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National Evaluation of the Enforcing the Underage Drinking Laws Program

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Alcohol use by youth is a critical problem in the United States. Before the Enforcing the Underage Drinking Laws (EUDL) Program (formerly known as the Combating Underage Drinking Program), there was no national, comprehensive response to the legal, social, and health problems associated with underage drinking. As the first in a series of reports on the National Evaluation of the EUDL Program, this Bulletin summarizes the problem of underage drinking, describes the EUDL Program and the design of the National Evaluation of the program, and presents a summary of key findings from the first wave of data collection, which was completed in 1999. These findings will be useful to policymakers and practitioners at the Federal, State, and local levels in making informed decisions about implementing this major initiative to reduce underage drinking.

The Problems of Youth Alcohol Use in the United States

In the United States, alcohol use by people younger than 21 is a pervasive problem. The 2000 Monitoring the Future study

found that 51.7 percent of 8th graders, 71.4 percent of 10th graders, and 80.3 percent of 12th graders reported that they had consumed alcohol at least once in their lifetime (Johnston, O'Malley, and Bachman, 2001). This national study also found that 14.1 percent of 8th graders, 26.2 percent of 10th graders, and 30.0 percent of 12th graders reported binge drinking (i.e., having five or more drinks in a row) during the 2 weeks preceding the survey. Nearly one-fourth (22.4 percent) of 8th graders, 41.0 percent of 10th graders, and 50.0 percent of 12th graders reported drinking at least once in the 30 days preceding the survey. Although a relatively small number of 8th graders (8.3 percent) reported having "been drunk" in the past 30 days, this proportion increased dramatically with age to 23.5 percent of 10th graders and 32.3 percent of 12th graders.¹

¹ These high levels of underage alcohol use are mirrored in other multistate and national surveys, such as the Centers for Disease Control and Prevention's Youth Risk Behavior Survey (Kann et al., 2000), the Substance Abuse and Mental Health Services Administration's National Household Survey on Drug Abuse (Substance Abuse and Mental Health Services Administration, 1999), and the Harvard School of Public Health's College Alcohol Survey (Wechsler et al., 2000).

A Message From OJJDP

Alcohol abuse is a persistent and pervasive problem that imposes significant social, legal, and health costs on abusers and nonabusers alike. Those costs are compounded considerably when the abusers are youth.

In 1997, OJJDP launched what is now known as the Enforcing the Underage Drinking Laws (EUDL) Program. The program was created to develop a national, comprehensive response to the serious challenges posed by alcohol abuse by minors. From FY 1998 through FY 2001, Congress appropriated nearly \$100 million to fund the EUDL Program.

What impact is this expenditure of financial and human capital having on youth alcohol abuse and attendant alcohol-related problems? What changes has it wrought in law enforcement practices intended to combat underage drinking? The national evaluation described in this Bulletin is designed to answer these and other crucial questions about this important initiative.

Although the first wave of data analyzed in these pages does not afford ultimate answers at this early stage of the evaluation, it evidences the magnitude of the problem of underage alcohol abuse and the inadequacy of the response to that problem before the inauguration of the EUDL Program.

Further findings and subsequent reports will bring us closer to the answers and—it is hoped—to the solutions that we seek.

These high levels of alcohol use are associated with widespread health, developmental, legal, and economic consequences. For example, motor vehicle crashes, more than a third of which involve alcohol, are the leading cause of death for adolescents in the United States (Baker et al., 1992; National Highway Traffic Safety Administration, 2000). The combination of young age, lack of driving experience, and drinking can be deadly. The relative risk of fatal crash involvement is dramatically higher for drinking drivers between the ages of 16 and 20 than it is for those ages 21 and older, even when their blood alcohol content levels are the same (Zador, 1991; Zador, Krawchuk, and Voas, 2000).

Adolescent alcohol use is also associated with a variety of unintentional injuries that are not related to motor vehicles, including drownings and (sometimes fatal) injuries from house fires and falls (Jones, Pieper, and Robertson, 1992). Alcohol use may lead to unsafe sexual practices that place individuals at risk for infection with the human immunodeficiency virus, other sexually transmitted diseases, and pregnancy (Graves and Leigh, 1995; Leigh, Schafer, and Temple, 1995). The early onset of alcohol use is a risk factor for progression to illicit drug use (Kandel and Yamaguchi, 1993) and to alcohol abuse and alcohol dependence in adulthood (Grant and Dawson, 1997). Moreover, alcohol use at an early age may have deleterious effects on the psychosocial development of children and adolescents (Jessor, 1991; Johnson et al., 1995; Semlitz and Gold, 1986). Finally, alcohol use by youth may impede their ability to reach educational and occupational goals (Braun et al., 2000; Roman and Johnson, 1996; Kandel and Yamaguchi, 1987).

In addition to developmental problems, alcohol use by youth can have significant legal consequences. Violations of "liquor laws" (underage purchase, possession, or consumption of alcoholic beverages) frequently pull youth into the justice system (Wagenaar and Wolfson, 1994). For example, in 1998, violation of liquor laws was the most common (nontraffic) arrest charge for 19-year-olds, the second most common arrest charge (surpassed by drug abuse violations) for 17-, 18-, and 20-year-olds, and the fifth most common arrest charge for 16-year-olds (Federal Bureau of Investigation, 1999). Arrests of 16- to 20-year-olds for liquor law violations (which do not include drunkenness or driving under the influence) totaled more than 200,000 in 1998 and constituted almost

12 percent of all (nontraffic) arrests for this age group.

Alcohol use by youth is a risk factor for commission of a violent crime and for being the victim of a violent crime. In a study of students attending two middle schools serving low-income and working-class communities in Georgia, DuRant and colleagues (1996) found that the use of alcohol, cigarettes, marijuana, injected drugs, and crack cocaine was positively associated with the intention to use violence in hypothetical situations. A similar study of male and female high school students in Massachusetts found that alcohol, cigarette, smokeless tobacco, and marijuana use were each associated with weapons carrying on school property (DuRant et al., 1997). After analyzing a probability sample of middle school students in North Carolina, DuRant et al. (1999) found that the early onset of alcohol, cigarette, and marijuana use was associated with an increased risk of carrying a gun, knife, or other weapon on school property. DuRant et al. (1999) also found that the early onset of alcohol use, particularly before 11 years of age, was significantly associated with a number of health risk behaviors reported by middle school students on a 15-item Health Risk Behavior Scale. This scale included behaviors such as not using a helmet when riding a bicycle, skating, or skateboarding; not using a seatbelt; riding with a drinking driver; carrying a gun or other weapon; fighting; making suicide plans; and using substances such as inhalants, anabolic steroids, injected drugs, and tobacco.

Despite the evidence provided by these and other studies, it is important to note that the causal effect of alcohol and other drugs on violence is unclear. Although research suggests that alcohol and drug use may play a significant role in explaining why violence and victimization often occur, confidence in these findings should be tempered by the cross-sectional² nature of much of this work (National Research Council, 1996).

Since 1988, all 50 States and the District of Columbia have had a minimum legal drinking age of 21, although the laws vary

² A relationship observed between two variables (e.g., alcohol use and violence) in cross-sectional studies may result from variable A causing variable B, variable B causing variable A, or both variables A and B being caused by a common, underlying variable (i.e., variable C). Thus, demonstration of a causal relationship usually requires some form of longitudinal research.

somewhat from State to State³ (Toomey, Rosenfeld, and Wagenaar, 1996; Wagenaar and Wolfson, 1995). Despite the positive effects of setting the minimum drinking age at 21 (e.g., reduction in youth drinking and involvement in alcohol-related traffic crashes) (Jones, Pieper, and Robertson, 1992; O'Malley and Wagenaar, 1991; U.S. General Accounting Office, 1987), large numbers of underage persons drink, and many experience the negative consequences associated with underage drinking, as described above.

