,000. Since officer training costs are a very small part of the total economic costs of the D.A.R.E. program, error in this estimate will have a very minor effect on overall program costs.

²⁰ D.A.R.E. America reports that approximately 3000 D.A.R.E. officers are trained each year.

²¹ Conversation with staff at D.A.R.E. America

recent tax year (1998), D.A.R.E. America reported an annual income of about \$11.5 million.²²

Some of the funds or grants for research and training that are received are awarded to subcontractors or to the regional training centers to support officer training. A number of research and evaluation studies have been funded by states, the U.S. government, or private foundations. This year, for example, a grant for \$13.7 million from the Robert Wood Johnson Foundation was awarded to the University of Akron for a five-year study to evaluate and redesign the D.A.R.E. curriculum.²³ The costs of research, evaluation, assessment, and redesign of curriculum should be included as part of the economic costs of the program. A cost of about \$3 million per year appears reasonable and is a very small part of the overall cost of the program.

Most states have offices with state employees or law enforcement officers who serve as D.A.R.E. coordinators. These offices typically serve as intermediaries between local school districts or local law enforcement agencies and D.A.R.E. America, the parent organization. Functions include overseeing or coordinating the state training centers and collecting data from local school districts or police departments participating in the program. An annual report is often prepared and information is provided to the appropriate state agency and to D.A.R.E. America. A report by the Research Triangle Institute in 1992 indicated that states spend close to \$300,000, on average, on these activities. With 50 states, this yields an estimated national cost of about \$15 million.²⁴

Adding up the costs of D.A.R.E. America, research and evaluation, and coordination of the D.A.R.E. program by states, the economic cost for this part of the D.A.R.E. program is estimated to be about \$27 million. This amount is likely to vary from year to year, but it should remain a very small part of the total economic cost.

D.A.R.E materials and supplies: The cost of D.A.R.E. includes the workbooks and D.A.R.E. merchandise typically provided to D.A.R.E. students. The workbooks and course materials are a small part of the cost (less than a dollar per student), but other items are more expensive. Pencils, caps, shirts, jackets, bags, bumper stickers, etc., are available from several licensed D.A.R.E vendors at prices ranging from pennies to 40 dollars or more. The amount spent per child varies significantly, depending on the community and the funds available to support the program. Only a minimal expense for instructional materials is needed to conduct a D.A.R.E. class, and a few communities, including New York City, provide little else.²⁵ Expenditures on D.A.R.E. merchandise are not reported, and licensed

²² Information from tax returns for D.A.R.E. and other tax-exempt organizations is available at Guidestar.org. The 1998 tax returns are the most recent currently available.

²³ "US Anti-drug Program Says It Will Adopt a New Strategy," *The New York Times*, Feb. 15, 2001.

²⁴ Research Triangle Institute, *Past and Future Directions of the D.A.R.E. Program: An Evaluation Review*. Draft Final Report, Sept. 1994.

²⁵ Conversations with local D.A.R.E. coordinators and officers in New York City and other communities in Maryland and up state New York.

D.A.R.E. vendors consider the information confidential.²⁶ However, during a recent tax year (1998), D.A.R.E. America reportedly earned over \$2,500,000 in license royalties.²⁷

Information on expenditures came from D.A.R.E. officers and newspaper reports from around the country. In a rural county in New York, a local D.A.R.E. officer estimated that the county had spent approximately \$5–\$7 per student enrolled in the core course over the past few years. Other sources indicated that there is variation in spending depending on available funding, with some communities spending more and some less.²⁸ Based on this information, \$5–\$10 in materials costs per student appears to be a reasonable estimate. With an estimated 4 million students in the elementary school program, and 1–2 million additional students in the middle and high school programs, the total cost is estimated to be between \$25 and \$60 million annually. Since this is a comparatively small number, error in this estimate will not significantly affect the final estimates.

