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Determinants of Youth Attitudes and Skills Towards which Drinking/Driving Prevention Programs Should Be Directed Volume I:

The State-of-the-Art in Youth DWI Prevention Programs

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## SECTION I INTRODUCTION

In October of 1984, the National Highway Traffic Safety Administration (NHTSA), United States Department of Transportation, contracted with the Pacific Institute for Research and Evaluation to conduct basic research that would result in recommendations for improvement of youth drinking/driving (DWI) prevention programs. The first task of this multi-component project was to conduct an analysis of existing programs nationwide aimed at encouraging youth to take responsible action to avoid drinking and driving. The goal of the analysis was to explore the underlying assumptions, premises, objectives, activities, and outcomes of these programs. This volume presents the methods, results, and conclusions of these explorations.<sup>1</sup>

The program analysis conducted by Pacific Institute encompasses three major research activities:

- A Review of Programmatic, Conceptual, and Empirical Literature, intended to provide a contextual basis within which to locate the information gathered in the other program analysis activities.
- A Program Review, intended to provide an overview of the assumptions, premises, objectives, activities, and outcomes of existing youth DWI prevention programs.
- A Site Visit Review, intended to provide an in-depth analysis of a limited sample of programs as they actually operate.

This volume is organized according to these three major activities, with separate sections devoted to the methods, results, and conclusions of the literature review, program review, and site visit review. A final section provides a

<sup>1</sup>A companion volume provides detailed, qualitative descriptions of twelve programs site-visited as part of the program analysis activities.

general set of conclusions based on the program analysis activities as a whole.

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#### SECTION II

#### REVIEW OF PROGRAMMATIC, CONCEPTUAL, AND EMPIRICAL LITERATURE

The review of the literature provides a general context for the information gathered in the program analysis activities. Programmatic, conceptual, and empirical literature concerning youth DWI prevention was collected from two major sources: (1) institutions and organizations with major document collections or with active programs of prevention research; and (2) computerized bibliographic databases.

Institutions and organizations contacted included: the Library of Congress; the National Library of Medicine; the National Clearinghouse for Alcohol Information; the National Federation of Parents for Drug-Free Youth; the National 4-H Center; the Center for Alcohol Studies, Rutgers University; and the Highway Research Institute, University of Michigan.

Bibliographic searches were conducted using both Dialog and the Biomedical Research Service Information Retrieval System. Additional databases searched included: the Transportation Research Information Service (TRIS); the Education Resources Information Center (ERIC); the Magazine Index; the National Technical Information Service (NTIS); Federal Research in Progress; Sociological Abstracts; and, Dissertation Abstracts.

In total, six hundred citations were identified, of which approximately ten percent were directly relevant to the current effort. The relevant documents were retrieved, catalogued, and summarized, and an Annotated Bibliography including seventy-six citations was prepared. (The Annotated Bibliography appears as Appendix A of this volume.)

#### RESULTS AND CONCLUSIONS

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The literature collected in the current review falls logically into three broad categories:

Epidemiology of Youthful Drinking/Driving Issues;

 Theoretical and Conceptual Issues Related to Youth DWI; and

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• Programmatic Approaches Aimed at Reducing Youth DWI. Although the major thrust of the program analysis project is the last of these three categories, literature is sparsest in this area. The majority of citations in the available literature concern either the epidemiology of youth DWI or attempts to explicate the factors that predispose, reinforce, and enable this behavioral pattern.

## Epidemiology of Youth Drinking/Driving

DWI traffic crashes are one of the most serious health risks for adolescents and young adults, and traffic crashes have been cited as the cause of about half of all accidental deaths and spinal cord injuries among persons 15 to 19 years old (Robertson, 1981). Moreover death rates for both males and females 15 to 24 have risen dramatically over the past several decades (Whitehead and Ferrance, 1976).

Some minor controversy surrounds the role of alcohol in traffic crashes among young people (e.g., Zylman, 1973). However, a growing body of evidence suggests that the probability of crash involvement increases with increasing blood alcohol content (BAC), and for young drivers, risk begins to increase even at very low BAC's (Borkenstein, et al., 1964; Perrine, et al., 1971; Farris, et.al., 1976). Although these studies are debated, the data support the conclusion that alcohol use is a significant contributing factor to youthful death and disability resulting from traffic crashes, and that alcohol plays a disproportionate role in traffic crashes involving youth (Cameron, 1982; Douglass, 1983).

Self-report data concerning youth DWI support the conclusions drawn from crash data. For example, results of a survey reported in <u>Current Issues in Alcohol and Drug Abuse Nursing</u> (1983), found that 40% of queried students in grades 10-12 reported driving after two drinks, and more than half of the

students admitted being passengers in a car with a drunk driver on a regular basis. According to a June, 1984 Gallup poll, 54% of older teens and 17% of those aged 13-15 reported riding in a car driven by someone under the influence of alcohol, and Lowman (1981a) reports that nearly 25% of high school students surveyed reported drinking in cars at night.

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Studies of differential DWI risk as a function of demographic variables suggest a disparity between male and female involvement in traffic crashes in general, and alcohol-related crashes specifically (Williams, et al., 1984a). The bulk of the problem, according to the research, is due to teenage males. Indeed, the proportion of high school-aged males who drive after drinking at least once a week is more than twice that of high school-aged females (Williams, et al., 1984b). The reasons for this are not fully known, but evidence suggests that the type of driving that most often leads to crash involvement is associated with characteristics found commonly among young males. For example, one study found that risk-taking behaviors such as DWI and driving at high speeds were widely implicated in crashes involving young men, while the only major predictor of crash involvement among young women was the number of miles driven (Sober, et al., 1976). In another recent study of college students, Boyd, et al. (1984), found that individuals with low maturity scores were more likely to drive while intoxicated, and across each age group, women scored higher on the maturity scale than men. This finding was replicated by Boyd and Huffman (1984). Importantly, however, DWI-related mortality and morbidity rates for females continues to parallel those for males. The difference is that young males are more frequently involved as drunk drivers while young females are more often involved as passengers (Simpson, et at., 1982).

Overall, the epidemiological literature on youth DWI suggests a tigh level of incidence and prevalence of drinking and driving, and substantial related mortality and morbidity. The sex differences in incidence and prevalence are particularly

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striking, and suggest a need for conceptual work concerning potential differential prevention strategies for male and female youth.

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## Theoretical and Conceptual Issues Related to Youth DWI

The factors that predispose, reinforce, and enable youth DWI are still not well understood. Several studies have suggested that personality factors such as aggressiveness, intolerance of authority, nonconformity, irresponsibility, group centeredness, liberal attitudes, impulsiveness, and positive attitudes towards alcohol may be associated with increased probability of driving after drinking (Kraus, et al., 1970; Grey Advertising, 1975), Other investigators have suggested that socially desirable biographic characteristics (e.g., family background, school performance) are associated with decreased risk of crash involvement (Harrington, 1972). A limited number of studies have focused on developmental issues and the stress of transition from adolescence to adulthood (Pelz and Schuman, 1971) or the role of drinking and driving as a "deviant route to status" (Klein, 1968). Another approach to understanding the young drinking/ driving problem centers on skill development, and suggests that youthful crash involvement results from the simultaneous acquisition of both drinking and driving experience (O'Day, 1970; Douglass, 1983).

The factors that predispose, reinforce, and enable youthful drinking per se are of considerable relevance to the current effort, especially since many youth begin to drink before they are legally able to drive. National surveys of youth suggest that most youth have had their first drink by grade 10 (Lowman, 1981), and that alcohol use steadily increases throughout the high school years. Factors that are repeatedly cited as contributing to youthful drinking include the desire to deal with stress (Cameron, 1982; Burkette and Carritners, 1980; Firth and Goffey, 1981; Forney, et al., 1984; Herbert, 1980; Koningsberg, et al., 1983; Scoles, et al., 1981; Wagenaar, 1983), the norma-

tive acceptability of drinking (Milgram, 1982; Lowman, 1981; Douglass, 1983), and peer pressure (Vejnoska, 1982; Scoles, et al, 1981; Krohn, et al., 1982; Nusbaumer and Zusman, 1981; Biddle, et al., 1980; Liccone, 1982). Indeed, this latter influence is thought to be so strong as to negate the effect of countervailing influences such as fear of legal sanctions or parental disapproval (Finley, 1983). In addition, young people are generally ignorant of the physiological and psychological effects of alcohol (Blane, 1983; Forney, et al., 1984; Hetherington, et al., 1979). Of particular concern is an apparent lack of knowledge about the amount of alcohol that impairs performance (Pawlowski, 1982), although the relationship between lack of knowledge and drinking behavior is unclear. Finally, recent systems-oriented approaches (e.g., Wallack, 1982a, 1982b) also suggest the need to consider larger environmental factors such as media influences (Greenberg, 1981; Koningsberg, et al., 1983), and the role of alcohol availability (Wittman, 1980).

The clear message from the conceptual and theoretical literature is the need for youth DWI prevention programs to address issues relating to peer norms and peer pressure. Individual level factors, particularly the ability to cope with stress, also appear to be potentially fruitful foci for programmatic intervention. The data provide some support for including an educational component in DWI prevention efforts, although in the absence of empirical support for the proposition that increased knowledge affects behavior, this conclusion must be considered highly tentative. Finally, the data suggest the need to address larger environmental issues (e.g., media), an approach that is currently gaining some visibility in other substancerelated prevention areas (see, for example, Wallack, 1982a).

#### Programmatic Approaches Aimed at Reducing Youth DWI

The amount of literature on youth DWI dealing directly with programmatic approaches was disappointingly small. Indeed, less than fifteen percent of the citations uncovered in the literature

review activities can be considered primarily programmatic in focus. Two factors may explain the small number of program descriptions and program evaluations to be found in the literature. First, although the disproportionate representation of youth in alcohol-related crashes has long been recognized, the proliferation of programs to address youth DWI has been relatively recent. Thus, it may take some time before the programs currently being developed find their way into the published literature. A second explanation may concern the priorities of local program planners and managers. With limited resources, priority is most often given to the provision of services. Program research and associated dissemination activities are viewed as, at best, an activity to be postponed until additional resources are available. Indeed, the bulk of the published programmatic literature has been developed by university or government-based researchers, and is rarely the work of local agencies responsible for the majority of youth DWI programs.

The available data suggest that attempts to reduce drunk driving and/or crash-related disability and death have not been successful either for youth or in the population at large, either in the U.S. or abroad (Cameron, 1978). The most successful programs have centered on new laws and stricter enforcement (e.g., the British Roadway Safety Act; the Canadian Breathalizer Legislation of 1968). Even so, these programs have been unable to demonstrate more than short-term problem reduction.

Research to date has also failed to demonstrate the effectiveness of public information campaigns, a result which has been taken by some to indicate that such campaigns are ineffective (Driessen and Bryk, 1973; Douglas, 1976). Others suggest the need for more rigorous scientific study (Swinehart, 1976; Blane and Hewitt, 1977), and still others the need for greater use of social, psychological, and communications theory and research in campaign planning (Hochheimer, 1981). Rehabilitation programs (i.e., programs targeted at individuals with a past record of DWI) have also been unable to produce evidence of effectiveness

to date (Reed, 1981). It has been suggested that such programs may have limited potential effectiveness because the majority of drivers involved in fatal crashes have no previous record of DWI (Sterling-Smith, 1976). Even driver education, long a mainstay of American public education, has been shown to <u>increase</u> rather than decrease youth crash involvement because of its contributions to early licensure of the 16-17 year old population (Robertson, 1980).

Finally, NHTSA's Alcohol Safety Action Programs of the 1970's represented a major national effort to combat drinking/ driving. Although highly publicized and relatively well funded, these state administered programs generated disappointingly little programming that proved effective (Jonah and Wilson, 1983), and such programming as was developed was reduced severely when Federal funding was withdrawn.

Discussions of the failure of DWI prevention programs have focused largely on programs associated with the deterrence models that underlie many prevention efforts (Jonah and Wilson, 1983). These discussions repeatedly cite the extremely low probability that drunk drivers will be arrested (Borkenstein, el. al., 1964; Robertson, 1981; Bietel, et al., 1975) and the even lower <u>subjective</u> probability associated with getting caught (Norstrom, 1983).

Analyses of the failure of DWI prevention programs based on skills building, education, or alternatives have been more limited than the analyses focused on deterrence. The analyses that do exist, however, tend to focus on the basic inapplicability of given models such as public information to the DWI problem, or on the development of programs based upon weak or empirically unconfirmed assumptions (e.g., that knowledge change leads to behavior change). These analyses also point to program planning and implementation weaknesses including: (1) lack of consensus concerning program goals; (2) poorly articulated program objectives (Cantor, et al., 1981); (3) inconsistent adherence to program protocols; or (4) poor program monitoring

and evaluation (Klitzner, 1982).

The programmatic literature highlights the importance of research aimed at improving the state-of-the-art in youth DWI prevention programming. Although substantial emphasis is placed on program development at grassroot levels, program models are not being evaluated and disseminated. Without increased effort in the areas of evaluation and dissemination, the majority of DWI prevention programs remain isolated efforts with limited probability of impact either at the local level or in the field as a whole.

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#### SUMMARY

In summary, the available literature highlights the severity of the youth DWI problem and associated mortality and morbidity, and suggests possible areas for programmatic development (peer pressure resistance, stress reduction, environmental factors). The literature provides little information about the nature of currently operating programs, but provides a general picture of the kinds of programs that have been tried in the past, and allows general conclusions concerning the reasons for past program failures. Accordingly, the literature review highlights the challenges associated with the current program analysis effort, and suggests the need for basic programmatic research that can be applied in the development of more effective prevention strategies.

# SECTION III PROGRAM REVIEW

This section provides a broad overview of the assumptions, premises, objectives, activities, and outcomes of existing youth DWI prevention programs. Materials were gathered from a large, national sample of programs, and two general types of analysis were conducted. The first set of analyses are descriptive, and are intended to provide a general profile of the state-of-the-art in youth DWI prevention programming. The second set of analyses represent an attempt to characterize, catalog, and, where possible, assess the validity of the assumptions and premises that form the conceptual basis for the programs studied.

As discussed shortly, both the sampling and data collection procedures somewhat limit the strength of the conclusions that can be drawn from the program review. However, the current analyses provide insights not currently available elsewhere in the youth drinking/driving literature. As such, they provide an important first step in a more analytically based understanding of existing youth DWI prevention programming.

#### SAMPLING AND DATA COLLECTION PROCEDURES

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A snowball sampling procedure was employed to identify currently operating youth DWI prevention programs. State, Federal, and private sector agencies and individuals concerned with DWI prevention programs were identified and several lists of individuals to be contacted were compiled. These agencies and individuals were asked to nominate currently operating youth DWI programs in their states. Over 500 individuals in all fifty states were contacted, resulting in the identification of 248 relevant programs including national, statewide, and local prevention programs. A complete listing of these programs with addresses appears as Appendix B of this volume.

The 248 identified programs were contacted by telephone to request mail submission of program descriptive materials. One

hundred-forty programs (53%) submitted materials including brochures, curricula, public education materials, program histories, films, and scrapbooks. These materials were then reviewed,<sup>2</sup> and the following information extracted:

 Lasic program history (level of funding, program setting, etc.);

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- target population demographics;
- program assumptions/premises;
- program objectives;
- program activities; and
- program evaluation results.

Where necessary, follow-up telephone calls were made in order to gather incomplete or missing information, or to clarify information that was ambiguous. For seven programs, it was not possible to gather sufficient data for analysis, either from the written materials or from the follow-up telephone contacts. Consequently, the following analyses are based on a total sample of 133 programs.

#### SAMPLE CHARACTERISTICS

The 133 programs included in the current analysis cannot be considered a representative sample in the statistical sense. However, the sampling methods employed were designed to ensure that the sample represents the range of youth DWI prevention programs operating nationwide.

As previously noted, data were collected mainly from secondary sources such as program brochures and funding proposals, and from informal telephone contact with program managers. Accordingly, the current descriptive analysis is keyed to

<sup>&</sup>lt;sup>2</sup>The original study plan had called for a detailed mail and telephone survey of the identified programs in order to gather the program descriptive data required by the current research. However, restrictions involving Office of Management and Budget clearance precluded such a strategy. Thus, the extraction of needed data from existing written program documents was considered the strongest available alternative option.

variables that could be reliably coded for all programs in the

sample. These are:

<u>Geographic Location</u> - The four geographic regions employed in the yearly alcohol and drug surveys of high school seniors conducted by the National Institute on Drug Abuse was employed to categorize the programs in the current research. The categories are: (1) Western; (2) North Central; (3) North Eastern; and (4) Southern.

<u>Geographic Scope</u> - The programs studied vary widely in the geographic areas they serve. The largest programs studied cover entire states, while the smallest are confined to a single grade level in a single school. For purposes of analyses, programs were coded into three categories: (1) Locál; (2) Multi-Community; and (3) Statewide.

<u>Target Age</u> - The original sample was defined as programs with target populations under age 26. Significant variation in target population age was discovered, and eight categories were necessary to describe the sample programs: (1) Elementary School Only; (2) Junior High School Only; (3) High School Only; (4) Junior and Senior High; (5) Elementary through Senior High; (6) Young Adult Only (19-26 years); (7) High School and Young Adult; and (8) No Age Distinction.