One important factor in the continuously large number of underage drinkers is the ease with which youth can obtain alcoholic beverages. Studies have demonstrated that many businesses licensed for alcohol sales (package stores, convenience stores, grocery stores, bars, and restaurants) sell alcohol to youth (Preusser and Williams, 1992; Forster et al., 1994, 1995; Wolfson et al., 1996a, 1996b). Surveys also indicate that alcohol is readily available to many persons who are younger than the legal drinking age (Wagenaar et al., 1996; U.S. Department of Health and Human Services, 1991). One reason for this accessibility is the relatively low level of enforcement that targets the illegal sale of alcoholic beverages to underage persons (Wagenaar and Wolfson, 1994; Wagenaar and Wolfson, 1995; Mosher, 1995; Wolfson and Hourigan, 1997).

The Enforcing the Underage Drinking Laws Program

The EUDL Program is the first major Federal initiative that focuses exclusively on youth alcohol use.⁴ Following a \$25 million appropriation for fiscal year (FY) 1998, each State and the District of Columbia

³ For example, States may prohibit some or all of the following: alcohol sales to underage individuals, purchase of alcohol by underage individuals, possession of alcohol by underage individuals, possession with intent to consume, consumption, misrepresentation of age, and furnishing alcohol to an underage individual.

⁴ For a number of years, many States have used a portion of their highway safety formula grant funds (awarded by the National Highway Traffic Safety Administration) to support activities designed to prevent drinking and driving by youth. In fiscal year 1994-95, States were required to allocate a portion of their Section 402 funds to support such programs. (Section 402 requires each State to have a highway safety program designed to reduce traffic accidents and the deaths, injuries, and property damage these accidents cause.)

received a grant of \$360,000 to “support and enhance efforts by States, in cooperation with local jurisdictions, to prohibit the sale of alcoholic beverages to—or the consumption of alcoholic beverages by—minors (persons under age 21)” (Pub. L. No. 105–119). The Governor of each State was asked to “designate a State agency to receive and administer” the grant funds (Office of Juvenile Justice and Delinquency Prevention, 1998a:2). In addition, approximately \$5 million was made available for discretionary awards to expand “the number of communities taking a comprehensive approach to the problem, with a special emphasis on increasing law enforcement activity with regard to the sale of alcohol to minors” (Office of Juvenile Justice and Delinquency Prevention, 1998b:5). In FY 1999, Congress again made a \$360,000 block grant available to each State and the District of Columbia (Office of Juvenile Justice and Delinquency Prevention, 1999a). In addition, \$6,640,000 was allocated for discretionary awards to support local program activity within States and territories, provide training and technical assistance to the States, and evaluate the overall program. The FY 1999 appropriation also changed the name of the program from “Combating Underage Drinking” to “Enforcing the Underage Drinking Laws” (Office of Juvenile Justice and Delinquency Prevention, 1999b). Subsequently, Congress appropriated \$25 million for FY 2000 and \$25 million for FY 2001 to continue the pro-

gram with block grants and discretionary grant funding as in the 2 previous years (table 1).

In addition to the block and discretionary grants awarded to States and the District of Columbia, the EUDL Program includes several training and technical assistance efforts. The National Association of Governors’ Highway Safety Representatives received a grant in 1999 to facilitate 10 regional workshops for the States. The Center for Enforcing Underage Drinking Laws at the Pacific Institute for Research and Evaluation (PIRE) is funded to provide training and technical assistance to EUDL grantees.⁵ Native American Connections, Inc., a nonprofit organization located in Phoenix, AZ, received a grant to reduce drinking by youth in American Indian and Alaska Native communities. Students Against Destructive Decisions (SADD) received a grant to start the “Not on Your Life Program,” a joint effort with alcohol distributors and law enforcement officials in four States (Arizona, Florida, Louisiana, and New York) to strengthen compliance with underage drinking laws. The Office of Juvenile Justice and Delinquency Prevention (OJJDP) also awarded grants to the Police Executive Research Forum to provide training and technical assistance to police departments and

⁵ The Web site for PIRE’s Center for Enforcing Underage Drinking Laws is www.udetc.org.

to Mothers Against Drunk Driving (MADD) to develop training materials for youth groups. The Wake Forest University School of Medicine has received funding to conduct the National Evaluation of the program, which is described below.

National Evaluation of the EUDL Program

The National Evaluation of the EUDL Program is being conducted by a multidisciplinary team at the Wake Forest University School of Medicine in Winston-Salem, NC. The evaluation is designed to provide timely, scientifically sound evidence regarding the implementation of the EUDL Program and its effects on law enforcement activities, youth alcohol consumption, and alcohol-related problems in local communities. The primary goals of the National Evaluation are to determine which State and local programmatic activities are being supported (“process evaluation”) and to evaluate the impact of the program in a sample of communities (“impact evaluation”).

The overall evaluation design includes four major data collection components (figure 1, page 4). The process evaluation has two main components:

- ◇ **Key Actor Survey**—a telephone survey of four key actors (e.g., State and local government and civic agencies) in the

Table 1: Funding of States and Local Communities Under the EUDL Program

Appropriation	Block Grants*	Discretionary Grants	Subgrants to Local Communities
FY 1998 \$25,000,000	\$18,360,000 to 50 States and the District of Columbia (\$360,000 to each State and the District of Columbia)	10 States, up to \$400,000 to each State	62
FY 1999 \$25,000,000	\$18,360,000 to 50 States and the District of Columbia (\$360,000 to each State and the District of Columbia)	7 States, up to \$400,000 to each State	24
FY 2000 \$25,000,000	\$18,360,000 to 50 States and the District of Columbia (\$360,000 to each State and the District of Columbia)	11 States, up to \$400,000 to each State	65
FY 2001 \$24,945,000**	\$18,319,608 to 50 States and the District of Columbia (\$359,208 to each State and the District of Columbia)	8 States, up to \$400,000 to each State	39

Note: In addition to funding for States and local communities, a small portion of the \$25 million annual appropriation (\$2.35 million in FY 1998 funds and \$2,085 million in FY 1999 funds) was provided to nonprofit organizations for program activities, technical assistance and training, and evaluation.

* Many of the States use a portion of block grant funds for subgrants to local communities.

** Recission of 0.0022% applies to FY 2001 funding.

Figure 1: Data Collection Schedule for the National Evaluation of the EUDL Program

	1999	2000	2001
Process Evaluation			
Key Actor Survey	50 States, 4 key actors per State	50 States and the District of Columbia, 4 key actors per State	50 States and the District of Columbia, 4 key actors per State
Case Studies	6 States	6 States	
Impact Evaluation*			
<i>First Wave of Discretionary Grants</i>			
	52 intervention + 52 control	52 intervention + 52 control	52 intervention + 52 control
<i>Second Wave of Discretionary Grants</i>			
		17 intervention + 17 control	17 intervention + 17 control
Total Sample	52 intervention + 52 control	69 intervention + 69 control	69 intervention + 69 control

* Law Enforcement Agency Survey and Youth Survey.

EUDL initiative in each of the 50 States and the District of Columbia.