Value of educational resources used for the program. One cost that is usually not included in newspaper reports is the economic cost of the educational resources used by the D.A.R.E. program. There is no accounting information on these costs because there are no formal expenditures for classroom time when school is in session. These represent economic opportunity costs because classroom time devoted to D.A.R.E. could have been (but is not) allocated for other educational activities. If schools are efficient, classroom hours should be assigned to activities where the educational value, or benefit, is greatest. Education costs have risen rapidly in recent years and are now approaching \$7,000 per student annually; this amount includes the costs of school buildings and grounds, maintenance and utilities, teaching and administration, equipment and supplies, transportation, and after-school activities.²⁹ Because students are in school, on average, for 6–7 hours a day (including transportation and after-school activities) for about 180 days a year, they can be expected (barring illness and absenteeism) to spend on average of between 1,080 and 1,260 hours a year involved with school activities. Dividing the estimated annual cost per student (\$7,000) by the range of hours spent yearly in the classroom yields an estimate of the cost per student per hour of between \$5.55 and \$6.48. With a national average class size of 24 students, this means that a classroom hour has implicit costs of between \$133 and \$155 per hour.³⁰ A D.A.R.E. class that used 18 hours would “cost” between

²⁶ Conversations with licensed D.A.R.E. vendors.

²⁷ Information from tax returns for D.A.R.E. and other tax-exempt organizations is available at Guidestar.org. The 1998 tax returns are the most recent currently available.

²⁸ Newspaper reports identified through the Media Awareness Project and conversations with D.A.R.E. officers and coordinators.

²⁹ *The Digest of Education Statistics, 1999*, of the National Center for Education Statistics, Table 170, Total and Current Expenditure Per Pupil, data for 1998-99.

³⁰ *Ibid.* Table 70 states that the average class size for elementary school teachers is 24.

\$2,394 and \$2,799 in estimated value of educational resources.³¹ With an estimated 3.3 to 3.9 million hours in the classroom used annually for the D.A.R.E. program nationally, this means that the estimated economic costs of educational resources for the D.A.R.E. program are between \$438.9 million and \$604.5 million. This cost, along with the costs of officer services, are substantially larger than the other cost items and comprise the bulk of the economic costs of the D.A.R.E. program in the schools.

5. Summary of economic costs

The cost estimates of this study are summarized and totaled in Table 3. Estimated annual economic costs range between \$1 billion and \$1.3 billion per year and are significantly greater than what is commonly reported in the press using information provided by D.A.R.E. The value of officer services and the costs of educational resources used by the D.A.R.E. program account for the bulk of these costs and therefore deserve greater scrutiny. With an estimated five to six million students enrolled in D.A.R.E. courses, the economic costs of the D.A.R.E. program are estimated to be \$175 to \$270 per student annually.

It is possible that the estimates could be upward or downward biased. If D.A.R.E. programs are as widespread as claimed by D.A.R.E. America, these estimates could be biased downward. On the other hand, if the number of schools and communities with the D.A.R.E. program is significantly less than reported, then these estimates would be biased upward. These preliminary estimates are based on the best information that has been identified thus far. When additional information becomes available, or if more detailed information can be provided by the D.A.R.E. organization, these estimates can be adjusted. In addition, these estimated costs are for the major components of the D.A.R.E. program--courses taught by trained D.A.R.E. officers to elementary, middle, and high school children. There was no attempt to estimate resources used for some of the extra D.A.R.E. activities that take place after school hours--D.A.R.E. dances, entertainment and recreational events, fund raisers, parents programs, etc. In most cases they are probably small compared to the resources used in the formal D.A.R.E. classes, but this provides another reason why these estimates might be considered to be conservative, lower bound estimates.

³¹ The D.A.R.E. elementary school program consists of 17 one-hour lessons, including the graduation. The D.A.R.E. officer meets with the classroom instructor before classes begin, and the regular classroom instructor often spends time during and after the D.A.R.E. program to reinforce the lessons. Thus 18 hours is probably a reasonable estimate of the amount of class hours for the D.A.R.E. program.