<u>Message Orientation/Complexity</u> - Most drinking/driving programs can be categorized according to their basic orientation towards the DWI problem. At one extreme, there are programs that view DWI as one of a constellation of alcohol-related problems (e.g., social, family or scholastic problems) that cannot be conceptually disaggregated from other alcohol-related problems. Such programs tend to have a significant focus on alcohol use and misuse, and may treat driving-related issues only in passing. At the other extreme are programs that view DWI solely as a traffic safety problem. These programs may pay little attention to drinking per se, focusing, rather, on the avoidance of <u>driving</u> after drinking or avoidance of riding with an intoxicated individual.

Programs at any point on the alcohol-related problems/traffic safety continuum may also place significant emphasis or general life-skills enhancement (e.g., decision-making skills, values clarification, self-esteem building, communication skills). These two dimensions are essentially independent, but they tend to appear in predictable combinations that define a single dimension -- Complexity. Specifically, the simplest programs are those that focus only on traffic safety. More complex programs derive from the combination of a traffic safety focus with a life skills approach. Finally, the most complex programs include an alcohol-related problems focus, a traffic safety orientation, and skills development. Thus, the Message Orientation/Complexity variable may be conceptualized as having three levels: (1) Single Risk (i.e., DWI); (2) Single Risk + Life Skills; and (3) Alcohol-Related Problems + Single Risk + Life Skills.

<u>Program Intensity</u> - Programs studied in the current research range in intensity from single presentations to K-12 curricula. In addition, some programs present high intensity experiences over relatively short time frames (e.g., a weekend retreat) while others provide as needed services over extended periods of time (e.g., a resource center). Finally, program activities may be highly focused (e.g., a drinking-driving prevention month with speakers, PSA's, events, etc.). Combining these various factors, five levels of program intensity emerge: (1) Single Presentation; (2) Multicomponent; (3) Retreat (i.e., an intensive experience in a special setting over a short time frame); (4) Extensive Curriculum; and (5) Resource Center.

Focus - The social and psychological factors that predispose, enable and/or reinforce DWI behavior may be located at various levels ranging from the individual (e.g., life skills) to the larger social environment (e.g., alcohol advertising). Accordingly, the programs in the current sample can be categorized according to the level or levels of influence on DWI behavior that they attempt to influence. These are: (1) Individual; (2) Peer; (3) Family; (4) School; (5) Larger Social Environment; and (6) Service Provider. This last category refers to programs focused on individuals who come into regular contact with youth (e.g., teachers), and who are viewed as change agents in the DWI reduction process.

Evaluative Data - Evaluative data on existing program models is necessary to assess the validity of the assumptions and premises underlying these programs. Programs were broken into three evaluation categories: (1) No Data Available; (2) Available Data Minimal; and (3) Available Data Adequate. Programs were included in this last category if the evaluations consisted of specific quantitative results, typically reporting percent change in knowledge, attitudes, and/or DWI crash and mortality rates, and if reasonable methods of testing were used or implied.

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#### RESULTS OF THE DESCRIPTIVE ANALYSIS

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The 133 programs represented in the current analysis reflect enormous diversity. Table 1 represents a summary analysis of programs for the variables described above. (A program-byprogram listing of the data summarized in Table 1 is presented in Appendix C.) Table 1 reveals that the snowball sampling technique employed to identify programs was successful in generating a program sample with adequate geographic representation. Some interesting regional variations exist, and are being analyzed for future reports. For the current analyses, the national sample as a whole will be considered.

			Marth	HE BUIL			
REGION	Western	Centrai	Eastern	Southern	Nation- wide	TOTALS	1/g
Total Number of Programs	30	40	31	26		· 33	
TARGET AGE:						-	
Elementary school	1	3	3	3	2	• ?	10
Junior high school		.1	ž	4		-	13
Senior high school	10	18	12	10	1	51	10
Junior-senior high school combined	4	. 6	1.		1	• • •	ra a
Elementary-high school complined	7	2	7	•		· š	
Young adult (age 19-26)	1	•	1	3	•	3	14
High school-young adult	4		2	4	•	ñ	18
No age distinction	3	10	3	2	•	·ď	10
MESSAGE ORIENTATION/COMPLEXITY			-	-		•	-
Single risk (i.e., OWI reduction)	14	15	20	11	2	52	17
Single nsk + Life skills	4	3	1	6	2	-5	. 7
Alconol-related problems + Single + Life Skills	12	21	11	9	ž	55	41
PROGRAM INTENSITY				-	÷ .		
Single presentation	5	11	8	13 -	4	38	29
Multi-component	11	13	6	9	1	40	30
Retreat	6	14	4.	3	2	29	22
Extensive curriculum	5	2	10	1	ž	21	
Resource center	4	•	3	•		7	
- CCUS							•
individual ·	21	32	26	26	5	110	33
Peer	15	25	8	13	3	54	18
Family	7	19	2	5	2	36	27
School	10	12	4	3	2	31	23
Broader environmental impact (e.g. media)	12	20	11	12	3	58	14
Service providers	4	•	5			3	
MPLEMENTATION SCOPE							
Local	13	15	4	17		49	37
Multi-community area	9	16	11	5		41	31
Statewide	8	9	16	4	•	37	28
Nanonwide	•	•	•		5	5	05
EVALUATIVE DATA							
None available	18	2 <b>8</b> -	9	16	4	78	59
Minimal process/outcome data	6	7	14	ô		.8	• ±
Adequate evaluation report	6	5	8	4	2	37	. 18
							• • •

TABLE 1 PROGRAM DESCRIPTIVE DATA

"Percents do not sum to 100 because most programs focus on more than one level.

By far the most common focus of the programs studied is the individual (83%). This finding may reflect the persistance of prevention models popular in the late 1960's and early 1970's that viewed the individual's personal strengths, life skills, and knowledge as key factors related to responsible decisions concerning alcohol and drug use and abuse.<sup>3</sup> The next most common focus is on peer-level influences (48%), a probable reflection of the growing popularity of the peer-pressure-resistance models pioneered in alcohol, tobacco, and drug abuse prevention in the middle and late 1970's. Programs focusing on the broader social environment were also fairly common (44%), a reflection of the continuing popularity of public awareness campaigns and the relatively recent emergence of grassroots, community based prevention efforts. Family and school environment foci were the least well represented (27% and 23% respectively). It is possible, however, that these program foci will become more common in the future given the emphasis on these influences in other prevention areas.

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The most common model employed by the programs studied was the Single Risk model that focuses exclusively on DWI (41%). This finding is probably a reflection of the widespread presentation of DWI prevention-related materials in driver education classes, and may also reflect characteristics of the sampling process (State Highway Safety Representatives were among the first individuals contacted in the snowball sampling procedure). However, this model is not a great deal more common than the Alcohol-Related Problems + Life Skills + Single Risk model, suggesting that youth prevention programmers are divided over the issue of whether DWI is a traffic safety or alcohol-related problem.

<sup>&</sup>lt;sup>3</sup>Evidence for the persistance of the individual-level model is also reflected in the large numbers of assumptions and premises associated with knowledge increase, personal competencies, and life skills that appear to underlie these programs. This finding is discussed in more detail later.

The data concerning the target age of the program populations show the largest number of programs focusing on high school students (38%). No other target population category includes more than 14% of the programs, and only 5% of the programs focus on young adults.

In terms of program intensity, single presentations and multi-component efforts predominate, accounting for approximately 60% of the programs studied. This finding probably reflects the fact that these two program formats are less expensive, but not necessarily easier to implement. Extensive curricula accounted for only about half as many programs as either single presentations or multi-component efforts. Again, cost considerations may be the primary consideration along with the difficulty of integrating a new curriculum activity into the schools. Retreats accounted for 22% of the programs studied, and almost all of these were some variation of the "Teen Institute" format popularized late in the last decade.

Implementation scope showed little variation, with local, multi-community and state programs accounting for 37%, 31%, and 28% of the programs respectively. It is likely that these figures strongly reflect the sampling strategy, since an effort was made to specifically include each type of program in the sample.

Finally, the lack of evaluative data for the programs studied is striking. Less than 20% of the sample were able to provide adequate evaluation reports for analysis. Here, adequate evaluations were defined as those that included either an outcome design capable of providing at least a preliminary assessment of program effects or a process that provided some data on the adequacy of program implementation. Obviously, the requirements necessary to meet this definition of "adequate" are minimal. However, if a more stringent definition is applied, almost none of the program evaluations could have been considered adequate. It is possible that more programs actually had evaluation reports, but failed to submit them because findings were nega-

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tive. This explanation is not testable with the current data, nor is it likely to be testable.

Table 2 presents a more detailed analysis of the evaluation activities of the 133 programs studied. This table presents tabulations of the variables measured, as well as the three following design features: (1) use of control or comparison groups; (2) measurement schedules; and (3) use of long-term follow-ups. Table 2 also presents data concerning process evaluation activities and data regarding how evaluations was conducted (in-house, outside evaluator, etc.).

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Table 2 reveals that the most commonly measured outcomes were knowledge gain and attitude change. By contrast, only about 38% of the evaluations attempted to measure behavior change. By far, the most common method of assessing outcomes was self-report (74.5%), with official records or other data sources employed in only about one-third of the evaluations.<sup>4</sup>

Pre-test/post-test designs predominate, although less than a third of the evaluations employed a control or comparison group. Long-term follow-up was also uncommon, with the majority of evaluations relying on a single post-test immediately following the program.

About 60% of the evaluations contained some process evaluation. The most common process evaluation activity involved collecting client satisfaction information (68%). Less than a third of the programs engaged in any kind of program monitoring, and only about 5% collected data that could be used to describe the program as it actually operated.

<sup>&</sup>lt;sup>4</sup>The reliance on self-report should not necessarily be viewed as a defect in these studies. Recent analyses of selfreport data in the youth DWI area (see Smith-Donals and Klitzner, 1985) suggest that these data have acceptable validity and high reliability. Moreover, reliance on official records or other "objective" data is plagued with both practical and theoretical difficulties, and such data may actually be less useful for evaluation purposes than self-report.

# TABLE 2

# PROGRAM EVALUATION DESCRIPTIVES

Out of 55 programs from wnom		ADEQUATE EVALUATIONS		MINIMAL EVALUATIONS		TOTAL EVALUATIONS		
evaluations were obtained.	the		% Adequate		% of Minimal		% of Total	
following were reported.		N	Evaluations	<u>N</u>	Evaluations	N	Evaluations	
OUTCOME STUDIES	(SUBTOTALS)	37		18		55		
Outcomes Measured:								
Knowledge cain		28	75.7%	8	44.4%	36	· 65.5%	
	,	28	75 70%	4	22 20%	32	58 20%	
		20	9 104	2	16 704	<u> </u>	5.50-	
Skills development			0. : 90 10.004	5	10.790	 		
Benavior change		15	43.240	5	27.8%	21	38.2%	
Other		5	13.5%	1	5.6%	6	10.9%	
Unspecified		3	8.1%	6	33.3%	9	9.1%	
None		1	2.7%	4	22.2%	5	16.4%	
Data Source:							•	
Self-report		29	78.4%	12	66.7%	41	74 5%	
			21 686	2	16 796	11	20.0%	
Official records			21.070	5	0.7 70	-	20.0%	
Other		2	13.3%	_		5	3. 90	
Unspecified		4	10.8%	5	27.8%	9	9.1%	
Not applicable		1	2.7%	4	22.2%	5	16.4%	
Control or Comparison Gro	ups:							
No control or comparison	n groups	15	40.5%	9	50.0%	24	43.6%	
Control (i.e., randomly			10 904	4	5 604	E	0 + 0/4	
assigned Ss)		4	10.0%0	1	. 3.070	5	9.100	
Comparison groups (i.e.,	non-			••••	•	_		
randomly assigned Ss)		8	21.6%	-		8	14.5%	
Other			-		-			
Unspecified		10	27.0%	9	50.0%	19	34.5%	
Not applicable		1	2.7%	4	22.2%	5	9, t %	
Evaluation Design:								
				•		~	10.004	
Post-test only		4	10.8%	2	11.1%	5	10.3%	
Pre- & post-test		28	75.7%	10	55.6%	38	69.1%	
Time series		2	5.4%	. 1	5.6%	3	5.5%	
Other		1	2.7%	1	5.6%	2	3.5%	
Upspecified		4	10.8%	5	27.8%	10	18.2%	
		•	2 704	4	22 294	5	9.1%	
Not applicable		ı	<b>E</b> , 7 70	-		•		
Long-Term Follow-up Cond	lucted:							
Yee		10	27.0%	1	5.6%	11	20.0%	
NO		27	73.0%	17	94.4%	44	80.0%	
PROCESS EVALUATIONS	(SUBTOTALS	6) 13		6	•	19		
Data Collected							04 694	
Program monitoring		5	38.5%	1	16.7%	6	. 31.5%	
Program description		1	7.7%			1	5.3%	
Client flow		1	7.7%			Í	5.3%	
Client satisfaction		5	38.5%	3	50.0%	13 -	68.4%	
Chefri Satistaction	i			2	33 396	2	10.5%	
		- 3	23.1%	1	16.7%	10	52.6%	
הפוותפלפווה					-			
EVALUATION CONDUCTED	BY (TOTALS	S) 38		23		- 61		
Program staff		12	31.6%	10	43.4%	22	30,1%	
In-house evaluator		4	10.5%			4	6.5%	
		10	26.3%	3	13.0%	13	21.3%	
Other		1	2.6%	1	4.3%	2	3.3%	
Linspecified		11	28.9%	7	30.4%	20	32.8%	
Unipedined							-	

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Finally, evaluations were most often conducted by program staff, with less than a third of the evaluations conducted by outside or in-house evaluators. Of course, program staff may have extensive evaluation experience, but past research (e.g., Kaufman, et al., 1982) suggests that this is not generally the case. Overall, the data suggest a low level of evaluation activity, both in terms of actual numbers of evaluations and in the quality and sophistication of the evaluations conducted.

In summary, the programs in the current sample tend to be of relatively short duration and of moderate intensity; they tend to rely heavily on a prevention model that focuses on the individual, and they are largely targeted at youth of high-school age. Programmers appear equally divided concerning whether DWI is a traffic safety problem or an alcohol-related problem, and programs, thus, tend to be heavily weighted toward either traffic safety or alcohol education. Finally, program evaluation is relatively rare, and little evaluative data concerning these programs is currently available.

### METHODS FOR ANALYZING ASSUMPTIONS AND PREMISES

As stated previously, a major goal of the program review was to characterize, catalog, and, when possible, assess the validity of the assumptions and premises that form the conceptual basis of currently operating youth DWI programs. To this end, an innovative technique for program analysis has been applied to the information gathered from the 133 programs in the current sample.

#### Conceptual Approach to Assumption and Premise Analysis

The current analysis of youth DWI program assumptions and premises is guided by a general conceptual approach that assumes all social programs have underlying assumptions and premises that operate at a number of levels. Specifically, as can be seen in Figure 1, five categories of assumptions and premises can be identified in all social programs:

- assumptions and premises concerning the overall approach that will guide the program effort;
- assumptions and premises concerning how the overall approach is translated into specific program objectives;
- assumptions and premises concerning the program activities dictated by the objectives, the appropriateness of these activities for the target population, and the resources necessary to implement these activities;
- assumptions and premises concerning the mechanism by which the program activities will effect changes in the target population and/or his/her environment; and
- assumptions and premises concerning the mechanisms by which the changes effected in the target population will result in short and long term behavior change.



The following sample scheme illustrates how the conceptual approach applies to operating programs:

<u>Program Type</u> :	"Friends don't let friends drive drunk."
<u>Assumption of</u> <u>Overall Approach</u> :	Social control theory.
<u>Program Objective</u> :	People will take the car keys away from friends who have drunk too much (applica- tion of social control theory).
Program Activity:	Public service campaign to raise aware- ness and teach methods of key collecting.
Outcome:	Awareness and education strategies result in key collecting behavior.

Clearly, many social program planners do not articulate these five categories of assumptions and premises when conceptualizing their program efforts. Still, all five categories of assumptions and premises, whether articulated or implicit, operate to determine program outcomes. Indeed, in order for a youth DWI prevention program to succeed in reducing DWI risk, assumptions and premises at all five levels must be valid and failure of assumptions and premises at any level will result in program failure.

The conceptual model of Figure 1 required some revision based on the limitations of the data collected. However, the general approach provides a useful structure for organizing the assumptions and premises underlying the DWI prevention programs studied in the current research.

#### PROCEDURES FOR ANALYZING THE ASSUMPTIONS AND PREMISES

Before any analytic work could be undertaken on the assumptions and premises underlying the programs studied, these assumptions and premises had to be extracted from program materials and translated into a format amenable to quantitative manipulation. A technical discussion of the procedures by which the assumptions and premises were extracted and coded is provided in Appendix D of this volume. Interested readers are referred to Appendix D as well as to the discussion in Klitzner and Vegega (1985).

Briefly, the extraction and coding of the assumptions and premises involved thorough reviews of materials from each of the 133 programs studied in order to locate or impute assumptions and premises in any or all of the five categories identified in Figure 1. These "raw" assumptions and premises were then translated into simple formulae representing the concepts to which the assumptions and premises referred (e.g., knowledge gain, peer pressure, reduced DWI risk), and the hypothesized. relationships between these concepts (e.g., reduced peer pressure leads to reduced DWI risk). Overall, about 200 separate assumptions and premises were coded for the 133 programs studied, although many of these were duplicates (i.e., more than one program was based on the same assumption and/or premise).