Case Studies—indepth case studies of program implementation in six States.

The impact evaluation also has two components:

- ◇ **Law Enforcement Agency Survey**—a telephone survey of law enforcement agencies in a sample of communities in States receiving discretionary grants.
- ◇ **Youth Survey**—a telephone survey of youth ages 16 to 20 in these same communities.

With the exception of the Case Studies, each of these data collection efforts was conducted relatively early in the implementation of the program (in 1999) and has been repeated annually for 2 years thereafter (in 2000 and 2001). The Case Studies were conducted two times only, in 1999 and 2000 (figure 1).

Evaluation Design and Methodology

Process Evaluation

The goal of the process evaluation is to determine how States and communities use EUDL Program funds. The National Evaluation conducts a key actor telephone survey and collects data from indepth case

studies to identify the strategies, activities, and programs being supported; the sectors involved in the effort; and State-level implementation issues.

Key Actor Survey. The purpose of the Key Actor Survey is to assess program implementation in all 50 States and, starting in 2000, the District of Columbia. The survey focuses on who is involved in the program, the types of strategies being implemented, policy changes, perceptions about obstacles and successes, use of the media, lead agency use of subcontracts, and feedback on national technical assistance and training.

The sample for the survey consists of four key actors in each State; these actors represent four different agencies actively involved in planning and implementing the State's EUDL Program. Information is systematically gathered from the State EUDL coordinators to select the four key actors per State. The designated contact person in the lead agency is automatically included as one of the four key actors in the sample. A law enforcement agency is also included in the sample for each State because of the enforcement focus of the EUDL Program. The third and fourth key actors are chosen to ensure an active and diverse sample of program organizations.

The first Key Actor Survey was carried out in 1999. Telephone interviews were

conducted by the University of South Carolina Survey Research Laboratory (SRL), and interviews were completed with 192 out of 198 eligible individuals (a response rate of 97.0 percent). The survey is repeated annually.

Case Studies. Indepth case studies of program implementation were conducted in six States (Connecticut, Michigan, Mississippi, New Mexico, Virginia, and Washington). The six States were selected for their regional diversity, population diversity, population size, lead agency type, types of programs being implemented, level of youth drinking, and alcohol control policy. Data collection for these case studies involved 2-day onsite visits by two or more project staff. In addition to site visits, project staff reviewed the States' grant proposal(s) and progress reports and (in most cases) interviewed the OJJDP Program Manager. A site visit in each State was conducted in 1999 and repeated in 2000.

Impact Evaluation

The impact evaluation compares communities that receive the most intensive interventions—in this case, communities that received subgrants under the EUDL discretionary grant program—with communities that did not receive such intense interventions. The 1999 sample included 52 communities (counties or cities) that

received subgrants and 52 matched controls in 9 of the 10 discretionary grant States.

Propensity scores (D'Agostino, 1998; Preisser, Zaccaro, and Wolfson, 2000) were used to identify matching control communities within each State. Variables used for matching included the size of the general population and median income (U.S. Bureau of the Census, 1990, 1993, 1998); student enrollment in 4-year colleges in the community, as a percentage of the population (CampusCorner®, 1999; Peterson's, 1999; U.S. Bureau of the Census, 1990, 1998); and rate of arrests for liquor law violations (Federal Bureau of Investigation, 1997). Counties or cities that were "dry" (i.e., prohibited alcohol sales) were excluded from the selection process. Priority was given to control communities that were not adjacent to intervention communities and had not received funding out of the EUDL block grant (see Preisser, Zaccaro, and Wolfson, 2000, for a detailed description of methods used for matching intervention and control communities).

An analysis of the first wave of collected data indicates that the process for selecting a balanced group of intervention and control communities for the 1999 Youth Survey and Law Enforcement Agency Survey was effective. Control communities and intervention communities shared similar demographics, college population sizes, and arrest rates for liquor law violations (Preisser, Zaccaro, and Wolfson, 2000). Moreover, the Youth Survey and the Law Enforcement Agency Survey found the intervention and control communities to be comparable in the drinking behavior of the youth and the behavior of the law enforcement agencies, respectively. These findings are described later in this Bulletin.

Law Enforcement Agency Survey. This survey involves conducting structured telephone interviews with police chiefs (or surrogates) and sheriffs (or surrogates) in the sample communities. The survey focuses on the level and form of enforcement efforts related to youth alcohol use in the community, perceived barriers to enforcement, and perceptions about community interest in enforcing underage drinking laws. The first wave of the survey was implemented in 52 intervention and 52 control communities.⁶

⁶ In order to include communities newly funded by the second wave of discretionary grants, 17 intervention and 17 control communities were added to the existing sample in the 2000 and 2001 surveys (see figure 1).

For the 1999 survey, a letter was mailed to both the police chiefs and the sheriffs informing them of the purpose and sponsorship of the survey and indicating that an interviewer from SRL would contact them to conduct an interview. A copy of the questionnaire was included with the letter. This procedure allowed each jurisdiction to perform any required record checks before the interview. Interviews were completed with respondents from 158 of the 208 agencies (a response rate of 76.0 percent). At least one law enforcement agency responded in 93.4 percent of the 104 communities in the sample. In more than half (56 percent) of the responding agencies, the interview was conducted with or the questionnaire was completed by the executive in charge (i.e., the police chief, the sheriff, or the director of public safety). Twenty-two percent of the surveys were completed by a deputy chief, captain, or lieutenant. The remaining 22 percent of the surveys were completed by sergeants or other sworn or nonsworn agency personnel.

Youth Survey. This component of the evaluation involves a telephone survey of youth ages 16 to 20 in the sample of intervention and control communities and focuses on the availability of alcohol to youth, underage alcohol use, and problems related to underage drinking. Like the Law Enforcement Agency Survey, the Youth Survey was implemented in 1999 with the original sample of 52 intervention and 52 control communities and repeated in 2000 and 2001 using the expanded sample of 69 intervention and 69 control communities.

Survey items included lifetime use of alcohol and use within the past 30 and past 7 days, binge drinking, sources of alcohol, perceptions of alcohol use among students in the same grade and community, and experiences of alcohol-related problems. The 1999 survey was conducted by SRL from July to October 1999. The target for this survey was to complete interviews with 15 youth between the ages of 16 and 20 in each of the 104 sample communities. Independent random samples of the 16- to 20-year-olds were selected for each site. The quota of 15 interviews per community was obtained or exceeded in 101 of the 104 communities. A total of 1,749 interviews were completed.

Evaluation Findings

Magnitude of the Underage Drinking Problem

Data from the National Evaluation underscore the magnitude of the underage drink-

ing problem. Results from the first wave of data collection also indicate that the EUDL Program may increase underage drinking law enforcement efforts. Like the national surveys mentioned above, data from the 1999 Youth Survey indicate that underage drinking is pervasive. Of the sample of youth ages 16 to 20, 43.3 percent reported current (within the past 30 days) alcohol use, 24.4 percent reported use within the past 7 days, and 17.7 percent reported binge drinking. These numbers increase dramatically with age and tend to be higher for males than for females (table 2, page 6). Substantial numbers of youth in the sample engaged in various risky behaviors associated with alcohol use. Self-reported drinking and driving was more common among males than females and increased dramatically as males aged, reaching a prevalence of 15.9 percent by age 19 and 23.0 percent by age 20 (table 2). Riding with a driver who had been drinking was quite common: 19.9 percent of the overall sample reported having done so in the 30 days preceding the survey (see table 2 for age by gender breakdowns).