6. Concluding remarks

Research on the economic costs should be an important part of a comprehensive evaluation of the D.A.R.E. program. Economists hold that evaluation of the economic merits of a particular program requires cost-benefit analysis and cost-effectiveness analysis. In a cost-benefit analysis, the economic costs and benefits of a particular program are compared to determine whether net benefits are generated and whether society is better off with a program than without it. Evaluation studies of the D.A.R.E. program provide information needed to assess its benefits. Many evaluations, however, show a neutral or negative effect of the D.A.R.E. program. (As a result, D.A.R.E. is no longer included on the list of approved programs, based on the “principles of effectiveness” by the U.S. Department of Education). Some experts in drug education believe that D.A.R.E. has negative effects on school children. This suggests that there may be additional costs associated with the D.A.R.E. program which could not be considered in this paper. The scientific evaluations that have been done suggest that the students and the community are receiving no measurable benefit from participation in the D.A.R.E. program. From an economic perspective, this suggests that the D.A.R.E. program should be discontinued because it is costly, ineffective, and possibly counterproductive.

However, even if D.A.R.E. generated benefits of the magnitude needed to justify the costs of its program, it is still important to compare its cost-effectiveness with that of other programs. A number of alternative programs have been developed that appear promising based on the findings of preliminary research. In choosing among alternative programs, the most cost-effective program — that which provides the greatest benefit per dollar cost — should provide the basis for determining the allocation of resources used for drug education.

Table 1: Number of Participants, Classes, and Classroom Hours in Two States.

a. Maryland

	<u>number (%)</u>	<u>classes</u>	<u>hours</u>
1. Elementary program..	48,196 (69%)	1,854	33,372
2. K-4 program	11,677 (17%)	449	225
3. Middle school	6,695 (10%)	258	2580
4. High school	2,883 (4%)	111	666
Totals	69,451 (100%)	2672	36,843

b. New York

	<u>number (%)</u>	<u>classes</u>	<u>hours</u>
1. Elementary program..	130,000 (36%)	5,394	97,092
2. K-4 program	162,000 (45%)	6,722	3,361
3. Middle school	59,000 (16%)	2,448	24,480
4. High school	6,000 (2%)	249	1,494
Totals	357,000 (100%)	14,813	126,427

Table 2. Information used to estimate economic costs of D.A.R.E.

1. Annual enrollment in D.A.R.E. elementary program	4 million
2. Estimated number of children hours in core elementary program.	72 million
3. Number of classroom hours in D.A.R.E. lessons.	3.3 to 3.9 million
4. Number of classroom hours for full time officers	421
5. Number of full-time equivalent D.A.R.E. officers nationwide	7,838 to 9,264
6. Estimated annual per-pupil cost of education	\$7,000
7. Average class size	24
8. Estimated cost of an hour of education services, per average size class	\$133 to 155
9. Average annual wages and salaries for a patrol officer	\$40,000

Table 3: Preliminary Estimates of the Economic Costs of the D.A.R.E. program.

1. Value of Officer Services

a. Number of full-time equivalent D.A.R.E. officers	7,838 to 9,264
b. Estimated average salary of a D.A.R.E. officer	\$40,000
c. Value of benefits (30% of total compensation)	\$17,143
d. Estimated cost of G&A, overhead, equipment transportation (20% of compensation)	\$11,429
e. Estimated average fully-loaded cost of a D.A.R.E. officer (b+c+d)	\$68,572
f. Estimated value of officer services (a * e)	\$537 to 635 million

2. Economic costs of officer training.

a. Estimated number of officers trained annually	3,000
b. Estimated cost of training	\$4,000
c. National estimate of annual training costs.	\$12 million

3. Economic costs of materials and supplies. \$25 to 60 million
(\$5-10 dollars per student)

4. Estimated cost of program development and administration.

a. Estimated cost of state D.A.R.E. offices	\$15 million
b. Estimated cost of D.A.R.E. America parent organization	\$9 million
c. Estimated cost of research/program development	\$3 million
d. Totals	\$27 million

5. Estimated Costs of Educational resources.

a. Estimated annual per-pupil cost of education	\$7,000
b. Estimated number of classroom hrs in D.A.R.E.	3.3 to 3.9 million
c. Estimated economic cost of a classroom hour	\$133 to \$155
d. Estimated value of educational resources (b * c)	\$439 to 605 million

6. Totals: National Estimates of D.A.R.E. costs

a. Millions of dollars	\$1,040 to \$1,339 million
b. Billions of dollars	or \$1.04 to \$1.34 billion

7. Estimated economic cost per student each year \$175 to \$270