The analysis of the assumptions and premises was designed to answer three basic questions:

- What do the assumptions and premises reveal about the general orientation of the programs studied? Specifically, how much emphasis is put on each of the categories of assumptions and premises from Figure 1?
- 2. What do the assumptions and premises reveal about the kinds of mechanisms thought to underlie youth DWI risk reduction? That is, what are the behavior change models that are underlying current program planning?
- 3. What evidence is available to suggest whether or not any of the assumptions and premises underlying the programs studied are valid?

#### OVERVIEW OF THE RAW ASSUMPTIONS AND PREMISES

Assumptions and premises related to alternatives to DWI were common. The following examples are representative of the ways in which program materials reflected an alternative-based orientation:

"Non-alcoholic parties and celebrations are acceptable 'new traditions' for rites of passage, and can prevent drinking and driving among youth."

"The chemical free party can eliminate DWI involvements/ crashes/fatalities." Also common were assumptions and premises concerning the development of life skills (decision-making skills, values clarification, self-esteem enhancement, communication skills). Typical raw assumptions and premises in this area included:

"When given the opportunity to develop positive life skills, involvement in self-destructive behavior will be reduced. All are capable of making sound decisions about their own life."

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"Practice in decision-making and participatory discussions will encourage students to make mature, responsible decisions about drinking and driving."

Like many alcohol and drug abuse prevention programs, a large number of programs in the current sample focused on peer pressure and peer-led interventions:

"Teens relate best to each other. They personally understand the effects of peer pressure, and peers are the major source of information and influence for each other."

"Trained student leaders are the most effective influence on peers and younger kids via positive peer pressure to make more responsible decisions about drinking/driving and finding alternatives."

Many programs also placed a significant emphasis on public awareness and other information-based strategies:

"Factual information concerning the dangers of involvement in consuming alcohol in conjunction with the operation of a motor vehicle will enhance a student's ability to make intelligent decisions about drinking and driving."

"Education provides a knowledge base for wise driving decisions, rather than outside pressure/advice of friends."

Less common were assumptions dealing with normative change:

"People learn positive behaviors by perceiving the norms and expectations of significant aspects of their communities, and emulate the behavior of those groups with whom they would like to compare themselves and become affiliated."

or those based on fear arousal:

"Viewing the real consequences of what can happen if one mixes driving with alcohol or drugs will have a considerable impact on adolescents who characteristically feel they are indestructible."

As can be seen in the above examples, the program assumptions and premises as stated in program materials varied widely in their scope and specificity. Some of the assumptions and premises provided specific guidelines for the development of program activities, while others provided only the most general notion of program orientation and thrust. Overall, an examination of the raw assumptions and premises suggests the need, evident throughout the current analysis, for a more refined approach to the development and explication of program theory.

## RESULTS OF THE ANALYSIS OF ASSUMPTIONS AND PREMISES

Figure 2 presents the breakdown of assumptions and premises according to the categories dictated by the conceptual model <sup>-</sup> presented in Figure 1.

In considering Figure 2, three limitations of the general conceptual model of Figure 1 become evident. First, a large number of assumptions and premises concerned causal relationships between two predisposing, reinforcing, or enabling factors (PREF's), e.g., knowledge and decision-making skills. This



Figure 2

category did not exist in the original model. Second, a somewhat smaller number of assumptions and premises related activities directly to outcomes without any specific PREF's intervening (e.g., increased enforcement and reduced DWI). Finally assumptions and premises underlying the overall approach were difficult to code because of the use in this analysis of assumptions and premises with only one causal relationship each. Accordingly in Figure 2, the "overall approach" category has been deleted, and categories have been added to code assumptions and premises relating one PREF to another, and assumptions and premises relating activities directly to outcomes.

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Inspection of Figure 2 shows that the most common assumptions and premises were those relating activities to PREF's (e.g., public awareness campaigns to increased knowledge). Assumptions and premises relating PREF's to outcomes (e.g., increased knowledge to behavior change) were only about half as common. This finding is consistent with past experience about how prevention programs characterize their efforts. Specifically, much more emphasis is usually put on mediating variables than on outcomes.<sup>5</sup> Assumptions and premises relating PREF's to one another were also fairly common, possibly reflecting again the emphasis placed on such variables by program developers.

Assumptions and premises relating general approach objectives to activities are under-represented in Figure 2. This finding may reflect the difficulties encountered in extracting such assumptions and premises from the available data, but probably also reflect the difficulty program developers appear

<sup>5</sup>This orientation is understandable, given the difficulties associated with assessing outcomes such as DWI and associated mortality and morbidity. These outcomes are generally rare events, may occur at any time in the future, and present significant technical and practical measurement difficulties.

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# TABLE 3

# TYPOLOGY OF ASSUMPTIONS AND PREMISES BY GENERAL CONCEPTUAL ORIENTATION

Increased Alternatives19Improved Life Skills17Increased Public Awareness16Increased Traffic Safety Information14Increased Peer Pressure Resistance Skills12Increased Alcohol and Drug Information10Improved Life Skills + Information10Improved Life Skills + Information10Altered Community Norms7Altered Peer Norms7Psychotherapy7Community Organization5Increased Social Support5Altered School Norms4Increased Enforcement4Fear Arousal3Increased Self-Control2Altered Family Norms1	General Conceptual Orientation	Frequency
Improved Life Skills17Increased Public Awareness16Increased Traffic Safety Information14Increased Peer Pressure Resistance Skills12Increased Alcohol and Drug Information10Improved Life Skills + Information10Altered Community Norms7Altered Peer Norms7Psychotherapy7Community Organization5Increased Social Support5Altered School Norms4Increased Enforcement4Fear Arousal3Increased Self-Control2Altered Family Norms1	Increased Alternatives	19
Increased Public Awareness16Increased Traffic Safety Information14Increased Peer Pressure Resistance Skills12Increased Alcohol and Drug Information10Improved Life Skills + Information10Altered Community Norms7Altered Peer Norms7Psychotherapy7Community Organization5Increased Social Support5Altered School Norms4Increased Enforcement4Fear Arousal3Increased Self-Control2Altered Family Norms1	Improved Life Skills	17
Increased Traffic Safety Information14Increased Peer Pressure Resistance Skills12Increased Alcohol and Drug Information10Improved Life Skills + Information10Altered Community Norms7Altered Peer Norms7Psychotherapy7Community Organization5Increased Social Support5Altered School Norms4Increased Enforcement4Fear Arousal3Increased Self-Control2Altered Family Norms1	Increased Public Awareness	16
Increased Peer Pressure Resistance Skills12Increased Alcohol and Drug Information10Improved Life Skills + Information10Altered Community Norms7Altered Peer Norms7Psychotherapy7Community Organization5Increased Social Support5Altered School Norms4Increased Enforcement4Fear Arousal3Increased Self-Control2Altered Family Norms1	Increased Traffic Safety Information	14
Increased Alcohol and Drug Information10Improved Life Skills + Information10Altered Community Norms7Altered Peer Norms7Psychotherapy7Community Organization5Increased Social Support5Altered School Norms4Increased Enforcement4Fear Arousal3Increased Self-Control2Altered Family Norms1	Increased Peer Pressure Resistance Skills	12
Improved Life Skills + Information10Altered Community Norms7Altered Peer Norms7Psychotherapy7Community Organization5Increased Social Support5Altered School Norms4Increased Enforcement4Fear Arousal3Increased Self-Control2Altered Family Norms1	Increased Alcohol and Drug Information	. 10
Altered Community Norms7Altered Peer Norms7Psychotherapy7Community Organization5Increased Social Support5Altered School Norms4Increased Enforcement4Fear Arousal3Increased Self-Control2Altered Family Norms1	Improved Life Skills + Information	10
Altered Peer Norms7Psychotherapy7Community Organization5Increased Social Support5Altered School Norms4Increased Enforcement4Fear Arousal3Increased Self-Control2Altered Family Norms1	Altered Community Norms	. 7
Psychotherapy7Community Organization5Increased Social Support5Altered School Norms4Increased Enforcement4Fear Arousal3Increased Self-Control2Altered Family Norms1	Altered Peer Norms	7
Community Organization5Increased Social Support5Altered School Norms4Increased Enforcement4Fear Arousal3Increased Self-Control2Altered Family Norms1	Psychotherapy	7
Increased Social Support5Altered School Norms4Increased Enforcement4Fear Arousal3Increased Self-Control2Altered Family Norms1	Community Organization	5
Altered School Norms4Increased Enforcement4Fear Arousal3Increased Self-Control2Altered Family Norms1	Increased Social Support	5
Increased Enforcement4Fear Arousal3Increased Self-Control2Altered Family Norms1	Aitered School Norms	4
Fear Arousal3Increased Self-Control2Altered Family Norms1	Increased Enforcement	4
Increased Self-Control2Altered Family Norms1	Fear Arousal	3
Altered Family Norms 1	Increased Self-Control	2
	Altered Family Norms	1

Table 3 presents a breakdown of the assumptions and premises according to general theoretical orientation in decreasing order of frequency. As can be seen from Table 3, assumptions and premises based on Alternatives (safe-ride, responsible hosting, alcohol-free commencement parties) are the most highly represented. However, when approaches based on Life Skills and Life Skills + Information are combined, these surpass Alternatives as the most common assumptions and premises. Assumptions and

<sup>&</sup>lt;sup>6</sup>Training in the development of objectives was offered by the Project Director some years ago. It was requested by so many agencies and individuals that a pamphlet on the same topic was eventually developed, and several hundred copies were distributed in all regions of the country.

premises associated with Public Awareness and Peer Pressure Resistance are also fairly common, as are those associated with Alcohol and Drug Information and approaches based on Traffic Safety Information. Normative change strategies are reflected in a sizeable number of the assumptions and premises, although no single focus of normative change (Peer, School, Family, or Community) had a frequency higher than eleven.

The data in Table 3 track closely the general picture of program focus derived from the program descriptive data. In particular, the traffic safety/alcohol-related problems dimension is evident when those assumptions and premises associated with each position are combined. Assumptions and premises directly associated with the traffic safety position (Alternatives, Traffic Safety Information, Enforcement, and Fear Arousal) were represented a total of 40 times, while assumptions and premises directly associated with the alcohol-related problems position (Life Skills, Life Skills + Information, Alcohol and Drug Information) were represented a total of 37 times. Thus, as with program focus, program assumptions and premises appear to be equally divided between the alcohol and traffic safety points of view.

The assumptions and premises derived from the program sample comprise 32 separate variables. These variables are the basic building-blocks from which the assumptions and premises derive. Of the 32 variables, 18 were process variables concerned with program activities, 12 were mediating variables, and two were outcome variables. The frequency with which each of these variables appears in the assumptions and premises is given in descending order in Table 4.

In terms of program activity or process variables, inspection of Table 4 reveals the primacy of education-based activities. By far, the majority of program process variables related to either cognitive training or unspecified training (a category used to code assumptions and premises when the specific content of the instructional materials could not be determined from the

#### program data obtained).

	TABLE 4 TYPOLO	GY OF VARIARIES	
Variable	Frequency	Variable	Francisco
ACTIVITIES:		Mediating Variables	rrequency
Unspecified Training	79	Knowledge	20
Cognitive Training	74	Decision Skills	52
Public Awareness	35	Other Skills	· 40
Aiternatives	19		28
Community Organization	10	Social Modering	20
Self-Exploration	6	Attitude Change	15
Structural Change	4		8
Enforcement	4	Age Apossosiate a	4
Public Service		Age Appropriateness	<u> </u>
Talk Therapy	·	Seasonal Appropriateness	2
Health Brometice	3	Self-Control	4
	2	Public Commitment	4
	2	Family Environment	•
Benavior inerapy	2		
Punative Sanctions	1	Outcomes:	
Program Development	1	Behavior Change	65
Clinical Assessment	1	Mortality, Morbidity	1
Public Policy	t		I
Experiential Learning	1.		

These two categories account for almost twice the number of variables of all the other program process categories combined. Indeed, if public awareness campaigns are defined as an educational activity as well, this category accounts for almost 80% of the program process variables in the current assumptions and premises.

Consistent with the above discussion, knowledge and skills dominate the predisposing, reinforcing, and enabling factors. Social Modeling is also well represented, a reflection of the growing programmatic emphasis on norms and peer pressure discussed earlier. Somewhat surprisingly, attitude change, once a staple of prevention theory, appears only eight times. Apparently, the link between attitudes and behavior is being questioned in the field, although the link between knowledge and behavior clearly is not.

Finally, it is worth noting that outcome variables appeared only 66 times in the assumptions and premises studied. This

finding is consistent with the relatively small number of assumptions and premises concerned with outcomes revealed in Figure 2, and the same explanation offered in discussing those data probably applies here as well.

### VALIDITY OF ASSUMPTIONS

As previously noted, a major objective of the current research is to determine whether any of the assumptions that underlie currently operating youth DWI programs are valid. Such a determination is possible in cases where adequate evaluations have been conducted for the programs under study. Unfortunately, only 37 programs provided evaluation reports that could be coded as adequate (i.e., those evaluations with acceptable designs, acceptable measurements strategies, and appropriate statistical analyses). Thus, the ability to analyze the validity of assumptions and premises is limited.

The first step in the analysis was to determine the extent to which the variables measured in the evaluations tracked the variables reflected in the assumptions and premises developed for each of the 37 programs for which evaluations are available. This may seem an obvious step, but, as discussed elsewhere (Klitzner, 1982), a major flaw of many prevention evaluations is lack of correspondence between the objectives and activities of programs and the variables actually measured. Indeed, only about half of the evaluations in the current sample demonstrated good correspondence between the assumptions and premises underlying the program and the variables measured. An additional eleven percent demonstrated moderate correspondence; in the remaining cases, correspondence was either poor or could not be ascertained from the available information. Thus, only twenty evaluations in all provided data from which the validity of assumptions and premises might be assessed.

Our ability to analyze the validity of assumptions and premises is further limited by the structure of the evaluations themselves. Specifically, in order to develop strong tests of
the relationship between predisposing, reinforcing, or enabling factors (PREF's) and outcomes, both the PREF's and the outcomes must be quantitatively assessed. None of the current evaluations meet this criterion. Accordingly, the current analysis is limited to a general assessment of the validity of the assumptions and premises.

Table 5 presents findings concerning the validity of assumptions and premises underlying youth DWI prevention programs. The left hand margin of Table 5 presents the general conceptual orientation of the assumptions and premises underlying the 20 programs included in the current analysis. The columns of Table 5 indicate the outcomes measured in the evaluation. An "x" indicates that a <u>positive</u> outcome was found in at least one evaluation.

As can be seen in Table 5, at least some behavior change was evidenced by programs based on Alternatives, Life Skills, Life Skills + Information, Peer Norms, Community Organization, Enforcement, and Fear Arousal. Knowledge and attitude change (including positive behavioral intention) also resulted from programs based on Life Skills, Life Skills + Information and Public Awareness.

		UUICUME	
General Conceptual Orientation	Knowledge Change	Attitude Change	Behavior Change
Increased Alternatives	•		x
Improved Life Skills	Х	Χ*	X**
Increased Public Awareness	X	x	
Improved Life Skills and Information	X	Χ*	×
Altered Peer Norms			×
Community Organization			×
Increased Enforcement			X
Fear Arousal			Χ.

\*Includes Behavioral Intentions

\*\*Includes Reduced Alcohol Use Only

The data in Table 5 must be considered preliminary at best. They reflect only a small portion of the programs studied and the tests of assumptions and premises they provide are not strong. However, these data suggest the potential validity of a variety of different approaches to the youth DWI problem, and provide insights into programmatic areas worthy of further research and development.

#### CONCLUSIONS FROM THE PROGRAM REVIEW

Overall, the data from the program review depict a youth DWI prevention field where traditional models such as education and life skills development predominate, but where promising trends are evident. Both the descriptive analysis of programs and the analysis of assumptions and premises suggest a move towards multi-component programs that address multiple levels of social, psychological, and structural influences on DWI. This trend is encouraging, and suggests an atmosphere of experimentation and the potential for future innovation. However, the conceptual underpinnings of even the most innovative programs studied appear to be similar to those that have guided prevention program development over the past two decades. Thus, although the <u>zeitgeist</u> for innovation is evident, restructuring of program models is needed if future programs are to depart conceptually from the programs of the present and the past.

Despite these encouraging trends, the current data are cause for concern. Specifically, the analysis of assumptions and premises suggests that available prevention theory is not widely used or articulated in planning many youth DWI efforts. Moreover, when theory is articulated, it tends to be a rehash of traditional notions of behavior change. This finding may reflect as much on the state-of-the-art in theory development as on the state-of-the-art in program development. In either case, additional theoretical work is needed to facilitate the apparent trends in program development discussed earlier.

Of interest for further study may be those programs or program components associated with assumptions and premises that appear very infrequently. Such programs or components may be more likely to be innovative than programs or components associated with frequently encountered assumptions or premises, and are probably worth further consideration.

The assumptions and premises also suggest theoretical gaps that must be filled, especially concerning the relationship between mediating variables and reduced DWI. As discussed, this link may be the most difficult to assess or evaluate. However this link must be validated if any of the programs studied are to meet their ultimate objectives.