Youth are experiencing, or are at a high risk of experiencing, many serious health, social, and legal problems associated with alcohol use. Negative consequences of drinking reported in the sample included headaches and hangovers, being unable to remember what happened during a drinking incident, passing out, getting into a fight, having sex without using birth control, acts of vandalism or destruction, missing school, and forced sexual victimization (table 3, page 6).

Respondents who reported drinking at least once in their lifetime were asked to identify the source of the alcohol they obtained for their most recent drinking occasion. Among those who reported drinking within the past 30 days, 83.0 percent reported getting alcohol from a source that researchers classified as "social" (e.g., a friend or parent), 9.1 percent reported getting alcohol from a source classified as "commercial" (e.g., a bar or liquor store), and 7.9 percent reported getting alcohol from another source (e.g., the alcohol was "just there") (table 4, page 7). Acquiring alcohol from social sources was highest for 17-year-olds and lowest for 20-year-olds. The proportion of youth who acquired alcohol from a commercial source increased with age (table 4) and was slightly higher for those who reported drinking within the past 7 days (11.5 percent) than for those who reported drinking within the past 30 days (9.1 percent) (data not shown in the table).

Table 2: Prevalence of Alcohol Use, Drinking and Driving, and Riding With a Drinking Driver Among Youth Ages 16–20

Pattern	Age					Overall	n
	16	17	18	19	20		
Drinking within the past 30 days							
Females	30.4%	38.3%	43.5%	56.7%	61.4%	41.5%	891
Males	32.3	37.6	49.5	63.5	68.2	45.1	884
Total	31.4	37.9	46.6	59.9	65.2	43.3	1,775
Drinking within the past 7 days							
Females	17.4%	19.7%	22.6%	30.7%	34.3%	22.3%	891
Males	12.8	17.8	31.4	45.2	53.4	26.5	884
Total	15.2	18.8	27.1	37.6	44.9	24.4	1,775
Binge drinking*							
Females	11.2%	8.4%	14.2%	17.3%	17.1%	12.3%	885
Males	12.5	18.0	26.2	38.9	40.7	23.2	875
Total	11.8	13.1	20.4	27.5	30.1	17.7	1,760
Drinking and driving (past 30 days)							
Females	1.2%	2.7%	4.6%	3.9%	2.9%	2.8%	883
Males	2.2	7.0	8.5	15.9	23.0	8.8	876
Total	1.7	4.8	6.6	9.6	14.0	5.8	1,759
Riding with a drinking driver (past 30 days)							
Females	17.7%	20.0%	20.1%	26.8%	25.0%	20.7%	877
Males	15.5	12.2	20.6	31.0	29.9	19.1	876
Total	16.6	16.2	20.4	28.8	27.7	19.9	1,753

Note: Unweighted data from the 1999 EUDL Youth Survey.

* Defined as drinking five or more drinks in one drinking occasion.

Table 3: Prevalence of Negative Consequences of Alcohol Use Among Youth Ages 16–20

Consequence	Total Sample (N=1,331–1,334)	Drinking Within the Past 30 Days (n=754–756)	Drinking Within the Past 7 Days (n=422–423)
Headache/ hangover	37.9%	50.1%	55.6%
Unable to remember	15.6	21.1	25.4
Passed out	15.0	21.0	23.2
Got into a fight	10.2	14.5	16.4
Had sex without birth control	7.3	9.8	11.6
Vandalism	5.3	7.8	10.6
Missed school	4.6	6.6	8.7
Victim of forced sex attempt	3.6	5.6	6.5

Note: Data are based on self-reports of experiences "after you had been drinking" from the 1999 EUDL Youth Survey. The data are weighted to reflect the age composition of the community. The number of youth reporting is given as a range because of slightly different response rates for questionnaire items.

Many self-reported drinkers—especially older and more frequent drinkers—reported one or more attempts to purchase alcohol from commercial outlets in the 30 days preceding the survey (see table 4). Youth who attempted to purchase alcohol were asked how many times they made these attempts and how many times they were successful in the past 30 days. Of these alcohol purchase attempts, 89.2 percent were successful (data not shown in the table). Of the youth who reported attempts to purchase alcohol within the past 30 days, 24.8 percent had used false identification to make the purchase. In addition to friends and acquaintances, parents were an important source of alcohol for youth in the sample. One-third (32.8 percent) of drinkers within the past 30 days and 37.4 percent of drinkers within the past 7 days reported that their parents or a friend's parents had provided them with alcohol in the past year.

Survey findings indicate that social norms support alcohol use by youth. For example, more than half (58.4 percent) of 16-year-olds thought most or all of their peers had drunk alcohol in the past 30 days; this percentage increased steadily to 74.4 percent by age 20 (data not shown in tables). Thus, youth in the sample systematically overestimated the proportion of their peers who drank (especially at younger ages). Moreover, small percentages of the sampled youth thought that it was very likely that they would be caught by either police or school officials for drinking (9.7 percent and 25.0 percent, respectively). The prevalence of having actually experienced any social or legal sanctions—being warned by a friend, cited by police, or punished by parents—was low (table 5, page 8).

Current Status of Local Enforcement Activity

Historically, enforcing underage drinking and alcohol age-of-sale laws has often been a relatively low priority for law enforcement agencies (Wagenaar and Wolfson, 1994, 1995; Wolfson, Wagenaar, and Hornseth, 1995). Data from the Law Enforcement Agency Survey show that some underage drinking enforcement efforts do occur, but a great deal more could be done. Less than half (45.8 percent) of the survey respondents reported that enforcing laws prohibiting underage persons from purchasing alcohol was one of their agency's highest priorities (figure 2). This percentage was even lower for the enforcement of laws prohibiting sales of

alcohol to underage persons (43.9 percent) and lower still for enforcement of laws prohibiting the furnishing of alcohol to underage persons (37.4 percent).

Although the majority of departments (92.9 percent) reported issuing citations to or arresting underage persons for purchase or possession of alcohol, systematic and proactive enforcement activities were far less common (figure 3, page 8). For example, less than half (45.2 percent) of the responding agencies reported conducting even one compliance check (e.g., using an underage decoy to determine whether an alcohol outlet will sell alcoholic beverages to underage persons) in the 12 months preceding the survey. The use of "shoulder tap" programs⁷ and monitoring alcohol outlet parking lots—efforts that focus on individuals furnishing alcohol to youth—were reported by 16.8 percent and 51.0 percent of responding departments, respectively. Finally, 31.6 percent of responding departments reported operating programs like Cops in Shops, which focuses on deterring youth from trying to buy alcohol at package stores and other alcohol outlets, in the year preceding the survey.

Most agencies (91.9 percent) characterized the community as being either strongly supportive or moderately supportive of efforts to enforce alcohol age-of-sale laws. Community groups most active on this issue included local coalitions or advocacy groups, the State police or Department of Public Safety, and the State Alcoholic Beverage Control agency (ABC); however, less than half of the responding agencies characterized these groups as being "very active" in enforcing age-of-sale laws (figure 4, page 9). Relatively small percentages of agencies reported that the city or county health department, the mayor, or the city or county council was very active (18.2 percent, 13.0 percent, and 9.2 percent, respectively).

States' enforcement efforts targeted different groups (merchants, youth, adults); some States focused on just one group, whereas others actively targeted all three. Most States that reported involvement (lead agency responses only) in strengthening the enforcement of underage drinking laws stated they were very involved (as opposed to somewhat involved, not

⁷ In "shoulder tap" programs, underage police operators who look young approach adults outside stores that sell alcohol and ask the adults to buy alcohol for them.

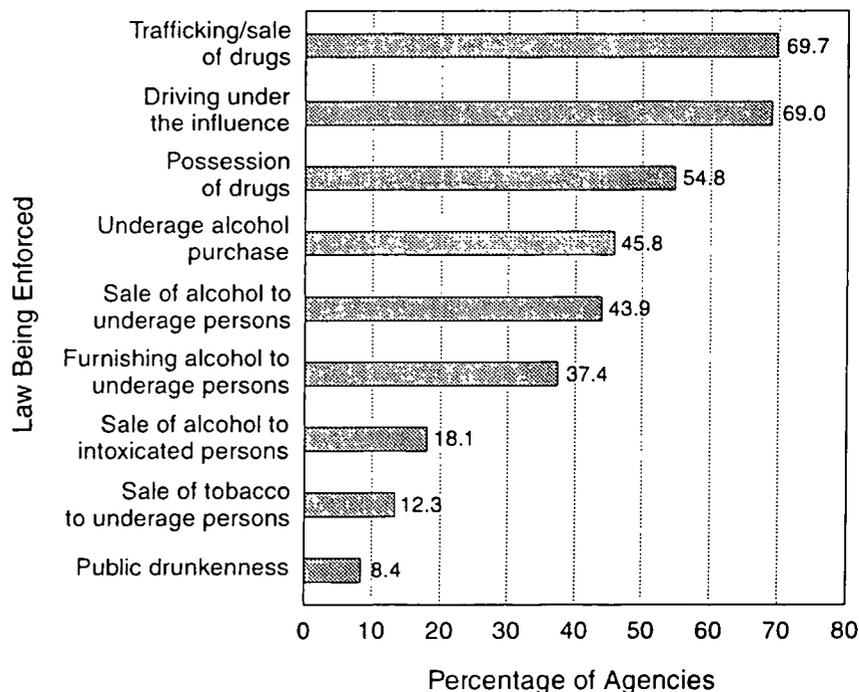
Table 4: Availability and Sources of Alcohol for Youth Ages 16–20 Who Reported Drinking Within the Past 30 Days

Source of Alcohol*	Age					Overall	n
	16	17	18	19	20		
Social	80.1%	88.4%	81.6%	84.7%	77.2%	83.0%	749
Commercial	6.9	5.3	8.9	11.8	15.8	9.1	749
Other	13.0	6.3	9.5	3.5	6.9	7.9	749
Past 30-day purchase attempts	8.0	6.2	12.5	21.0	29.4	13.9	756
Given alcohol by parents in past year	30.4	28.0	35.4	38.7	33.3	32.8	749

Note: Unweighted data from the 1999 EUDL Youth Survey.

* Reported source of alcohol for most recent drinking occasion.

Figure 2: Priority Given by Law Enforcement Agencies to Enforcing Alcohol, Drug, and Tobacco Laws



Note: Data indicate the percentage of agencies reporting that each type of enforcement is "one of the highest priorities of the agency" in the 1999 Law Enforcement Agency Survey (n=153–154). The number of agencies reporting is given as a range because of slightly different response rates for questionnaire items.

very involved, or not at all involved) in focusing their efforts on alcohol outlets (78.0 percent) and targeting purchase and possession by underage youth (72.0 percent) (figure 5, page 9). Slightly more than half reported that they were very involved in targeting "people other than merchants who provide alcohol to underage youth."

Current Status of State EUDL Initiatives

Key Actor Survey. In the 1999 Key Actor Survey, the percentage of States whose EUDL coordinators reported their State was very involved in specific interventions was as follows: strengthening coordination of activities to reduce underage drinking,

Table 5: Prevalence of Receiving Formal and Informal Sanctions for Alcohol Use Among Youth Ages 16–20

Sanction	Total Sample (N=1,333–1,334)	Drinking Within the Past 30 Days (n=755–756)	Drinking Within the Past 7 Days (n=422–423)
Cited for purchase or possession	4.5%	6.3%	6.8%
Punished by parents	9.0	12.5	10.5
Warned by a friend	7.6	9.6	11.4

Note: Data are based on self-reports of experiences "after you had been drinking" from the 1999 EUDL Youth Survey. The timeframe used for this table is "in the last year." Data are weighted to reflect the age composition of the community. The number of youth reporting is given as a range because of slightly different response rates for questionnaire items.

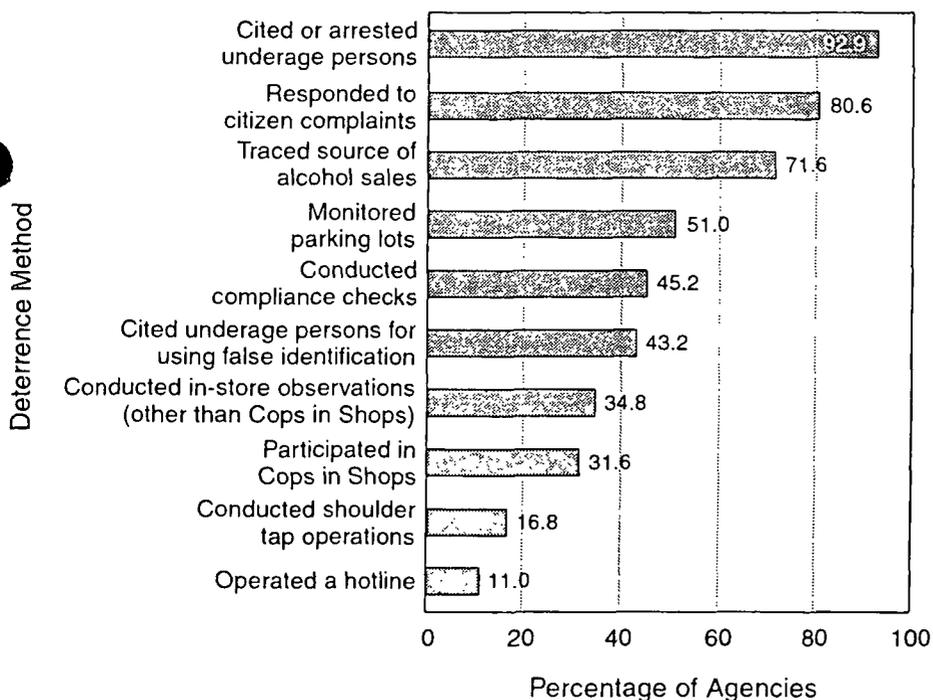
the program's name change in Congress's FY 1999 appropriation. Only 21 States reported that their EUDL initiative was very involved in efforts to promote policy change.

Case Studies. The Case Studies provided detailed information and valuable insights into how six diverse States (Connecticut, Michigan, Mississippi, New Mexico, Virginia, and Washington) planned and implemented the EUDL Program in its first year. Some very interesting and potentially effective interventions are being implemented at the State and local levels in these States. Each of the six case study States is implementing some combination of interventions, including enforcement, public education, youth involvement, and training (the precise mix varies from State to State). Examples of the types of interventions underway in the case study States are provided below.