Of particular concern is the current lack of emphasis on ultimate outcomes -- i.e., the reduction of youth DWI and associated mortality and morbidity. This shortcoming is evident in both the small numbers of articulated assumptions and premises concerning the relationship between program models and outcomes, and in the generally low level of program evaluation activity evident in the field. The lack of emphasis on outcomes is understandable, given the orientation of most program developers towards observable results (i.e., changes in mediating variables), and towards the provision of services. However, increased emphasis on outcomes must be encouraged both in program theory and in program evaluation if the field is to progress.

## SECTION IV SITE VISIT REVIEW

To enrich the data from the program review described in the previous section, twelve programs from the program review sample were selected for intensive, on-site examination. The site visits represented the most intensive data collection activities of the program analysis, and were designed to serve two major purposes. First, they provided the most complete context from which to view the results gathered in the program review. Specifically, they provided an opportunity to gather first hand data on the assumptions, premises, objectives, and activities of youth DWI prevention programs as they actually operate in the field.

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A second, related purpose of the site visits was to explore the strength and integrity with which program strategies are implemented (Sechrest, et al., 1979). Experience suggests that programs as they are described may be very different from programs as they are actually implemented (Patton, 1979; Sechrest et al., 1979; Moskowitz, et al., 1980; Wittman, 1982). For example, a school-based DWI curriculum may be conceptually and theoretically appealing on paper, but if it is poorly implemented (e.g., by under-trained instructors), it is unlikely to be effective. An exploration of such implementation issues is a crucial aspect in determining how the results of the current effort can be most effectively used. Specifically, even if strong, valid assumptions and premises, objectives, and activities for preventing youth DWI are eventually developed, these will be useful only to the extent that programs of strength and integrity can be implemented as a result.

#### SAMPLING AND DATA COLLECTION PROCEDURES

The site-visit programs were selected to represent as complete a range as possible of the variables used in the descriptive analysis of the program review: (1) Geographic

Location, (2) Program Intensity, (3) Message Orientation/Complexity, (4) Implementation Scope, (5) Focus, (6) Target Population, and (7) Evaluation Activities. Because so little variation was found on the "focus" variable (i.e., the level of societal influence at which the program operates), this variable was not considered in selecting the site-visit sample. In addition, particular weight was given to programs with adequate evaluation activities because of the direct relevance of evaluation data to the proposed examination of program assumptions and premises.

The research methods employed in the site visits were largely ethnographic/anthropological. That is, an attempt was made to gather as large, varied, and rich a descriptive base as possible in the two or three days researchers spent in each program site. Data collection was guided by focused interview and observation protocols that were designed to gather standardized information on each program while providing local informants with numerous opportunities to provide background material, express personal opinions, and relate anecdotes to increase understanding of the program's operation. Wherever possible, actual program sessions or activities were observed, and the researchers toured the communities in order to obtain information on the context in which the programs operate.

The specific information areas addressed with program staff, program directors, agency staff, community officials, parents, and participants, and in program observations were as follows:

Interviews with Program Staff

- Program history
- Assumptions and premises underlying the general approach
- Program objectives
- Program activities
- Data (if any) concerning program outcomes, and methods of data collection
- Assumptions and premises linking the general approach, objectives, activities, and outcomes
- Staff characteristics

- Target population characteristics
- Implementation difficulties

Interviews with Program Directors and Agency Staff

- Understanding of program assumptions and premises, objectives, and activities
- Relationship of program assumptions and premises, objectives, and activities to the ongoing program of the agency
- Status or priority of the program within the larger agency mission .

Interviews with Participants, Parents, and Community Officials

- Understanding of program objectives; agreement with these objectives
- Perceived appropriateness and usefulness of program activities
- Perceived credibility of program providers
- Perceived credibility of underlying assumptions and premises (parents and officials only)
- Perceived outcomes of program participation (participants and parents only)

Program Observation

- Conformity of program activities to program plan (e.g., adherence to a curriculum)
- Apparent mastery of program materials by program staff
- Apparent reaction of program participants to program materials

A major challenge for the site visit data collection was getting respondents to articulate program assumptions and premises. Past experience suggested that program directors and staff are unused to thinking about and discussing their programs in terms of conceptual variables and the processes by which these variables are hypothesized to interact to produce desired outcomes. Indeed, many program managers and staff are unable to articulate desired outcomes beyond general notions of alcohol and drug abuse or DWI reduction.

Accordingly, an interviewing strategy was adopted that has been used with considerable success in past attempts to diagnose program theory from program staff interviews. Specifically

respondents were asked three questions. First, they were asked to consider how an individual exposed to the program would be different from an identical individual who had not been exposed to the program. This question is intended to explore the mediating variables that comprise the immediate outcome objectives of most prevention programs (e.g., increased knowledge, improved decision-making skills, increased awareness of alternatives). Second, respondents were asked to comment on the ways in which specific program activities lead to the differences observed in participants. This question represents an attempt to help program staff articulate the mechanisms presumed to underlie program effects. Finally, respondents were asked to consider how the differences in participants caused by the program relate to ultimate outcomes (e.g., reduced DWI risk, reduced substance abuse) in order to shed light on the hypothesized relationships between mediating variables and outcomes. In practice, these procedures were reasonably effective in helping program directors and staff articulate program assumptions and premises, although some imputation on the part of the researchers was still required.

## SAMPLE CHARACTERISTICS

Table 6 presents a breakdown of the twelve site-visit programs according to the seven variables described above. As can be seen from Table 6, nine of the twelve programs serve local communities (although some are replications of national models), and the remaining three are statewide coordinating efforts. Most of the programs are targeted at teens, age 13-18, although two (BACCHUS, and Flaps Up Designated Driver Program) are designed specifically for young adults, ages 19-25. Consistent with the

PROGRAM TITLE AND LOCATION		Pi IN	ROGRA	VH L TY		OK I I MI	ESSA( ENTA	E FION	IMP	LEME SCO	NTAT PE	LUN	EVA MA	LUAT	TON AL	<u></u>		TAR AC	GET SE	<u> </u>		- <b></b>	РН Н	OCUS	H ;	
	Single Presentation	Mult1- component	Intensive retreat	Extensive curriculum	Resource Center	DWI risk reduction	Life skills	Alcohel problems	Local area program	Multi-com-	Statevide program	Nacionvide Program	None available	Minimal available	Adequate available	12 or less years	13 - 15 <b>year</b> s	- 16 - 18 <b>yea</b> te	19 - 20	21 - 26	No age distinction	Individual focus	- Peer focus	[ School focus	Femily focus	Broader
WESTERN REGION																										
Comprehensive Dui System Im- provement Project for the County of San Mateo San Mateo, California		x				x				x			x								x	x	x			x
New Experiences in Aftec- cive Training (NEAT) Family Program Larayecce, Calitornia		x		x			x	x		x					x		x	x				x			х	
Students Against Driving Drunk (SADD) Albuquerque, New Mexico		x				х				x			x				<b>x</b> _	x	x	x		x	x			
Utah K-12 Alcohol, Drug and Tobacco Prevention Education Program Salt Lake City, Utah		x	x	X			x	x			° <b>X</b>				<b>X</b>	x.	x	x				x	x	х	x	x
NORTH CENTRAL REGION												•														
lt Starts With People K-12 Substance Abuse Preven- tion Curriculum Wichita, Kansas				x			x	x		x					x	x	x	x				x	x	x	x	. <b>X</b>
Youch Drinking Driving Program Grand Rapids, Michigan				x		x	x		x				x					x				x	х			
NORTH EASTERN REGION							1									ĺ										
Project Graduation Augusta, Maine	x					x						x			x			x				x	X			x
Green Mountain Prevention Pro- jects, Inc. Builington, Vermont			x				x	x		x					х		х	x				x	Х			х

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TABLE 6

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ſ	PROGRAM TITLE AND LOCATION		PROGRAM INTENSITY					MESSAGE UNIENTATION				NTAT PE	LON	EV. M	ALUA' ATERI	CION LAL	TARGET AGE							PROGRAM FOCUS					
		Single	presentation Multi-	component Intensive	Extensive	Resource	DW1 risk reduction	Life skills	Alcohol problems	Local area	Hulti-com-	Statevide	Nationwide	None None available	Minimal	Adequate available	12 or less years	13 - 15 vears	16 - 18 Veats	19 - 20 Vears	21 - 26	i No age distinction	Individual  focus	Peer	School	Fam () y	Broader environment		
	Starting Early AL-CO-HOL Montpelier, Vermont				x			x	x			x				x	x						x						
	SOUTHERN REGION Boost Alcohol Consciousness Concerning Health of Univer- sity Students (BACCHUS) Lexington, Kentucky		)	(			x	x	x			x			x					x	x		x	x			. X		
	High Risk Adolescent Trauma Prevention Program Baltimore, Maryland	x			x		x	х			x				x			x	x				x						
	Flaps Up Designated Driver Program Bethesda, Maryland	X					X			x				X							х		X	х					
																						-							
											1				:														

## TABLE 6

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preventive focus of the program, the majority serve primarily general population youth; however, two programs (The High-Risk Adolescent Trauma Prevention Program and NEAT) serve clients who are experiencing alcohol, drug, and/or DWI problems. Finally, many of the programs have a multiple problem focus, addressing youth DWI as one component of a comprehensive approach to alcohol and drug-related problem prevention.

## RESULTS OF SITE VISIT ANALYSES

The first phase of the site visit analyses was the preparation of synoptic summaries of interview and observational data collected at each of the twelve sites. These reports are presented in Volume II of this report.

The second phase of the site visit analyses involved examination of the data collected in light of the two major purposes of the site visit review: (1) an analysis of program assumptions and premises as they are implemented in the field; and (2) an exploration of the implementation difficulties experienced by the programs studied.

## Results Related to Assumptions and Premises

As suggested, the ability of program managers and staff to articulate the assumptions and premises that underlie their programs' objectives, activities, and outcomes was somewhat limited. However, sufficient data was generated to draw some important conclusions concerning:

- the categories of assumptions and premises emphasized in the site visit interviews;
- the translation of these assumptions and premises into program activities; and
- o the general role assumptions and premises play in program operation.

<u>Emphasis</u> - The program assumptions and premises emphasized by respondents in the site visit interviews were similar to the assumptions and premises revealed through the program review activities described earlier. Changes in individual knowledge,

attitudes, and life skills were considered the major mechanism by which reduction of DWI risk occurs. However, a number of interesting differences were also apparent.

The first difference concerns the view reflected in the field of alternatives as a DWI reduction mechanism. In the program review, alternatives were ranked as the second most common mechanism underlying program effects. Although alternatives were also commonly mentioned in the site visit interviews, they were rarely viewed as a true prevention strategy. Rather, program staff and managers tended to view alternatives as a "stop-gap" measure to be implemented until something else could be done. It was commonly felt that teaching youth about alternatives (e.g., alternate transportation modes) or providing such alternatives (e.g., alcohol-free parties) did not reduce long term DWI risk because no real change in the individual results. This orientation reflects the substantial emphasis placed on individual level changes reflected throughout the data collected in the current effort. Two notable exceptions to this general finding were the Kentucky BACCHUS chapter and the Utah K-12 Alcohol, Drug, and Tobacco Prevention Education Programs. In both cases, the provision of alternatives is assumed to effect long-term changes in orientation to alcohol-related behavior or in the social norms that govern drinking behavior.

A second difference in emphasis noted in the site visits was the large number of assumptions and premises articulated relating to enforcement. Enforcement was infrequently suggested as an <u>underlying program mechanism in the program review; in the</u> site visits, however, it was mentioned frequently. Enforcement issues were particularly germaine to individuals not directly involved with program delivery (agency staff, community, and school officials). These individuals appeared much more likely than program staff to take a systems view of the DWI problem as opposed to a view based solely on individual behavior.

A final difference was the emphasis on assumptions and premises relating to family support and family involvement by on-site staff. This finding stands in sharp contrast to the relatively weak family emphasis revealed in the program review. The emphasis on family issues possibly reflected the fact that program staff were actively engaged in attempting to overcome what they perceived as significant barriers to family involvement at the time of the site visits. Whether or not the increased emphasis on family involvement represents a general or lasting trend in program direction cannot be determined at the current time.

<u>Translation of Assumptions and Premises into Program Activi-</u> <u>ties</u> - Another major finding of the analyses of assumptions and premises from the site visit data concerns the ways in which assumptions and premises are translated into actual program activities. It appears that significant filtering occurs as articulated assumptions and premises are applied in the program setting, and very different programmatic activities may occur within the same program depending upon particular staff members' interpretation of the assumptions and premises.

Often assumptions and premises were translated into program activities based upon idiosyncratic understandings of the concepts involved. The most common example of this type of filtering concerned the concept of "responsible drinking." Assumptions and premises in this area were numerous, since they comprised a major subset of the assumptions and premises having to do with changes in individual level knowledge, attitudes, and skills. Although staff members might generally agree with the concept of responsible drinking, the specific knowledge, attitudes and skills seen as needed to drink responsibly varied enormously. For some, responsible drinking might be viewed as a way of avoiding intoxication for others; as a way of advanced planning to avoid driving after drinking; and for still others, the only form of "drinking" considered responsible was abstinence. The latter interpretation was expressed by one informant who stated that "we teach responsible decision-making so that children will never drink."

In other cases, the ways that articulated assumptions and premises were translated into program activities appeared to be a function of other implicit assumptions and premises. For example, there is a tendency among program staff to vary message content as a function of the presumed alcohol and drug use of the target population. Specifically, there appears to be an implicit assumption that fear arousal messages are more appropriate for heavier using populations and life-skills and general alcohol and drug-related information is more appropriate in populations with lower average use. Thus, even within the same program, message content may be varied depending upon staff members' assessment of the use levels of the immediate audience.

Finally, assumptions and premises may be translated into program activities depending upon the values orientation and life experiences of program staff. An obvious example is the difficulty experienced by non-drinking teachers in presenting alcoholrelated information. Some teachers reported substantial ethical conflict in presenting program materials that ran counter to their own orientation to alcohol. Others simply felt ill-suited to speak authoritatively on the subject. In both cases, the result is that some program activities bear little resemblance to what was originally intended in the program plan.

The Role of Assumptions and Premises in Program Operation -The above discussions suggest that the role of assumptions and premises in program operation varies considerably. However, the site visit data suggest a strong association between the quantity and quality of staff training and the pervasiveness of consistent assumptions and premises in program operation. An example of this phenomenon was found in the School Team training approach used by the Wichita Comprehensive Substance Abuse Program. In this program, selected teachers are exposed to an intensive, one week training experience that covers the program assumptions and premises in some depth. Interviews with these staff revealed substantial familiarity with the program's assumptions and premises, and substantial consistency in the ways these assump-

tions and premises were described and applied. A similar consistency was found among staff members of the Kentucky BACCHUS chapter who are highly trained. BACCHUS staff reflect a high level of consistency articulating and applying assumptions and premises. Thus, although substantial variation occurs in the use of assumptions and premises in program operation, adequate staff training, can provide some assurance that program theory will be translated into program operations.

#### Results Related to Implementation Issues

The site visit data collection uncovered a large number of implementation issues that affected the overall quality of the programs studied. The data collection also revealed a variety of solutions as well as some strategies for avoiding, or at least limiting the impact of these difficulties. Implementation issues revealed by the site visit data collection have been grouped under six general topic areas:

- Consistency in Program Operations
- Program Content and Format
- Participant Characteristics
- Level of Participation
- Program Staff
- Constituency Building

<u>Consistency in Program Operation</u> - As suggested in the discussion on assumptions and premises, consistency is lacking in the implementation of activities within programs. Variations were evident in both the extent to which program staff understood the purpose and methods of the program, and in the ways in which program concepts were applied. Similar variation has been observed in past studies of prevention program implementation (Patton, 1979; Sechrest et al., 1979; Moskowitz, et al., 1980; Wittman, 1982), and some level of inconsistency is to be expected. However, in some programs observed, the level of inconsistency was so pronounced that it would be difficult to characteize the activities observed according to any but the most

general "program" model. As suggested in the discussion of assumptions and premises, variations in implementation seem to be least common in programs with well planned, intensive staff training programs. Even in these programs, some variation in implementation was evident, but not nearly as pronounced as in programs with less intensive staff training programs.

Program Content and Format - A number of the programs studied relied on some combination of peer modeling and role playing. These program strategies are theoretically appealing, but pose a number of difficulties in implementation. In terms of peer modeling, the youth chosen for this role appear to have a significant impact on whether the program content is assimilated by program participants. The site visit data suggest that most youth selected as peer leaders are non-users, often high achievers, and highly visible members of the student body. They tend to be surrounded by non-using friends. Those students who may be at highest DWI risk are often isolated, dropouts, or members of peer groups less oriented to achievement activities. The data suggest that school personnel avoid selecting known users as peer leaders for fear that alcohol and drug use will be seen as a route to leadership positions. Often, these selection strategies lead to the selection of peer leaders that are somewhat alien to the target population of the program. For example. Kentucky BACCHUS attempted to address heavy drinking on campus by appointing sorority and fraternity peer leaders who were socially distant from the general student body. Prevention events that appeared to be sponsored by the "Greeks" were then systematically avoided by other students. Cliques and backlash were the result.