All six case study States had plans to implement or had already implemented activities to strengthen enforcement of underage drinking laws. Several case study States use funds to pay overtime to enforcement personnel. Most case study States either are implementing Cops in Shops or have expressed a strong interest in doing so in the future. Several States are implementing compliance check programs for the first time, and others are strengthening existing efforts. Some case study States awarded grants to local law enforcement agencies to strengthen enforcement efforts. One State⁸ is implementing and publicizing a program called Party Patrols, in which officers are dispatched in numbers sufficient to contain and discourage underage drinking parties.

Two of the case study States invested the majority of their 1998 block grant funds in media campaigns. One State's radio campaign targeted youth through testimonial messages from teenagers about the consequences of drinking and driving. This program was carefully designed by an inter-agency committee in conjunction with a public relations firm experienced in developing social marketing campaigns. A large share of the State's first block grant (\$250,000 out of \$360,000) was spent on the campaign, which was supplemented

Figure 3: Methods Used by Law Enforcement Agencies To Deter Underage Drinking



Note: Data are from the 1999 Law Enforcement Agency Survey (n=153–154). The number of agencies reporting is given as a range because of slightly different response rates for questionnaire items.

82.0 percent; public education efforts, 80.0 percent; enforcement efforts, 64.0 percent; and policy change efforts, 42.0 percent (Figure 6, page 10). Because the States have progressed through a period of planning and organizing their EUDL initiatives, these percentages are expected to increase in the 2000 Key Actor Survey.

The high percentage of States involved in strengthening coordination and public education efforts is noteworthy. However, the fact that only 64.0 percent of the States indicated that their initiative had focused heavily on enforcement may be cause for some concern, especially given the more explicit focus on enforcement reflected by

⁸ In writing about the EUDL evaluation case study States, it is the authors' policy not to single out specific States by name. This policy is based, in part, on the agreement with participating States to maintain the anonymity of interviewees.

by \$250,000 appropriated by the State legislature to promote compliance with new driving-under-the-influence laws.

Case study States are carrying out a variety of training programs. Police officers, prosecutors, and judges are learning how the juvenile justice system handles, and can better handle, the problem of underage drinking; judges, court staff, probation officers, and referees are being trained in youth alcohol laws; and other workshops are linking and improving relationships between local law enforcement agencies and licensees within their communities.

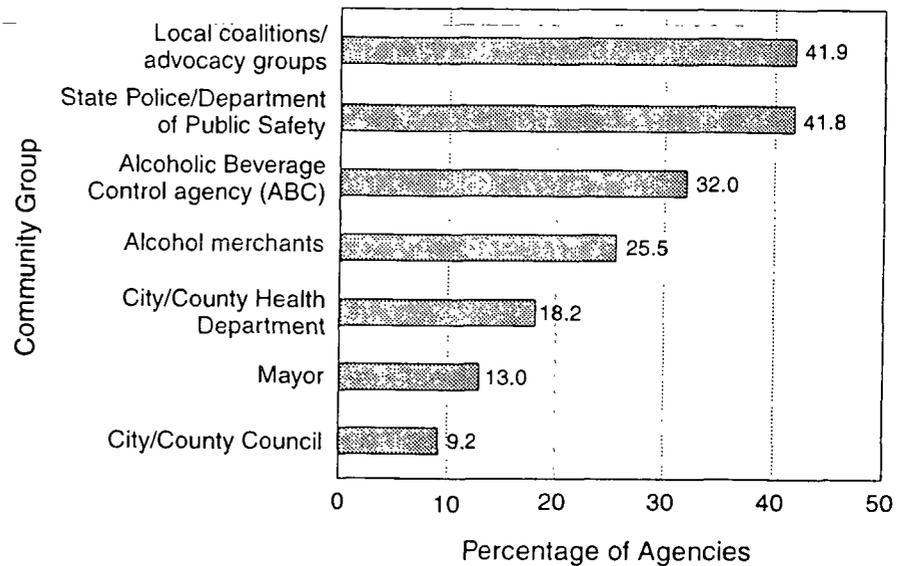
Several case study States are using discretionary grants to fund initiatives to involve youth at the State and local levels. One State is integrating an existing network of student high school clubs into the EUDL Program to ensure youth involvement, and several youth are members of the State-level coordinating committee for the EUDL Program. Another State EUDL Program cosponsored a youth leadership camp with the State MADD chapter.

Program Implementation by the States

The EUDL Program is being implemented by a diverse group of lead agencies (as designated by the Governor in each State) and is working with a wide variety of State and local organizations. The majority of lead agencies fall into one of three categories: the State juvenile justice agency, the State substance abuse prevention and treatment agency, or the State traffic safety agency (figure 7, page 10). Each of these lead agencies has a distinct history, culture, and set of funding sources that shape its relationships with other State and local agencies and its perspective on the issue of underage drinking. For example, traffic safety agencies typically address the problem of underage drinking in their efforts to reduce drinking and driving. Substance abuse prevention and treatment agencies have historically focused on preventing underage alcohol use as a means to prevent substance use and abuse and to refer abusers to treatment. Additionally, each type of department receives funding from different Federal agencies with unique mandates and requirements.

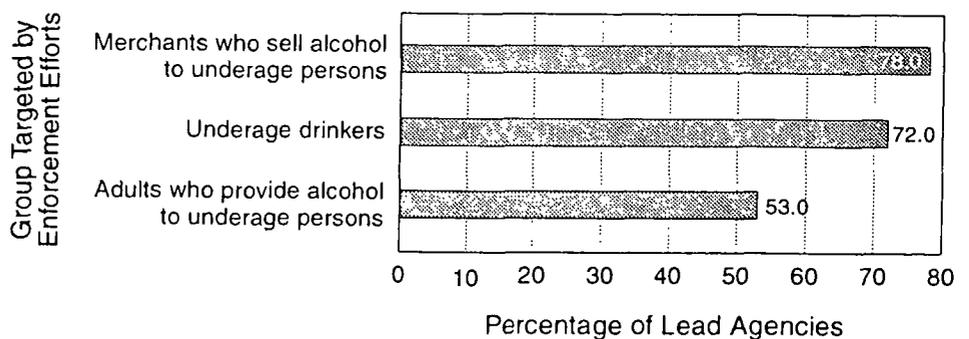
Results from the Key Actor Survey and the Case Studies indicate that, in many States, the EUDL Program is bringing together groups that have not previously worked closely together—particularly law enforcement and substance abuse prevention and

Figure 4: Law Enforcement Agencies' Perceptions of the Level of Involvement of Community Groups in Enforcing Underage Drinking Laws



Note: Data indicate the percentage of agencies reporting that the group or individual was "very active" in the community in "working to influence enforcement practices concerning alcohol sales to underage people." Data are from the 1999 Law Enforcement Agency Survey ($n=153-154$). The number of agencies reporting is given as a range because of slightly different response rates for questionnaire items.

Figure 5: Targets of Enforcement Efforts by Lead Agencies

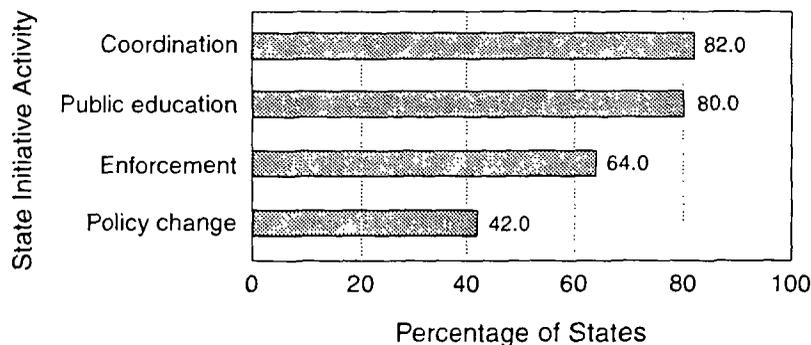


Note: Data indicate the percentage of lead agencies reporting they were "very involved" in focusing enforcement efforts on these specific groups. Data are from the 1999 Key Actor Survey.

treatment agencies (figure 8, page 10). Involving ABCs, however, may present a special set of challenges in some States. According to the coordinator responses in the 1999 Key Actor Survey, ABCs were highly involved in the EUDL effort in 66.0 percent of the States. The Case Studies, however, suggest that ABCs and other agencies concerned with underage drinking (such as traffic safety, juvenile justice,

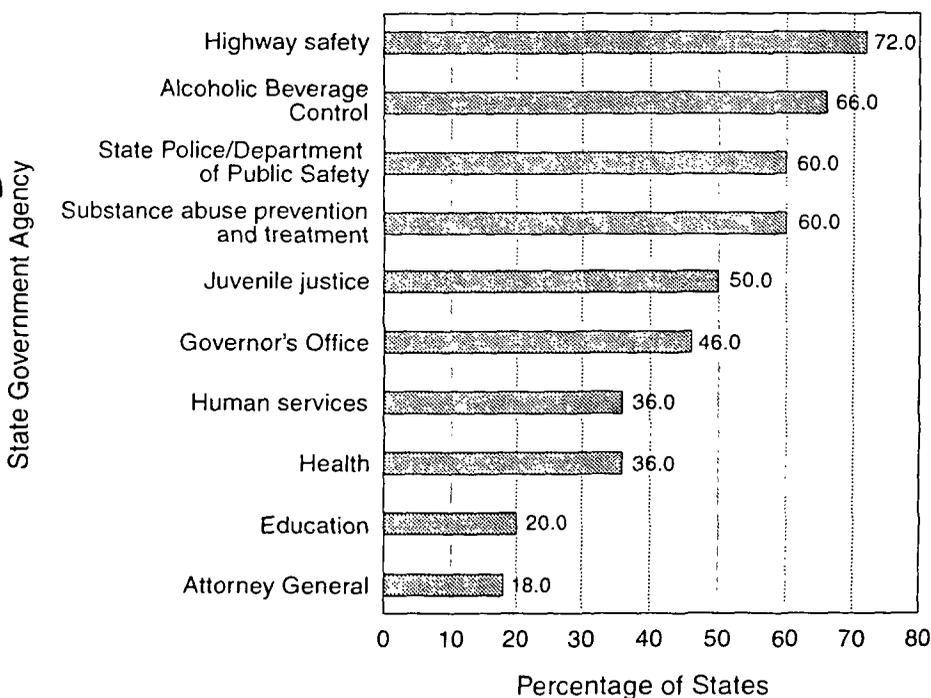
and substance abuse prevention and treatment) typically have had limited experience working together. Although many of the case study States recognized the usefulness of cultivating a stronger relationship with the ABC, it appears that several States experienced difficulty in achieving this goal. Policy development, licensing, and enforcement are important elements in environmental approaches to reducing

Figure 6: Types of Intervention Reported by EUDL Coordinators



Note: Data indicate the percentage of States reporting in the Key Actor Survey that the State was "very involved" in a given type of intervention.

Figure 8: Types of State Government Agencies Involved in the EUDL Program



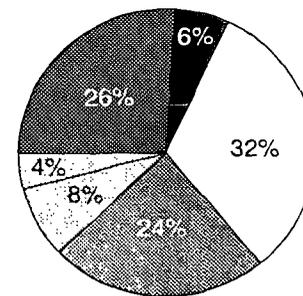
Note: Data indicate the percentage of lead agencies (n=50) reporting the involvement of a given State agency in the EUDL Program in the 1999 Key Actor Survey.

underage alcohol use (Toomey and Wagenaar, 1999); therefore, strategies should be developed to encourage and facilitate greater involvement of ABCs in the EUDL Program.

Advocacy organizations, such as MADD, were highly involved in only 28 States (data

not shown). Cultivating partnerships with these groups, especially in the 22 States where advocacy groups were not highly involved, could be an important way to broaden the constituencies involved in the EUDL effort.

Figure 7: Lead Agencies



- Law enforcement
- Juvenile justice
- ▨ Substance abuse prevention and treatment
- ▤ Alcoholic Beverage Control
- ▥ Miscellaneous government
- ▧ Traffic safety

Note: Data are from the 1999 Key Actor Survey.

Finally, local law enforcement agencies were actively involved in 31 States. It will be important to see if this number increases over time, given the enforcement focus of the EUDL Program and the critical role local law enforcement may play.

Implementation Challenges

Coordinating the Efforts of Diverse Agencies

The type of agency (e.g., traffic safety, substance abuse prevention and treatment, juvenile justice, law enforcement, ABC) designated to lead the initiative in each State may have an important influence on the focus, strategies, and groups involved in State programs. Understanding how the choice of lead agency may affect the program's success in each State is critical (Butterfoss, Goodman, and Wandersman, 1993). The process evaluation will continue to track the effect lead agencies may have on the types of interventions carried out and the types of groups involved in each State's EUDL initiative.

One strength of this program is that, in many States, it brings prevention and enforcement groups together, often for the

first time. However, the Case Studies revealed that tension often arises between these two groups because of conflicting philosophies on how best to address the underage drinking issue. Whereas enforcement groups often focus on making arrests to deter youth from drinking and on stopping licensed outlets from selling or serving alcohol to underage persons, prevention groups often are concerned that important deterrent elements, such as education, might be neglected if the State program emphasizes enforcement efforts. Some States that have implemented the Synar Amendment—a Federal law that brings both prevention and enforcement groups together to reduce youth access to tobacco—could provide valuable insights into how these linkages might be enhanced in the EUDL Program. There also may be other ways to integrate the efforts of ABCs, citizens' organizations such as MADD, and other organizations concerned with underage alcohol use (e.g., through involvement in coalitions, organized advocacy efforts, and training).

Defining Program Strategies

Currently, each State may define its program as it sees fit, as long as it abides by established legislative guidelines. The EUDL Program allows each State to develop its own plan to address underage drinking. Clearly, trying to combat this

complex and pervasive problem with limited funds is difficult. To meet this challenge, many States have involved a diverse group of stakeholders in the planning process. These groups struggle to decide where to focus program resources—media campaigns, merchant education, compliance checks, youth leadership training, school-based education, local coalitions, and other types of interventions that seek to reduce underage drinking are all possible options. There are distinct advantages to giving States the flexibility to implement programmatic efforts that they believe will most suit their unique politics, cultures, and underage drinking problems. However, this flexibility can be risky, as limited resources may be allocated to activities that have limited prospects for success. Efforts made by the Center for Enforcing Underage Drinking Laws to identify, publicize, and provide training in effective strategies for preventing underage alcohol use are important steps toward more clearly defined program focus (see sidebar).

To further address the issue of program definition, a new component of the evaluation was initiated in October 2000 to focus on best or most promising practices. This component supplements the current scope of the National Evaluation by doing the following:

- ◆ Identifying four or five best or most promising practices for reducing underage alcohol use.
- ◆ Conducting case studies of the implementation of each identified practice.
- ◆ Disseminating analysis results and case study findings to stakeholders in the EUDL Program, including EUDL State coordinators and OJJDP and PIRE staff.