In terms of role playing, the site visit data suggest that many classroom teachers are intimidated by the process and are not well trained in setting up role play situations. This leads to a situation in which role plays are either avoided, or implemented without much enthusiasm. In addition, in some programs, role plays focus on drinking/driving situations that

arise in later teen years, and with which program participants have had no real life experience. Accordingly, informants felt that the skills learned and the discussion generated were relatively meaningless to participants.

A number of programs also focused on attempting to change school or community climate, and implementation difficulties were experienced here, as well. Attempts to change school or community climate appear most effective when assemblies, in-service training, or dramatic presentations are presented to the widest possible audience. For example, if large numbers of students are familiar with the techniques and phrases learned during a role playing exercise, these will more likely become normative behaviors in the school or community. Unfortunately, wide coverage is rarely attained, and it is much more common for exposure to be limited to single grade cohorts or other sub-populations. In addition, DWI curricula are often presented in elective courses on social issues, or in drivers education and health classes. School personnel at a number of the studied sites estimate that this strategy ensures exposure of only about 25% of the student body.

Program Participants - The site visit data suggested a number of issues concerning the characteristics of program participants that lead to greater or lesser implementation Chief among these issues related to sex differences. success. Sex differences were observed in message appeal and voluntary participation rates across a variety of programs and locations. The site visit data suggest that males respond more favorably to information about enforcement and the legal consequences of drinking. In contrast, females were reported to be more responsive to information about the impact of drinking on relationships (e.g., how it feels to lose a friend in a drunk driving crash; how problem drinking influences family relationships). Consistent with these observations, females appear to participate more frequently and more enthusiastically in peer prevention efforts than do males. Finally, mixed gender groups do not appear to be

as effective as separate groups for males and females. In mixed groups, males tend to dominate, and stereotypic, unsupportive, or undercutting comments are reported to be common. In particular, women's issues related to alcohol appeared most successfully discussed in exclusively female groups.

Participants' level of alcohol and drug use also appeared to have an effect on program outcomes. However, unlike mixed gender groups, groups composed of individuals with varying levels of use appeared to perform better than segregated groups. Reports suggest that abstainers are sometimes surprised by the depressing, non-productive solutions to life problems offered by users, and contrary to a concern voiced by many parents, non-users appear not to be particularly impressed by the "highs" reported by the user population and by users' rebellious statements. Overall, exposure to users under the correct conditions may increase abstainers resolve to avoid alcohol and drug abuse. Heavy users may also experience positive outcomes as a result of exposure to non-users. Reports suggest that they may profit from exposure to objections to their lifestyle by peers, and they are exposed to a wider repertoire of interpersonal alternatives described by abstainers. In general, informants noted that mixed groups appear to stimulate greater quantity and quality of discussion.

Level of Participation - Across all study sites, data on level of participation was cause for some concern. Generally, the numbers of individuals reached by the programs fall short of the numbers expected, and in some cases, significant portions of the target population are not reached at all.

For example, data from the Project Graduation program in Maine suggests that, although a number of alternative graduation parties are offered, these exist side by side with large numbers of traditional parties which involve excessive drinking and considerable DWI risk. Similarly, on-site observation of the Designated Driver Program offered by the Flaps Up Bar and Restaurant (in which free non-alcoholic beverages are offered to

a designated driver) suggested that very few of the bar patrons were even aware that a program existed. Finally, BACCHUS, which is highly publicized as a campus-wide response to drinking problems among college students was able to maintain an active membership of only seven students in the chapter studied. In general, the penetration rates of the programs studied suggest that even if the programs are well designed and implemented, their impact will be limited because of the numbers of individuals actually reached.

<u>Program Staff</u> - The effects of staff training have already been discussed. Additional implementation issues concerning staff included problems of staff turnover, staff burn-out, and the heavy reliance of some programs on the personal qualities of particular staff members.

Risk of staff burn-out was most evident in those programs that require high levels of personal involvement on the part of the staff. The High Risk Adolescent Trauma Prevention Program and the Comprehensive Substance Abuse Program of Wichita, Kansas are relevant examples. Both programs require extremely high levels of staff commitment, and a willingness to work closely with program participants to achieve desired effects. Unfortunately, risk of staff burn-out may correlate with potential benefit to participants, since the same high levels of staff involvement that may cause burn-out may also contribute to positive program outcomes. Some programs have attempted to deal directly with burn-out by providing "refresher" courses for staff members at regular intervals.

Staff turnover was a general problem for the programs studied, but had particular impact on those programs for whom a single individual or group of individuals had become key to the program's success. For example, the New Mexico SADD Coordinating Committee appeared successful primarily because it was possible to assemble individuals representing a variety of government agencies who were willing to work cooperatively despite differing priorities and agendas. Several of the original Committee

members have now left or been reassigned, and it remains open to question whether this Committee can continue its program planning efforts with the same level of success.

Related to problems of both burn-out and turnover was the fact that, throughout the programs studied, individuals were discovered who seemed to account in large measure for the quality of the program activities observed. In some cases, these individuals were in program management positions, but more commonly, they were simply providers whose personal commitment and charisma overshadowed other aspects of program content. From the perspective of the individual programs, the existence of such individuals is a major asset. However, problems are likely when these individuals leave the programs. Perhaps more importantly program effects tied to the characteristics of individual managers or providers may be particularly difficult to replicate.

<u>Constituency Building</u> - The site-visit data collection demonstrated the importance of building a broad base of community support for youth DWI prevention efforts. This finding is consistent with other analyses of factors that contribute to successful prevention program implementation (Kaufman, et al., 1982), but may be of particular importance in the area of alcohol-related problems where consistent public attitudes concerning youthful alcohol use are not common.

Data from several of the programs studied suggest that the implementation of public awareness campaigns concerning the DWI problem prior to the implementation of program activities can help to ensure a favorable reception and facilitate the development of public support. For example, in New Mexico, where public awareness of the DWI problem is high, implementation of SADD appears to be proceeding without much resistance to the sometimes controversial "Contract for Life." This effect has also been observed in those communities where prevailing values result in an abstinence orientation among large numbers of adults. In these communities, public awareness campaigns serve to overcome resistance to dealing directly with alcohol-related problems by

impressing upon community members the severity of DWI as a risk factor for youth.

The site visit data also revealed important cautions in constituency building. Specifically, several examples were discovered in which too strong a link was established with a specific segment of the community, thus alienating other segments. The previously cited example, in which BACCHUS aligned itself with fraternity members, provides a relevant illustration. Here, in an attempt to gain the support of a highly visible constituency within the campus community, the support of the average student was compromised. Similar problems were encountered by programs that formed too strong an alliance with segments of the community members committed to "responsible use."

## CONCLUSIONS FROM THE SITE VISIT REVIEW

In general, the site-visit reviews confirmed the conclusions drawn from the program review. Both studies reveal a general lack of theoretical orientation on the part of program developers and program staff, and a tendency to rely on fairly traditional notions of behavior change. The site visits strongly confirmed the tendency of program staff to conceptualize DWI risk reduction as an individual level phenomenon, although the data do suggest a move toward recognition of the importance of an environmental focus (e.g., peer influence, alternatives, enforcement).

Despite the lack of a theoretical focus in the programs reviewed, the site visit data provide numerous reasons for guarded optimism about the state-of-the-art in youth DWI programming. Staff dedication, energy, and commitment to reducing DWI risk were evident in all the programs studied. Moreover, the programs showed substantial resourcefulness in gaining community support for their efforts, and many of the programs seemed likely to survive even in the face of funding cutbacks.

The quality of program implementation appears to be a major and continuing problem. Implementation difficulties were identified at all levels of program functioning, and the quality of implementation, even within the same program, was highly variable. However, the data suggested that with intensive staff training, a much higher level of program consistency is possible. Although such training requires additional resources, it will be necessary to give program models a reasonable chance to succeed in reducing youth DWI.

#### SECTION V

## GENERAL CONCLUSIONS AND RECOMMENDATIONS

Four general themes appear throughout the analyses presented in this volume. These themes suggest areas where program improvement is possible, and present challenges for program development in the future.

- the general lack of a strong theoretical grounding for program activities;
- the tendency to view DWI problems as located within the individual to the exclusion of other levels of behavioral influence;
- the need for additional attention to implementation; and
- the need for more sophisticated and widespread program evaluations.

The following is a detailed discussion of these themes and recommendations for future program initiatives.

#### LACK OF A THEORETICAL GROUNDING FOR PROGRAMMATIC ACTIVITIES

Perhaps the most obvious conclusion from the analyses conducted was that programs lack a strong theoretical or conceptual orientation. This problem is not limited to the youth DWI prevention field, nor is it limited to the prevention field generally. It has been our repeated experience in studying a wide range of alcohol and drug abuse programs that theory is underdeveloped and underused.

It is probable that several factors contribute to this general condition. First, programs are most often developed out of a pressing need to "do something" about social problems such as youth DWI. Thus, programmers do not usually have the luxury of extensive literature reviews before developing programmatic options. Equally important, even when such reviews are conducted, program planners may be forced to rely on incomplete or conflicting risk-factor research. Indeed, the genesis of the current situation may be traced, at least in part, to the literature itself where correlational literature abounds, but

well constructed, prospective research is extremely rare. Finally, the tendency for researchers to be located in universities and for programmers to be located in community-based organizations does little to foster communication between the two groups. Thus, research and program development agendas are often undertaken as parallel efforts with little crossing over between these two obviously related pursuits.

The above analysis suggests several recommendations to improve the theoretical and conceptual richness of future program efforts. Primary among these is the need to provide opportunities for researchers and program planners to exchange ideas through joint professional meetings, colloquia, and workshops. Such meetings will foster the communication necessary to bridge the current gap between the development of theory and the use of this theory in practice.

In terms of the research itself, priority must be given to the kinds of prospective research that is able to test causal hypotheses concerning the relationship between DWI risk and DWI behavior. Such research is costly and time consuming, and thus may not be appealing to those agencies charged with responsibility for research funding. However, without such studies, program planners will continue to be forced to rely upon risk factors studies that can, at best, suggest general areas for program intervention.

Finally, program funding must be more closely tied to the conceptual quality of program proposals. Here, the responsibility lies largely with the local and state agencies who most often provide program funding. This responsibility is twofold. More emphasis must be placed on funding programs that can articulate a clear rationale for program activities. Equally important, however, is the need for these agencies to provide technical assistance to program planners to help ensure that they have the expertise necessary to develop conceptually and theoretically sound programs.

## EMPHASIS ON INDIVIDUAL LEVEL RISK FACTORS

In those cases where a theoretical orientation could be identified in the programs studied, there was a strong tendency to view DWI problems as arising from intrapsychic predisposing, reinforcing, and enabling factors (i.e., the individual's knowledge, attitudes, beliefs, skills, and values). This emphasis is understandable, given the predominance of individual level analyses in past DWI risk factor theory and research.

Clearly, the attributes of individual youth are a major determinant of DWI risk, and hence, an important focus of DWI prevention activities. However, it is becoming increasingly apparent that all alcohol-related problems are multiply determined, and that crucial predisposing, reinforcing, and enabling factors are to be found in the environment in which the individual behaves. These environmental factors can be conceptualized as concentric circles of influence beginning with the immediate social environment (family and peers) and expanding to include the school and community, state and federal regulation and legislation, and the larger social environment of societal norms and values, and the influence of mass media.

A minority of the programs studied recognized the importance of environmental factors, including the roles of peer pressure, school policy, enforcement, and normative change. This finding is encouraging, and suggests a growing awareness of the role of environmental factors in DWI risk. It is recommended that this trend be encouraged, and efforts be made to educate program planners about the role of environmental risk factors. Moreover, further basic research is needed into the operation of such factors, and applied research is needed in the translation of environmental theory into programmatic action.

#### ADDITIONAL ATTENTION TO IMPLEMENTATION

Even the most carefully designed DWI prevention program will fail if poorly implemented, and the site visit data suggest variation in the quality of implementation of currently operating

programs. Like the theoretical weakness of current DWI prevention programs, these implementation problems appear to be a widespread characteristic of all alcohol and drug abuse-related programming. Again, several factors can be identified that contribute to implementation problems.

First, implementation is not usually emphasized in either programmatic or research literature. For example, of the evaluations reviewed in the current program analysis, only two gave significant attention to a description of what actually occurred in the program. The difficulties in implementing strong, consistent social programs and the associated need for careful attention to implementation issues have only recently been recognized (see, for example, Patton, 1978). Accordingly, it is not surprising that insufficient attention is paid to monitoring the quality and consistency of youth program activities.

Second, implementation monitoring requires a well designed management information system and sufficient time for implementation. Few training resources in this area specifically designed for the alcohol and drug abuse program manager currently exist, and thus, even those program managers who are aware of the need for implementation monitoring may be at a loss as to how to proceed.

Finally, quality implementation requires significant attention to staff training and staff development. The current data suggest that quality of implementation is directly related to the level of staff training--where staff are well trained, implementation quality increases. However, time and resources devoted to staff training may take time and resources away from direct services. Thus, staff development may be given lower priority, especially in programs where resources are limited.

Given the above considerations, several recommendations are suggested. First, all programs should be encouraged to document implementation as part of program reports, manuals, and evaluation documents. Second, to facilitate this first recommendation,

training materials should be developed and made available to program managers that address implementation issues specifically within the context of youth DWI prevention programming. Finally, funders should recognize the primacy of staff training and development as an integral part of program delivery, and reflect this priority through requiring such activities as part of an overall program funding package.

#### THE NEED FOR MORE WIDESPREAD EVALUATION ACTIVITIES

Without adequate evaluation data, it is simply not possible to assess with certainty the efficacy of current approaches to the prevention of youth DWI. However, the level of evaluation activity evident in the current program review suggests that few programs are being adequately evaluated.

The lack of emphasis on evaluation is understandable, given the substantial resources necessary to perform methodologically sound outcome research studies. Again, resources devoted to evaluation are most often resources taken from direct services. Thus, for many programs, evaluation is viewed as a luxury that can only be implemented after direct service needs are met.

Additionally, the number of skilled prevention evaluators is currently limited. Graduate programs in evaluation research are becoming more common. At the present time, however, programs may have difficulty in finding needed consultation to develop high quality evaluation efforts.

Finally, many program managers do not view evaluation as an activity of value to <u>them</u>. Rather, evaluation is viewed as something done at the request of others (e.g., funders) which is of little internal use. Unfortunately, this perspective is often valid, although evaluators are becoming increasingly aware of the need to design evaluation research which is responsive to internal as well as external information needs.

An obvious recommendation in the area of evaluation is the need to make program funders aware of the integral role evaluation plays in program development. It is often recommended that program funding carry an evaluation requirement, but it is less common that a reasonable percentage of program budget be specifically allocated to meet this requirement.

It would also be desirable to develop a central resource that would enable program staff to contact skilled evaluators when it is felt that additional consultation is needed. Such evaluation networks have been attempted in the alcohol and drug abuse area in the past (see, for example, Kaufman, et al., 1982) with excellent results.

Finally, evaluation guidelines should be developed that outline minimum acceptable standards for adequate program evaluation (design, measurement, evaluation implementation, and analysis). The Department of Transportation has developed a manual for the evaluation of bicyclist and pedestrian safety programs, the National Institute on Drug Abuse has developed several such guides for the evaluation of drug abuse prevention programs (see for example, French and Kaufman, 1981). These documents could serve as models for the development of guidelines specifically tailored to the needs of youth DWI prevention programs.

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# SECTION VI APPENDICES

## APPENDIX A LITERATURE REVIEW CITATIONS

This annotated bibliography represents a subset of the total literature cited in this report. Citations for the annotated bibliography were selected to be of broad, general interest.

#### EPIDEMIOLOGY OF DRUNK DRIVING

Douglass, R.L., "Youth, Alcohol, and Traffic Accidents: Current Status, "<u>Recent Developments in Alcoholism</u>, Vol. 1, Plenum Press, New York, NY, 1983.

The chapter discusses the results of a comprehensive review of the literature and research on the consequences, causes and proposed prevention strategies related to youthful drinking and driving. Several recommendations for continued research are also presented.

Douglass reports in his introduction that although youth has been a dominant factor in incidences of alcohol-related traffic crashes since 1940, youth in the DWI prevention programs have continually failed. Efforts have been unsuccessful largely because of the characteristics of youthful drinking practices, and the underlying reasons for youth DWI were rarely incorporated into programs. In fact, he notes that many programs are based on adult behavior models, which have little probability of success with youth. One reason given for the paucity of youth-targeted programs is a state of knowledge that is largely descriptive. However, the 1968 publication of the Secretary of Transportation's, "Alcohol and Highway Safety Report" to Congress, gave impetus to a new wave of Federal initiatives and research on youth alcohol consumption and driving. Only since 1968 has the literature acquired a truly scientific character. Other noteworthy findings from Douglass' review include:

- The probability of alcohol involvement increases with the severity of the crash, and for all traffic crashes, young drivers are considerably more likely to have been drinking than older drivers.
- Although past explanations for the exceptional numbers
  of young drivers involved in traffic crashes are
  related to their exposure to the road, when data are
  controlled for exposure, young drivers aged 16-24 are
  still more likely to be involved in a crash after
  drinking.
- In a 1970 study, Waller (for this and following numbered study citations, complete reference information is included in the Bouglass article, listed under the noted reference number) contended that exposure is an inadequate explanation for the over involvement of youth in traffic crashes and suggested that this kind of exposure was likely to be as important as the quantity.

- In a 1975 national survey of high school students, 32% acknowledged "riding in cars with 'heavily intoxicated drivers' at least once a month." These same students had little understanding of the hazards of DWI. Moreover, only 25% of teen passengers of a vehicle driven by a drinking youth are likely to be "better risks" (Waller).
- Although a large percentage of teens who crash fatally after drinking are very intoxicated, fatally injured young drivers who have been drinking tend, as a group, to have a lower BAC than older drivers who crash similarly.
- In a 1977 study, DAMKOT, et al. found that younger males considered beer less likely to cause an alcoholrelated crash or to be as intoxicating as liquor.
- Recent studies found that adolescents who are likely to drink frequently and subsequently drive are not necessarily deviant regarding academic performance, school sports involvement, social behavior, liberalism or impulsivity. Young drivers involved in alcoholrelated crashes beyond high school, however, are more likely on the average to have prior traffic violation convictions; previous traffic crashes; marital problems; to be unemployed; and to have discontinued formal education after high school. Young drivers killed in alcohol-related crashes are more likely than others to have lower educational and socioeconomic levels.
- In a summary of the state of knowledge of alcoholrelated traffic crashes among youth, Douglass concludes that for certain youth and at certain times in a young person's life and during or subsequent to certain life events, the likelihood of an alcoholrelated crash is greater than expected, indicating that the overall problem is not an entirely random process. Rather, increasingly it appears to be predictable.
- For successful youth DWI prevention, precrash research that is psychological, sociological, or of a broad scientific perspective is appropriate. Questions pursued should relate to why certain youth drink, with whom they drink, how they drink, what they drink, and why they drive after drinking.
- Although many reports and popular articles suggest cultural reasons for the prevalence of drinking and driving among youth, the actual motivational and other psychological factors determining these behaviors have
not been sufficiently studied.

- The environment in which youthful drinking and driving occurs is not well understood, and includes the availability of alcohol to youth. The recent increases in the legal purchase and drinking age afford a rare natural experiment for testing the effect of limited alcohol availability on alcohol-related teenage deaths and injuries.
- Efforts to modify behavior in order to reduce alcoholrelated crashes need to be initiated well before youth are able to drink or drive legally, because by that time attitudes and behaviors are fairly well established. Research should seek to understand the attitudes and beliefs about drinking and driving among youth aged 10-15, and educational programs should be developed accordingly.
- Lastly, new knowledge of youth beliefs and perspectives on drinking and driving must be incorporated into field tests and immediately evaluated for behavioral or attitudinal impact.

"Drinking and Driving: A Serious Public Health Problem," <u>Consumer Reports</u>, Vol. 40, No. 7, p. 353, 1983.

Article reports that among youth, alcohol exacts an especially tragic toll and is the leading cause of death in the 16-24 year age group. Current evidence shows that losses in reaction time and coordination can occur at blood alcohol levels well below the 0.10% considered intoxicating. Moreover, the impairment from seemingly modest amounts of alcohol is magnified if consumed with other drugs. States emphasizing the enforcement of strict drunk driving laws are likely to save the most lives, while those that depend largely on the deterrent value of penalties may only repeat earlier failures. "Drinking and Driving Behaviors of Grades 10-12 in One Rural High School," <u>Current Issues in Alcohol and Drug Abuse</u> <u>Nursing: Research, Education and Clinical Practice</u>, Conference Proceedings, pp. 98-104, Washington, D.C., May 18-20, 1983.

A study was performed to assess the local nature of student drinking as a basis for prevention recommendations. A self-report questionnaire of 113 items was administered to 164 students in the 10th and 12th grades in a rural community. The instrument was divided into four sections: demographic, curricila placement of alcohol and drinking and driving content, drinking and alcohol-related behavior, and driving and drinking data. Students' responses indicated that driving after drinking was commonplace. More than half the students had been passengers in a car with a drunk driver, and nearly 40 percent had driven a car after two drinks. Students who drive drunk reported themselves as frequent drinkers and were likely to drive more often than other students. Their drinking was likely to occur on weekends rather than only on holidays. Drunk drivers in this student population were more likely to be male, and in the 12th grade rather than 10th. Findings indicated that primary prevention of alcohol abuse is closely related to prevention of drunk driving. Prevention strategies suggested include instructuring teens on how to avoid being a passenger with a drunk driver, choosing alternate transportation, and targeting information efforts to parents. Alcohol misuse by adults should be explored especially since young people driving under the influence may be reflecting the behavior of adults.

Herbert, D.C. "Drunk Driving Background Materials," presented at the Drunk Driving Conference, New South Wales Department of Education, Newport, May 27, 1980.

The paper overviews some statistics on the negative effects of alcohol on driving performance, and discusses the population most at risk: teenagers. Young drivers are not likely to be deferred from DWI by formal sanctions alone. Rather it is the informal sanction (i.e., peer attitudes, a social tolerance for DWI) which must first be changed and then used in conjunction with legal penalties and continuing alcohol education programs to reduce the incidence of youth DWI.

The author discusses previous anti-drinking/driving programs, especially mass media campaigns, and why they failed. His conclusion is that mass media campaigns designed to increase the public's knowledge of the hazards of DWI, although a needed ingredient of any effort, are ineffective when used alone to catalyze widespread behavioral change. An in-depth review of the SIOB campaign grew out of a survey of community drinking/driving

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habits conducted in 1971, and revealed that permissive social attitudes were the major cause of irresponsible drinking and driving in communities. These attitudes, until changed, would continue to contribute to the persistence of DWI and its consequences. A mass media campaign was implemented to change social attitudes, especially among youths who are most vulnerable to social pressure. It was targeted not at road user behavior directly but at the permissive attitudes supporting this behavior. Post campaign evaluation conducted by the Australian Bureau of Statistics demonstrated a dramatic increase in knowledge about alcohol and traffic crashes, and a small but statistically significant change in attitude. The campaign cost of achieving that small attitude change was great enough to warrant implementing alternatives. A secondary school drinking/driving educational program is advocated. "Once less permissive attitudes become more common among young people as a result of school programs, mass media campaigns may then serve to reinforce and spread anti-DWI attitudes throughout the community.

Koningsberg, D.; Weinhouse, B.; Wechsler, J., "Teenagers and Alcohol: Holiday Hazard, Year-Round Tragedy," <u>Ladies</u> <u>Home Journal</u> Vol. 100(12), pp. 78, 80, 86, 87, 141, 1983.

The article describes the nature and prevalence of adolescents' alcohol use (the most misused drug of all American youth), and suggests to parents ways to defeat and also deal with it. Some statistics on, and examples of, alcohol-related tragedies among teenagers are provided to illustrate the problem. How parents, the alcohol industry, advertisements, and television are perpetuating youthful drinking are discussed, and what methods parents and organizations are using to counsel youth about drinking are described. In examining television programming during 1981-82, researchers at California's Institute for Scientific Analysis found that both sitcoms and dramas contained more than eight incidences of alcohol consumption in an average viewing hour. Overall, half the time actors were portrayed drinking anything, the drink was an alcoholic beverage. And, it is estimated that the average youth is exposed to nearly four thousand drinking scenes on television each year. Parents are chastised as poor models for their teenaged children, since, as adults, they often may turn to alcohol as a coping method. The article notes however, that besides reacting to external forces such as parents, advertisements and television, teenagers also abuse alcohol for reasons stemming from their own immaturity. Social psychologist Richard Jesser of the University of Colorado believes that what often passes for youthful recklessness and stupidity is largely a matter of inexperience--in driving, in drinking, and in life. Without an adult sense of mortality or an understanding of responsibility for one's own safety, he explains, drinking--a relatively new experience for

most kids--becomes the catalyst for youthful actions and emotions that frequently cause traffic deaths and fatalities.

Lowman, C., "Facts for Planning, No. 1: Prevalence of Alcohol Use Among U.S. Senior High School Students," <u>Alcohol Health Resource World</u>, Vol. 6, No. 1, pp. 29-40, 1981a.

This article is first in a series of articles on youthful drinking practices based upon national surveys conducted by the Research Triangle Institute (RTI) for NIAAA. Findings from a survey testing the prevalence of adolescent alcohol use include:

- most senior high school boys and girls have used alcohol by the 10th grade;
- frequency of alcohol use increases significantly between 10th and 12th grades;
- the sharpest increase in heavy drinking among senior high school boys is between 10th and 11th grades;
- more senior high school boys than girls use alcohol, but the gap is narrowing; and
- there is more alcohol use among suburban senior high school students than among those in big cities.

Lowman, C., "Facts for Planning, No. 3: U.S. Teenage Alcohol Use in Unsupervised Social Setting," <u>Alcohol Health Resource</u> <u>World, Vol. 6(2), pp. 46-52, 1981b.</u>

The article report results from a 1978 survey of senior high school students regarding aspects of their drinking habits. Significant findings are that: (1) nearly 25% of the students surveyed admitted often drinking in cars at night; (2) about twice as many (26%) small town students drink in cars at night as compared to big city students (12%); and (3) nearly one third often drink when in teenage hangouts and unsupervised. Strategies to reduce teen drinking are also discussed. "Patterns of Alcohol Use Among Teenage Drivers in Fatal Motor Vehicle Accidents: United States, 1977-1981," <u>Morbidity and Mortality Weekly Reports</u>, Vol. 32, No. 26, pp. 344-347, 1983.

National data from the Fatal Accident Reporting System (FARS) for the years 1977-1981 show that the overall proportion of drivers with measurable blood alcohol concentration (BAC) steadily increased. The percentage of teenage drivers (15-19) showing measurable BAC's rose from 20% in 1977 to 28% in 1981. Comparable increases occurred among young adults aged 20-24, and adult drivers aged 25 or older. BAC test results in 1981 demonstrate that 21% of the 8,790 teenage drivers involved in fatal motor vehicle crashes had been drinking alcoholic beverages. However, the extent of alcohol use among drivers involved in such crashes varied markedly depending on the drivers' sex and age, number of vehicles involved, time of day, and day of the week. More single vehicle fatal crashes than multiple vehicle fatal crashes have been estimated to involve drivers with high BAC levels. In 1981, 28% of the 4,199 teenage drivers involved in SVFA had positive BAC's as compared with 14% of the 4,591 teenagers drivers involved in MVFA's. Two national probability surveys show a larger proportion of young adult drivers reported general alcohol use than did teens or adult drivers. Proportionally, more people in their twenties report higher levels of alcohol use and alcohol-related problems than do members of any other age group. The risk of a fatality from all alcohol-related vehicle crashes is high for teenagers, and increases in the 20-24 age group.

Scoles, P.; Fine, E.N., "Substance Abuse Patterns Among Youthful Drinking Drivers," <u>Alcoholism: Clinical and</u> <u>Experimental Research</u>, Vol. 5(1), January 1981.

Seventy-five youthful offenders arrested for DWI during 1978-1979 were evaluated by the National Council on Alcoholism-Alcohol Highway Safety Program of Philadelphia. Clinical background characteristics and scores on the Quantity-Frequency (Q-F), Impairment Index (I.I.), Severity of Drug Abuse Index (SDA), and Blood Alcohol Concentration (BAC) were cross-tabulated for the total population on sixteen variables. Sixty-eight percent reported alcohol and other controlled substance abuse. Thirty-one percent of this population reported consumption of four or more drugs prior to arrest. Twenty-eight percent of the multiple drug users reported moderate to severe drug patterns (as determined by the SDA), in conjunction with their alcohol intake. Statistically significant associations were found between low BAC's and multiple drug use patterns, crashes and multiple drug user, and crashes and education levels. In conclusion, the authors called for the design of specialized educational and treatment programs accenting polydrug complications, peer pressure, and primary prevention.

Simpson, H.M.; Mayhew, D.R.; Warren, R.A., "Epidemiology of Road Accidents Involving Young Adults: Alcohol, Drugs and Other Factors," <u>Drug and Alcohol Dependence</u>, Vol. 10, pp. 35-63, 1982.

The paper reviews the magnitude and characteristics of road crashes involving young adults. The magnitude contribution of road crashes to mortality and morbidity among young adults is examined to determine the extent to which it occurs as a result of their involvement as drivers, passengers, and pedestrians. To determine the characteristics of collisions involving young adults, the potential contributory roles of alcohol, drugs and other factors in their collisions is evaluated on the basis of current epidemiological evidence, drawn especially from studies conducted in Canada. The review examines factors that are not only related to the frequency of collision involvement, but also to the severity of the collision.

Although the principal intention of the review is to identify what is known about factors that appear to contribute to crashes involving young adults, an added purpose is to identify what is not known, and in this context, to suggest, given current methodological and practical limitations, what can be determined in the near future.

"A Special Issue: Teens and Autos: A Deadly Combination," <u>The Highway Loss Reduction Status Report</u>, Vol. 16, No. 14, pp. 1-11, September 23, 1981.

This special edition summarizes and highlights findings of several Insurance Institute for Highway Safety Research reports about teenagers and motor vehicles. Studies reviewed include: (1) <u>Teenage Drivers and Motor Vehicle Deaths</u>, R.S. Karpf and A.F. Williams; (2) <u>Patterns of Teenage Driver Involvement in</u> <u>Fatal Motor Vehicle Crashes: Implications for Policy Options</u>, L.S. Robertson; and (3) <u>The Effect of Raising the Legal Minimum</u> <u>Drinking Age on Fatal Crash Involvement</u>, A.F. Williams; P.L. Zabor, S.S. Harris; and R.S. Karpf.

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Tyson, W., "Wyoming Teenagers Discover Drinking, Driving and You," <u>Traffic Safety</u>, Vol. 84, No. 2, pp. 14-16, 1984.

Article reports that nearly 60% of traffic fatalities in Wyoming are attributable to alcohol-impaired drivers, and that this problem is particularly acute for teenaged drivers. Forty-one percent of all fatally injured traffic victims in Wyoming in 1981 were between age 15-24. Thus, representatives of the Wyoming Safety Council and the Wyoming Highway Patrol developed an anti-drunk driving plan, and decided to present the National Safety Council's two-hour alcohol supplement to the Defensive Driving Course (DDC), entitled "Drinking, Driving and You," to all high school seniors. By mid-May, 1983, the program was presented to 2,796 students in 45 Wyoming high schools, reaching at least 40% of the first year's target population.

Williams, A.F.; Karpf, R.S., "Teenage Drivers and Fatal Crash Responsibility," <u>Law and Policy</u>, Vol. 6(1), January 1984.

The article reviews and discusses fatal traffic crash statistics and concludes that young drivers, especially teenage drivers, are disproportionately involved in fatal crashes. The bulk of the problem related to young drivers is due to teenage males. The reason for this is not fully known, but there is evidence that the type of driving that leads to crash involvement and responsibility for crashes in which one is involved is associated with characteristics that are much more common among young males than females. Character traits that are generally associated with masculinity are frequently associated by young men with driving (e.g., owning a car, high mileage, speeding, risky driving).

One study found (Sober and Underhill 1976) that whereas traits such as rebelliousness and risk taking were associated with crash involvement among young males, the only important predictor of crash involvement among young females was the number of miles driven. Other noteworthy points include:

> Attempts to reduce the deaths associated with driving of teens have relied on policies aimed at producing drivers who are less likely to crash. These policies have included use of education, restrictive licensing practices, driving law enforcement, and suspension or rehabilitation of drivers with crashes or violations. These policies have at best only limited success (Robertson, 1981).

- Another approach to reducing teenage traffic fatalities is to reduce their exposure. For example, an unexpected by-product of the elimination of state funding for driver education in Connecticut was a reduction in the percent of the 16 and 17 year old population obtaining drivers licenses, which in turn greatly reduced their per capita crash involvement (Robertson, 1980).
- Curfew laws, enacted in some states, have shown to be effective in reducing the number of traffic crashes involving teenagers (Preusser, Williams, Zador, and Blomberg, 1984).
- It is concluded that the deaths resulting from teenage driving could be most effectively reduced by adopting policies that reduce their exposure as drivers, and by ensuring that long proven automatic injury-reduction technologies such as antiburst door locks, energy absorbing steering columns, and airbags become standard equipment in all motor vehicles.

Williams, A.F; Lund, A.K: Preusser, D., "Driving Behavior of Licensed and Unlicensed Teenagers," Insurance Institute for Highway Safety, Nov. 1984.

The paper discusses findings of a 1983 questionnaire survey of high school students in seven states conducted to determine teenagers' access to cars and their amount and type of driving. Considerable illegal driving was reported by unlicensed drivers, both those with learners' permits and those without. Licensed drivers have ready access to cars with the majority owning one, and parents to some extent influence or control whether or not their children own cars. Because car ownership is likely to encourage more driving, which is associated with increased crashes, parents should be aware that they may be increasing the car crash risk of their sons and daughters by allowing car ownership.