Conclusion

This Bulletin provides a snapshot of the EUDL Program at an early stage of implementation. In 1999, block and discretionary grants to the States were already supporting a variety of programs and activities designed to reduce underage drinking. These included efforts to improve coordination, educate the public about the problem of underage drinking, and increase the level of law enforcement activity aimed at preventing underage alcohol use. Even at this early stage, the program clearly succeeded in increasing the attention and resources devoted to preventing underage drinking.

The EUDL Program, like many new Federal/State partnerships addressing complex social problems, faces significant challenges. The first wave of data collection in the National Evaluation underscores the magnitude of the problem of underage drinking in the United States and the inadequate societal response to the problem

Effective Prevention Strategies From the Center for Enforcing Underage Drinking Laws at PIRE

The Center for Enforcing Underage Drinking Laws has created a framework (described below) to highlight strategies that effectively prevent underage alcohol use. The framework is divided into four interrelated strategies:¹

- ◆ Limiting youth's access to alcohol.
 - ❖ Enforce minimum purchase age laws with vigorous compliance checks and other strategies.
 - ❖ Reduce the social availability of alcohol through strategies such as keg registration laws.
 - ❖ Improve laws related to minimum purchase age, particularly those laws regarding minors in possession of alcohol.
 - ❖ Control the availability of alcohol in general (e.g., by increasing the price of alcoholic beverages through excise taxes).
- ◆ Expressing community norms against underage alcohol use.
 - ❖ Prohibit or restrict alcohol use at community events or in public areas.
 - ❖ Prohibit alcohol sponsorship of public events.
- ◆ Conduct media campaigns, media advocacy, and counteradvertising.
- ◆ Preventing drunk driving.
 - ❖ Establish and enforce "zero tolerance" laws for drivers younger than 21.
 - ❖ Conduct sobriety checkpoints to detect impaired drivers.
 - ❖ Vigorously enforce and publicize impaired driving laws.
- ◆ Implementing school-based prevention strategies.
 - ❖ Establish school policies regarding alcohol on school property or at school-sponsored events.
 - ❖ Create media literacy programs to teach youth about the manipulative techniques of advertisers.

¹ For more information, visit www.udetc.org.

Compendium of Resources

Enforcing the Underage Drinking Laws: A Compendium of Resources provides practical information to States and units of local government to help them determine how to use Federal funds most effectively to combat underage drinking. The *Compendium* also describes programs and lists contacts and source materials to help jurisdictions maximize the effectiveness of the Enforcing the Underage Drinking Laws Program.

Highlighted below are a few of the resources offered in the *Compendium*. To view the updated *Compendium* online, visit ojjdp.ncjrs.org/pubs/substance.html#compend.

Federal Resources

Center for Substance Abuse Prevention (CSAP)

5600 Fishers Lane, Rockwall II
Rockville, MD 20857
301-443-0365
nnadal@samhsa.gov
www.samhsa.gov/csap/index.htm

CSAP provides national leadership in the Federal effort to prevent alcohol, tobacco, and illicit drug problems, which are linked to other serious national problems. CSAP connects people and resources to innovative ideas and strategies and encourages efforts to reduce and eliminate alcohol, tobacco, and illicit drug problems in the United States and abroad.

Centers for Disease Control and Prevention (CDC)

Division of Adolescent and School Health (DASH)
1600 Clifton Road NE.
Atlanta, GA 30333
404-639-3311
netinfo@cdc.gov
www.cdc.gov

CDC established DASH in its National Center for Chronic Disease Prevention and Health Promotion in 1988. DASH pursues four strategies: synthesizing and applying research, identifying and monitoring highest priority risks, implementing national programs to prevent these risks, and evaluating and improving those programs. One of the highest priority risk behaviors identified is underage drinking.

National Highway Traffic Safety Administration (NHTSA)

U.S. Department of Transportation
Impaired Driving Program, NTS-11
400 Seventh Street SW.
Washington, DC 20590
202-366-9581
202-366-2766 (fax)
www.nhtsa.dot.gov

NHTSA's mission is to save lives, prevent injuries, and reduce traffic-related health-care and other economic costs. The goal of NHTSA's Impaired Driving Program is to reduce alcohol-related fatalities to 11,000 by the year 2005. Technical assistance targeting underage drinking and driving includes Youth Assessments, the Cross-Age Peer Mentoring Program, and many other youth-targeted programs.

National Institute on Alcohol Abuse and Alcoholism (NIAAA)

National Institutes of Health
Willco Building
6000 Executive Boulevard
Bethesda, MD 20892-7003
301-443-0786
www.niaaa.nih.gov

NIAAA supports and conducts biomedical and behavioral research on the causes, consequences, treatment, and prevention of alcoholism and alcohol-related problems. NIAAA also provides leadership in the national effort to reduce the severe and often fatal consequences of these problems.

National Resources

Alcohol Epidemiology Program (AEP)

1300 South Second Street, Suite 300
Minneapolis, MN 55454-1015
612-624-1818
612-624-0315 (fax)
alexander@epivax.epi.umn.edu
www.epi.umn.edu/alcohol

AEP is a research program within the University of Minnesota School of Public Health. Its mission is to conduct advanced research to discover effective community and policy interventions to reduce alcohol-related social and health problems. AEP's recent projects have included studies of adolescent drinking and alcohol-involved traffic crashes, community prevention trials, training of alcohol outlet managers and servers, and natural experiments with

changes in State and local alcohol policies. AEP's report *Alcohol Policies in the United States: Highlights From the States* is available on its Web site. AEP receives funding from the National Institute on Alcohol Abuse and Alcoholism and the Robert Wood Johnson Foundation.

Center for Enforcing Underage Drinking Laws at the Pacific Institute for Research and Evaluation (PIRE)

11710 Beltsville Drive, Suite 300
Beltsville, MD 20705-3102
301-755-2700
301-755-2799 (fax)
udetc@pire.org
www.udetc.org

PIRE's training center is funded by OJJDP to provide science-based, practical, and effective training, technical assistance, and resource materials to States as they implement the EUDL initiative. In addition to providing assistance to States and communities involved in enforcing underage alcohol access and use laws, PIRE's training center hosts a national leadership conference and develops publications to assist States and communities in the enforcement of underage drinking laws. These publications can be downloaded from PIRE's Web site or ordered at no cost from the above address.

Mothers Against Drunk Driving (MADD)

511 East John Carpenter Freeway
Suite 700
Irving, TX 75062
800-GET-MADD (800-438-6233)
madd.org

MADD has joined forces with Motivational Media Assemblies to create Take the Lead, an innovative multimedia program that looks at the forces that drive young people's actions. The show focuses on reasons why youth are led down certain paths and where they have the potential to go if they make responsible decisions about underage drinking. The 40-minute show uses youth-oriented language, music, and messages to convey the deadly consequences of underage drinking.

before the initiation of the EUDL Program. Whether the resources and strategies that are being marshaled to address the underage drinking problem will make a measurable impact remains to be seen. The first wave of data collection points to two central challenges faced by OJJDP and the States in implementing the EUDL Program: coordinating the efforts of diverse agencies and effectively defining the nature and scope of each State's program.

Overall, the implementation of the National Evaluation went well in its first year. Program evaluation requires the cooperation of many individuals from States and local communities and also OJJDP staff. The support received to date has been encouraging. Ongoing data collection efforts (see pages 3–6) should provide important information on EUDL implementation, changes in the program's focus over time, and evidence of its impact.

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