In each area surveyed, more than one-third of the license holders reported that they usually drive to school; in Orange County, California and rural Colorado, nearly two-thirds do so. One-third of male licensed drivers and 14% of female licensed drivers said they drove more than 70 miles per hour once a week or more. <u>Twenty five percent of male licensed drivers and</u> <u>11% of females said they drove after drinking once a week</u> <u>or more.</u> At the time of the survey, the minimum alcohol purchase age was 18 in Louisiana, 19 in New York State, and 21 in the other five states (except the allowance of drinking 3.2% beer by 18 years olds in Colorado and Mississippi). Thus, for all of the

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15 to 17 year old students surveyed, and most of those 18 or older, the purchase of alcoholic beverages was illegal. Yet, many reported drinking and driving. More males than females reported drinking and driving, and for both sexes the frequency increased with age. Furthermore, there was little variation in drinking and driving patterns in the seven surveyed areas. (In contrast, a substantial regional variation in the extent of driving by unlicensed students was found, with Mississippi reporting the most illegal driving followed by Louisiana and Colorado).

More than 40% of males and females who had held licenses for at least two years reported having had one or more crashes. Earning lower average high school grades was associated with car ownership, high weekly mileage, speeding, driving after drinking, and having traffic tickets and crashes. In addition the authors report finding an interrelation between several of the driving variables analyzed: driving to school, owning a car, having high weekly mileage, driving more that 70 miles per hour, driving after drinking, and having crashes and traffic violations. In all seven surveyed areas, ad for both males and females, licensed drivers having any one of these characteristics were more likely to have all the others.

The study is relevant to development of youth DWI prevention programs for several reasons: (1) because of its discussion specifically of adolescent drinking and driving patterns; (2) because of its potential application in considering licensing sanctions against youth DWI; and (3) because of its application in reviewing the prevention option of raising the minimum driving age.

Vejnoska, I., "Putting the Brakes on Teenage Drunk Driving," <u>Police Chief</u>, Vol. 49, No. 12, pp. 35-38, 1982.

The article presents statistical data on drunk driving illustrating the magnitude of this problem, especially among teenagers. Discussed are barriers to the recognition of the youth drunk driving problem; why drunk driving is such a pervasive problem among youth; how to deal with the problem; police response to teenage drinking problems; and public support for approaches taken by police to reduce teenage drunk driving.

Some of the explanations of youth drunk driving are posed, such as: (1) young people are more inexperienced than the atlarge driving population in both drinking and driving; (2) many youth drive more often and at great speeds; (3) many teens feel that in order to fit in with peers, they must participate in social situations involving alcohol use and driving; (4) the group most often engaging in drinking and intervention strategies; and (5) it has often been the case that many people are more tolerant of drunk driving than other crimes.

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# PROGRAM APPROACHES AIMED AT REDUCING YOUTH DWI

Ashwell, J.F., "In Amherst--Town and Gown Unite to Fight Drunk Driving," <u>Traffic Safety</u>, Vol. 83, No. 4, pp. 14-16, 30-32, 1983.

Article describes an alcohol prevention program instituted in Amherst following the worst period of traffic deaths ever experienced in the western Massachusetts community. In 14 months, 13 residents died in traffic crashes. Nine of the victims were students, and alcohol was a factor in all but three crashes. Local police and university officials worked together to combat DWI through enforcement linked with education in judicious drinking and responsible barkeeping.

Beck, L., Introductory Remarks at Preview of the "Just Along for the Ride" film, Drunk Driving Awareness Week Meeting, Washington, D.C., December 12-13, 1982.

Lowell Beck, President of the National Association of Independent Insurers (NAII) noted that the film, "Just Along for the Ride", was targeted at teens to deter them from drinking and driving. The film shows the consequences of DWI and presents some alternatives open to youth "regardless of the peer pressure" to drink and drive. Available free of charge to interested schools, the film is designed to spark classroom discussion.

Callen, K., "The Secretary's Conference for Youth on Drinking and Driving, Special Report," <u>Public Health</u> <u>Reports</u>, Vol. 98(4), pp. 336-343, 1983.

Article describes the "National Conference for Youth on Drinking and Driving," sponsored by the Department of Health and Human Services and held on March 26-28, 1983 in Chevy Chase, MD. Eight successful, student-run drunk driving programs were featured: (1) The Control Factor Program (MN) trains selected high school juniors and seniors to conduct alcohol safety education programs for underclassmen. Supported by the state and sponsored by each separate school district, the program operated on the premise that "young people can have a positive impact on other young people's behavior"; evaluative data supports that belief; (2) National Student Safety Program (NSSP) is a national resource program for students wishing to initiate safety programs in their schools. The four safety areas supported by the program are consumer product safety, general safety (home, school, vacation, etc.), special safety (Halloween, hunting, etc.), and driver/traffic safety. The underlying program premise is

that student participation in community projects of social consequence is key to developing a sense of responsibility for others, and that students have the desire, resourcefulness, and ability to contribute significantly to solving current problems. Based on class discussions, pre-and post-knowledge tests, student ratings and school activities, the project proves successful; (3) Students Against Driving Drunk (SADD) is a peer-organized, peer-run alcohol education program designed to deter drunk driving by teenagers and others in the community. The program operates on the premise that students will be better able to avoid DWI situations if they have an understanding of the effects of alcohol, especially in impairing driving performance, of their own attitude toward drunk driving, and have planned ways to cope with or avoid DWI situations; (4) Project Graduation-begun in towns and cities across Maine, the Project objective is to provide graduating seniors "dry" parties to deter drinking and driving during graduation time. The program rests on the premise that students can enjoy graduation without alcohol and drugs if provided with pleasureable alternatives. Although no formal study was conducted as of Spring 1983, results from certain school districts suggest its effectiveness; (5) Peer Resource Education Program (PREP) began in Wisconsin in 1978. The program's goal is to provide school and community alcohol and drug education through high school volunteers. The assumption is that teens relate best to each ather, understand peer pressure, and are the major source of information for each other, and with appropriate training, students can serve as good resources. Student and audience evaluations demonstrate program success; (5) Ohio Teen Institute--since 1965 the program has trained young people across the state to develop and implement substance abuse prevention activities in their schools and communities. The program's basis rests on the belief that teenagers can have a positive impact on the drinking and driving attitudes and behavior of their peers, and can take a responsible role in their communities; (7) Operation Snowball is a peer leadership program operating through a state, regional, and local level agency network to provide teens with the training and support needed to develop and operate alcohol abuse prevention programs. The Established overall program success is measured by its growth. in 1977, by Spring 1983 the program claimed 37 chapters; (8) Southern Oregon Drug Awareness (SODA) works to raise students' and the community's awareness of the prevalence and hazards of alcohol and drug abuse and provides support to county agencies and others working to stop abuse. All facets of communities are enlisted to provide a comprehensive deterrent force. Peer counseling and safe rides are available.

Dennis, M.E., "Adapting the Texas DWI Curriculum for Public Schools," <u>Magazine of The Texas Commission on Alcoholism</u>, Vol. 9, No. 1, pp. 9-11, 1983.

The Texas Driver Education Curriculum Guide devotes a portion of one unit to alcohol and highway safety, but no uniform approach is used by programs in Texas and no specific time allocation is prescribed. In this article, the author suggests ways of adapting the Texas DWI curriculum for use in public schools, specifically, high schools. Modles incorporated in this curriculum are summarized. Because these adaptations result from a subjective analysis of the curriculum by one person, it is suggested that to determine if these revisions and condensations really work, models need to be developed, implemented and evaluated.

Duryea, E.J., "Preliminary Six-month Follow-up Results of a Preventive Alcohol Education Intervention," Conference Paper, <u>American Public Health Association</u>, Annual Meeting, November 13-18, 1983.

The paper reports findings of a study to test the effectiveness of immunizing ninth-grade students against persuasive prodrinking and driving arguments as a DWI prevention method. An experimental group participated in a one-week program designed to acquaint them with possible pro-drinking and driving arguments. (A review of alcohol education literature and interviews with a comparable sample of students provided the contents of each argument.) Through films, discussions, slide shows and role playing of peer pressured situations, the experimental group learned how to refute various possible arguments of peers, siblings and adults. Results demonstrated significant positive outcomes for the experimental group's knowledge, refutation of arguments, and compliance and frequency of accompanying drinking drivers. Students were able to learn an important health skill and achieve intermediate health-promoting objectives related to that skill. A six-month follow-up study tested the ability to refute persuasive pro-drinking and driving arguments, tendency to comply in risky alcohol situations, frequency of riding with drinking drivers, frequency of drinking, frequency of refusing to ride with drinking drivers, frequency of refusing drinks, and frequency of accepting drinks. For the first two dependent measures and two of the five behavioral measures, outcomes were positive. Based on the psychological theory that individuals forewarned against a persuasive argument can resist its appeal, the planned immunization of students was viewed, to an extent, successful.

Jacobs, G., "Implementation Guide for Establishing a Youth Traffic Safety Council," Jacobs and Associates, Plymouth Meeting, PA, No. DOT-HS-806-031, 1982.

The Guide was developed for state and local officials interested in establishing an organizational framework for youth activity in highway casualties and the enormous influence of peer pressure. The guide emphasizes youth activity at the local level, supported by states through a network of communications and materials resources. Recommendations are given for organization, the extent of state personnel and money, state and regional conferences, and specific suggested activities.

Kohn, P.M.; Goodstadt, M.S.; Cook, G.M.; Sheppard, M.; Chan, G., "Ineffectiveness of Threat Appeals about Drinking and Driving," <u>Accident Analysis and Prevention</u>, Vol. 14, No. 6, pp. 457-464, 1982.

The article reports the findings of a study in which four groups of high school students in a southern Ontario (Canada) county were each exposed to one of the following films: - A High-Threat, Medium-Threat, or Low-Threat appeal about impaired driving, or an irrelevant control film. The threatening films evoked varying degrees of general upset (anxiety, depression, loss of pleasure, and disgust), rather than just fear alone. All three experimental groups outscored control subjects on an immediate post-test measure of knowledge about drinking and driving; however, this advantage dissipated by the delayed post test administered six months later. The high and low-threat films actually evoked more permissive attitudes to impaired driving than the control subjects on an immediate post-test; however, no attitudinal differences among treatments appeared on the delayed post test. The experimental films also failed to affect self-reports of impaired-driving frequency over the six months between the two post-tests. Possible reasons are suggested for the evident ineffectiveness of the threat appeals, and possible issues for further investigation are identified.

Morris, R., "Peer Education Teaches Minnesota Teenagers 'The Control Factor' in Drinking and Driving," <u>Traffic Safety</u>, Vol. 83, No. 5, pp. 6-8, 29, 1983.

Article describes Minnesota's efforts to find a solution to the persistent problem of youth DWI by reaching teenagers directly. In 1979, the Minnesota Safety Council, working with the State Education Department, developed and implemented a statewide program dedicated to peer education in traffic safety: the Minnesota Student Traffic Safety Organization (MSTSO). Funded by the State Department of Public Safety, the program was based on successful models for other states. Unfortunately, what worked for other states was unsuccessful in Minnesota, and MSTSO ended. However, before its dissolution, the MSTSO Board and membership formulated a list of recommendations that became the cornerstone of the successful Control Factor Program of public safety.

The Control Factor is a peer education program designed to be presented to high school freshmen and sophomores by a team of trained juniors and seniors. The program is presented in three 50-minute class periods over a three-day span. The Control Factor strives to establish and maintain an open and informal atmosphere in the classroom relying on slide presentations, videotapes, audio material, worksheets, and small group discussions.

The program was developed with the realization that youth under the drinking age do drink and drive, and traditional approaches of employing scare tactics, moralizing, or lecturing about the dangers of drunk driving had little impact.

Raymond, A., "Young Drinking Drivers' Course - A New Approach in Australia," <u>The Globe</u>, No. 1, pp. 17-19, March 1983.

The article describes a youth drinking driver program conducted since 1976 by the Department of Community Medicine, St. Vincent's Hospital, Victoria Australia, which targets young adults, aged 26 and under, who have been convicted of drunk driving offenses. The aim is to help young drivers understand more clearly the risks associated with excessive drinking especially when combined with driving, through involvement in two-hour sessions held one evening a week covering topics such as: (1) the effect of alcohol on driving performance; (2) association of raised blood alcohol level with raised crash risk; (3) short and long term physical effects of alcohol; (4) alcohol dependency; and (5) case histories.

This early intervention program rests on the assumptions that many, perhaps most, young drinkers are unaware that excessive alcohol use has long term implications and that young drivers often do not see the link between bad experiences and drinking. Rather they attribute their trouble to bad luck. Since its inception, the program has functioned as a model for others. Rozelle, G.; Gonzales G., "A Peer-Facilitated Course on Alcohol Abuse: An Innovative Approach to Prevention on the College Campus," <u>Journal of Alcohol and Drug Education</u>, Vol. 25(1), pp. 20-30, 1979.

The article describes the evolution of alcohol education from a primarily authoritarian, moralistic approach to a peerfacilitated method significantly increasing students' responsible attitudes and decreasing negative consequences of drinking as measured by the Student Drinking Questionnaire. In addition, an academic course on alcohol abuse was shown to be an important part of the campus alcohol abuse prevention program.

## THEORETICAL AND CONCEPTUAL ISSUES RELATED TO YOUTH DWI

Beck, K.M., "Driving While Under the Influence of Alcohol: Relationship to Attitudes and Beliefs in a College Population," <u>American Journal of Drug and Alcohol Abuse</u>, Vol. 8, No. 3, pp. 377-388, 1981.

The article describes a study in which two social psychological theories (the Fishbein Model and the Health Belief Model) were used to derive attitude and belief factors to predict intentions to drive while under the influence of alcohol. and actual drinking-driver behavior in a college population. The results revealed strong support for the Fishbein theory: attitudes and normative beliefs predicted intentions, while intentions were the best predictor of subsequent behavior. From the Health Belief Model, specific beliefs regarding one's effectiveness at being able to avoid getting caught by the police and cause an crash while driving under the influence of alcohol were also significantly related to drinking-driving intentions and behavior. These findings indicate that decisions to drink and drive are the result of one's personal evaluation of behavior and one's perceived ability to control the threatening consequences. Thus drinking and driving may continue to be prevalent in a college population because they erroneously believe that they are still safe drivers and effective at controlling the attendant risks.

Blane, H.T., "Problem Drinking in Delinquent and Nondelinquent Adolescent Males," <u>The American Journal of Drugs and</u> <u>Alcohol</u>, Vol. 9, No. 2, pp. 221-232, 1982-83.

The chapter notes that clinical evidence suggests that problem drinking among adolescent delinquents is more severe than among nondelinquents and is accompanied by greater social pathology. This investigation explored this question empirically by comparing samples of delinquent (n=49) and nondelinquent (n=100) adolescent male drinkers matched on age and race and controlling for community size and region of the country. Criteria for problem drinking and other measures duplicated those developed for a national probability survey of teenaged drinking practices conducted in the U.S. during 1974-75. Results replicated the often reported higher incidence of problem drinkers among delinquents than nondelinquents. In short, delinquent problem drinkers showed more severe involvement with alcohol and drugs and more signs of social pathology than nondelinquent problem drinkers. Delinquent problem drinkers drank more, drank more frequently, reported more negative consequences from drinking in more areas, and perceived themselves as having a

drinking problem more often than nondelinquent problem drinkers. These differences were not found between delinquent and nondelinquent subjects who showed no evidence of drinking problems. The results have implications for treatment and rehabilitation of juvenile offenders and for the construction of policy-relevant definitions of problem drinking in young people.

Boyd, N.R.; Huffman, W.J., "The Relationship Between Adult Maturity and Drinking-Driving Involvement Among Young Adults," <u>Journal of Safety Research</u>, Vol. 15, No. 1, pp. 1-6, Spring 1984.

The relationship between emotional maturity and drinkingdriving involvement among persons aged 25-34 was studied. Variables were sex/age broken down into two groups (25-29 and 30-39), and six drinking and driving categories. The revised Huffman Inventory was used to measure emotional immaturity, and was administered to graduate students at The University of Tennessee at Knoxville during the summer of 1981. A table of random numbers was used to obtain a sample of 326 subjects. A three-factor analysis of variance was used to test the hypothe-'ses. If a difference among groups was significant (p < .05), Duncana's Multiple Range Test was applied to determine where those differences were. The conclusions were: (1) among females and males in the same age group, females are more emotionally mature; (2) age is a factor in emotional maturity in that emotional maturity increases with age; (3) there appears to be a link between emotional maturity and drinking and driving involvement in that persons with lower emotional maturity are more likely to drive while under the influence of alcohol; and (4) the highest mean emotional maturity score was that of persons who drink but were not drinking drivers and suggested that these individuals' locus of control was internal, and they tended to be more risk conscious. (Locus of control, developed by Rotter (1954) as a variable within social learning theory, refers to the extent that an individual believes that reinforcement hinges upon his or her behavior. Internal--the idea that reinforcement results from individual's own behavior.)

The authors also conclude that the low emotional maturity scores of the drinking groups in this study suggest that current school curriculum is lacking in values-clarification and decision-making skills; both areas are important in the development of proper habits and attitudes toward responsible alcohol use, and ultimately drinking and driving. The authors advocate states mandating health and safety education in grades K-12, to include lessons in values clarification and decision-making with regard to alcohol. Research cited in the article (Diamond & Shapiro, 1973; Eiseman, 1972; Parcel & Nader, 1977; Parks, Becker, Chamberlain, & Crandau, 1975) shows that successful educational programs can be designed to change individuals from an external to an internal locus of control. Programs could be devised to teach externals in regard to alcohol and driving with the ultimate goal to change the external to an internal locus of control.

Burkett, S.R.; Carritners, W.T., "Adolescents' Drinking and Perception of Legal and Informal Sanctions: A Test of Four Hypotheses," <u>Journal of Studies on Alcohol</u>, Vol. 41, No. 9, pp. 839-853, 1980.

Four hypotheses are examined in an effort to establish a more complete understanding of the impact of legal sanctions on adolescents' drinking behavior. The findings are consistent with the implications of deterrence theory. "Peer disapproval contributed most, and parental disapproval least to explaining adolescents' drinking behavior. Adolescents' moral commitment to laws and their perception of the certainty of legal sanctions had intermediate effects."

Cameron, T., "Drinking and Driving Among American Youth," Drug and Alcohol Dependence, Vol. 10, pp. 1-33, 1982.

The author discusses the various conclusions and findings of research concerning youth, alcohol use, and traffic safety. Noteworthy facts include:

- Traffic crash data indicate clearly that a large proportion of crashes involve drivers under the age of 25. Even after differential exposure to traffic crashes is controlled, young drivers remain overrepresented in both alcohol-related and non-alcohol related traffic crashes.
- The relative risk of crash involvement increases markedly among drivers at even relatively low blood alcohol concentrations.
- When persons under 25 are compared as a group with those 25 and older, a larger proportion of young people in the general population both approved of and reported that they engaged in drinking and driving behavior.

However, the actual proportion of young persons in the general population who indicated that they had ever been arrested for driving impaired, or that they had a traffic crash as a result of drinking, was quite small.

- Although limited, data on social psychological and behavioral correlates of youthful drinking and driving problems indicated some association between feelings of rebellion, hostility and alienation (as measured by attitudes towards parents, schools and society), and increased numbers of traffic violations and crashes.
- For young drivers aged 16-19, most studies agree that the likelihood of having been drinking prior to crash involvement is lower than that of older groups. They are also, if drinking is involved, likely to have lower BAC's.
- Teenagers are less likely than young adults in their twenties or thirties to have been drinking before crash involvement.
- The proportions of drinking and impaired drivers increases with age until the peak age group; 30-39.
- Over 50% of students drink because of the social functions of alcohol, and reasons given for drinking reflect the reasons given by parents.
- Race and religion appear to influence an adolescent's attitude toward drinking: students with no formal religious affiliation scored lowest in knowledge; black students express more negative attitudes toward alcohol use, which may be a result of parental influence.
- The study revealed powerful correlations when sociocultural variables were taken four at a time. For instance a child's age, sex, race, or parental drinking habits, each examined alone, may be weakly correlated with behavior. However, examining the combination of the four variables may explain much more of the variance in behavior. Therefore, the authors conclude, prior studies may have failed to show significant effects of a single variable because those effects may actually be mediated through a complex interaction with other sociocultural variables.
- In addition to being the most important single influence on adolescent drinking habits, parental patterns of alcohol use as a determinant factor of teen drinking, cannot be mediated through attitudes and knowledge. Consequently, the authors recommend that schools continue with their alcohol education programs but also implement adult education programs emphasizing the effects of parental role models.

Cooper, A.M.; Sobell, M.B., "Does Alcohol Education Prevent Alcohol Problems? Need for Evaluation," <u>Journal of Alcohol</u> and Drug Education, Vol. 25(1), pp. 54-63, 1979.

The author responds to the frequently made argument that alcohol and drug education is ineffective at best, and at times can actually prove counterproductive in preventing alcohol and drug misuse by children and adolescents. The article examines the evidence against prevention programs, and concludes that an indictment of such programs is unwarranted. Several recommendations regarding methodological characteristics of an adequate test of effectiveness of alcohol education are presented and discussed.

# Firth, D.; Goffey, L., "What Do Teenagers Think About Road Safety?," <u>Traffic Education</u>, Vol. 6(4), pp. 23-25, 1981.

The article reports findings of a study testing road users/usage of 13-14 year olds. Seventy young people from two outer London urban areas took part in recorded group discussions. Several topics were introduced and the results analyzed into five main topic areas. Findings show that peer influence is very strong among teenagers and could possible be used in planning countermeasures. Although concerned about road crashes, the students' motivation for personal safety decisions was low. Legislation was seen as an acceptable and almost desirable countermeasure. Voluntary training was scorned as a sign of weakness. Teenagers do take risks on the road, sometimes deliberately. The tendency is affected by social pressures, and motor cyclists were more likely than car drivers to take risks. Finally, attitudinal and motivational data can be obtained in relation to road usage of a particular group, and can also be applied in the targeting and design of countermeasures for that group.

Forney, M.A. and PiD.; Davis, H.; Van Hoose, J.; Gafferty, T.; Allen, H., "Sociological Factors Affecting Knowledge, Attitude, and Behavior Toward the Use of Alcohol Among Middle School Students," Paper presented to the American Educational Research Association Annual Conference, April 23-27, 1984.

The paper discusses the procedure and findings of a study concerning the effects of age, race, sex, grade level, socioeconomic status, family composition, residence, religion, parental drinking patterns, mother's employment status, and age of first drink, on the knowledge, attitudes and behavior toward the use of alcohol among middle school children. Multivariate analyses revealed little correlation between a student's knowledge, attitude and drinking behavior. Parental drinking patterns appeared to have the most powerful influence on a child's drinking behavior. Other noteworthy discussion points are:

- This study, and most prior research efforts, indicate that facts alone will not reduce the frequency of drinking among youth, but that a combination of knowledge and attitudes toward the responsible use of alcohol will promote more mature decisions by young people.
- Students tend to hold common misconceptions concerning alcohol and its effects: e.g., that teens cannot be alcoholic; that beer and wine are not as harmful as "hard liquor;" that black coffee or a shower will sober one who is drunk; or that alcohol is a stimulant (Stephen, A.; DiMella, N., "Thinking about Drinking: Teaching Tomorrow's Drinkers," <u>Independent Schools</u>, October 11-13, 1978).
- More than 93% of middle and high schools offer an alcohol education program of some sort. Yet most students surveyed said they received their alcohol information elsewhere.
- Studies show that males were marginally more knowledgeable about alcohol and drugs than females; that knowledge scores increase with grade levels; that users had higher scores than nonusers; that students with higher knowledge scores had more permissive attitudes concerning drug use; that rural students tend both to be more knowledgeable about alcohol and to drink more than urban teens; that protestant adolescents were the most knowledgeable, but drank least.
- Attitudes toward drinking are thought to be formed early (pre-adolescence) and as a direct result of parental influence.

Gire, D.A., "Young People Drinking and Driving: A Prevention Idea Booklet for Local Communities," Office of Substance Abuse, Lansing, MI, 1980.

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The report reviews the problem of drinking and driving among young people (high school age and young adults 18-24 years old), and provides ideas for developing and planning community prevention programs. A list of resource organizations, a directory of substance abuse coordinating agencies, and Alcohol Highway Safety

#### Programs in Michigan are presented.

Hetherington R.W.; Dickinson, J.; Cipywnyk, K.; Hay, D., "Attitudes and Knowledge about Alcohol among Saskatchewasn Adolescents," <u>Canadian Journal of Public Health</u>, Vol. 70(4), pp. 247-259, 1979.

The paper reports the findings of part two of a study of Saskatchewan adolescents in grades 6-12. It addresses students' knowledge about alcohol and its effects, their perceptions about their own and others' drinking, and their receptivity to various types of alcohol education. Seventy four percent of high school and public school students reported they would welcome more education in schools, and would prefer this education to come from persons with direct knowledge of alcohol and its problems, such as physicians and researchers, those undergoing treatment, and ex-alcoholics. The authors stress, though, that the impact of school-based programs will continue to be secondary and dependent on home environment, peer influence, legislation, and formal community controls of alcohol accessibility and media treatment of drinking.

Homel, R., "Young Men in the Arms of the Law: an Austrialian Perspective on Policing and Punishing the Drinking Driver," <u>Accident Analysis and Prevention</u>, Vol. 15, No. 6, pp. 499-512, Dec. 1983.

The article argues that young men, particularly those of an unskilled occupational status, are subject to more intensive surveillance by the police and more severe punishments for drinking and driving than other road users. Evidence for this proposition is presented, drawing from roadside surveys, convictions, sentencings, and police data on the ways drivers come to notice for a screening breath test. Homel argues that the power granted to police and magistrates to exercise discretion in the performance of their duties has a pervasive influence in the production of conviction and sentencing statistics, although road user characteristics (such as the time and frequency of driving) are of primary importance. Police and magistrates, he explains, tend to see young (unskilled) male drinking-drivers as a greater threat to public safety than other classes of drinking drivers. Evidence suggests that the value of this tough approach to young men may be limited.

Krohn, M.D.; Akers, R.L.; Radosevich, M.J.; Lanza-Kaduce, L., "Norm Qualities and Adolescent Drinking and Drug Behavior," <u>Journal of Drug Issues</u>, Fall 1982.

The effect of normative climate on a person's alcohol and marijuana attitudes and use patterns is examined. Specifically the norm qualities of significant reference group sources for the 7th and 12th grade are examined (n=3065) to determine their relative impact on both frequency of use and level of abuse of both alcohol and marijuana. Results showed that the norm qualities of all the reference groups are related to use patterns and attitudes in the predicted direction and that norm qualities of friends (compared to parents and religion) is clearly the most predictive variable. However, hypotheses of increased substance abuse under the impact of ascriptive and proscriptive norm qualities are not supported.

Mann, P., "Deadliest Duo: A Special Report: Teen and Cars," <u>Family Circle</u>, Vol. 95, No. 13, pp. 98-99, 149-152, 154, 1982.

Article discusses the problems involved with alcohol, teenagers, and driving. Suggestions are offered to parents on what can be done to help prevent this growing tragedy. A resource list of individuals, agencies and organizations working to combat DWI among teens is provided.

McKnight, A.J., "Youth Alcohol Safety Education Criterion," Journal of Traffic Safety Education, Vol. 28, No. 3, pp. 21-22, 1981.

The National Public Services Research Institute (NPSRI), under contract to the U.S. Department of Transportation, developed a criterion measure to assess the ability of alcohol safety education programs to modify the attitudes of young drivers. The Youth Alcohol Safety Education (YASE) criterion measure is described, including its scoring, reliability and validity, and use.

Milgram, G.G., "Societal Attitudes Toward Youthful Drinking," <u>Journal of Drug Education</u>, Vol. 12(4), 1982.

The article describes the history of alcohol use in the United States and how that influences consumption among adolescent youth. The three major variables affecting alcohol use and abuse by teens are: (1) parental drinking habits; (2) social acceptance of drinking; and (3) peer influence.

The initial drinking experience for most youths usually occurs around age thirteen, in the home, and with parents or other adult authorities present. The reasons for initial consumption of alcohol are family reasons for alcohol use. As the adolescent matures, more and more drinking is done outside the home with friends. This period of time is often characterized by attitudes, patterns and drinking habits which are different from those of the parent population; the peer group and situational factors are significant influences on drinking behavior during this phase. Though alcohol use is usually motivated by the same reasons provided for most drinking adults (e.g., to be social), drinking to intoxication is often considered acceptable. As adolescents mature and develop into independent adult status, drinking often again resembles the use patterns of the parents.

Nusbaumer, M.R.; Zusman, M.E., "Autos, Alcohol and Adolescents: Forgotten Concerns and Overlooked Linkages," <u>Journal</u> of Drug Education, Vol. 11, No. 2, pp. 167-178, 1981.

The article describes a research project designed to socially locate and better understand a group of adolescents who ride with a drinking driver but do not drink and drive themselves. This group was compared to those who both drink and drive and ride with a drinking driver, and those who do neither. Specific attention was given to selected sociodemographic characteristics and alcohol-related attitudes and behaviors as group discriminating factors. Conclusions include: (1) drinking and automobile use represent a continuance of behaviors and decisions, and not simply an all or nothing view as implied by much of the drinking and driving literature; (2) the decision to ride with a drinking driver appears to be closely tied to the more general norms and values associated with the consumption of alcohol, although this decision does not appear to be associated with wide scale alcohol abuse, drunkenness or deviant behavior; (3) special prevention and education efforts should focus on those who ride with a drinking driver, but do not drink themselves since this is a unique and socially identifiable group; and (4) the practice of riding with a drinking driver may be causally linked to the eventual practices of drinking and driving.

 Programs geared for the adolescent who chooses to ride with a drinking driver, but does not drink and drive, should have two goals: reducing the number of teens in that group; and disrupting the learning process leading to drinking and driving.

- Programs should discuss the relationship between autos and alcohol at an early age and grade level, with particular emphasis upon the risks involved with riding in an automobile with drinking driver.
- Greater emphasis must be placed on drinking-related behaviors and attitudes of those who drink moderately. Special effort should be made not to define them as outcasts or deviants, nor encourage engagement in more alcohol use and risk-taking behavior.
- In attempting to disrupt or alter the learning process necessary for becoming a drinking driver, program planners should recognize that many students are now riding with drinking drivers, and utilize their experience to reverse the learning process.

Padavan, F., "Why Nineteen: The Minimum Drinking Age and Related Initiatives to Combat Alcoholism, Drunk Driving, and Teenage Alcohol Abuse," New York State Senate Committee on Mental Hygiene and Addiction Control, 1981.

The report includes a review and discussion of overall youthful involvement in drunk driving crashes and New York State legislation initiated to combat the problem: youth alcohol abuse; the merits of raising the legal minimum drinking age in New York; and several alcohol policy initiatives in prevention and education (school-based prevention programs are included), treatment and enforcement. Statistical data on alcohol-related crashes are appended.

Pawlowski, W.V., "Norms and Attitudes Related to Alcohol Usage and Driving: A Review of the Relevant Literature," Vol. III and IV, DTNH-22-81-07385, Sept. 1982.

Results of a NHTSA funded study of norms and attitudes related to alcohol use and driving are reported in this four volume publication. Volume III includes a review and discussion of the methodology and findings of individual interviews conducted with early adolescents (13-14), middle-late adolescents (17-18) and young adults (18-25). Findings suggest that there are strong influences in our society that encourage drinking and driving. More information is needed to help the drinker assess when he/she is impaired and to educate the driver who drinks concerning other drinking and driving issues (e.g., BAC levels). Community organizations, individuals, and social institutions can have a countering effect on pro-drinking and driving influences. Volume IV reports the findings of a series of focus group discussions designed to explore norms and attitudes regarding drinking and driving. Two focus groups were composed of parents of teenaged drivers, and one group included males over 30 years old. The rationale and selection criteria for choosing each groups participants and the sampling procedures are given. It was found that adults are concerned and want to combat the drinking driver problem; however, they feel incapable of acting because they believe (1) their knowledge of the problem is inadequate, and (2) they do not have the public support needed. Adults indicated they are open to and supportive of government intervention programming that would both help educate the public and create a social climate that is less tolerant of drinking, and drinking and driving.

Preusser, D.F.; Williams, A.F.; Zador, P.V.; Blomberg, R.D., "The Effect of Curfew Laws on Motor Vehicle Crashes," Law and Policy, Vol. 6, No. 1, January 1984.

The article reviews the findings of a study of curfew laws in four states and their impact on the incidences of youthrelated traffic crashes. In each state the laws were found substantially to reduce the crashes of 16 year olds. Sixteen year old driver crash involvements during curfew hours were reduced by an estimated 69% in Pennsylvania, 62% in New York, 40% in Maryland, and 25% in Louisiana. Except in Maryland, the percentage of the 16 year old population licensed was lower in curfew than comparison states. It is possible that curfew laws reduce early licensure, in which case reduction in crash involvements resulting from curfews are greater than shown above.

Rabow, J.; Watts, R.K.; Phil, C., "The Availability of Alcohol and Alcohol Problems," <u>Alcoholism: Clinical and</u> <u>Experimental Research</u>, Vol. 5(1), January 1981.

An analysis of alcohol availability, alcohol consumption and their relationship to alcohol problem indicators is conducted at the local level among 51 counties in the State of California, and subcounty level of 200 cities. A social profile emphasizing social rank, lifestyles and ethnicity was obtained with information on public drunk arrests, drunk driving arrests, total juvenile alcohol-related arrests, and cirrhotic death rates. Data on the number and types of outlets and taxable retail sales are utilized in this study which employs correlational and multiple regression techniques. At the county level, a strong relationship was found between alcohol availability, public drunk arrests and cirrhotic deaths and selected social characteristics of community members and alcohol problems. At the city level, beer bars related to indicators of felony drunk driving, misdemeanor drunk driving and public drunk arrests. Single person households were related to cirrhotic death rates.

Seals, T.A.; Matthias, H.; Bloomfield, G.; McKnight, A.J., "Should We Teach Students to Drink Responsibly?" <u>Journal of</u> <u>Traffic Safety Education</u>, Vol. 30, No. 3, pp. 12, 14, 1982.

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Article presents viewpoints of three safety educators regarding whether students should be taught responsible drinking habits as a deterrent against youthful driving under the influence of alcohol in driver education classes. Factors influencing decisions by young people to drink are noted.

Wagenaar, A.C., <u>Youth Drinking and Driving</u>: <u>One Effective</u> <u>Countermeasure</u>, paper presented at the Drinking and Driving Symposium, American Association for Advancement of Science Meetings, Detroit, MI, May 31, 1983.

A trend toward lowering the legal drinking age in the early 1970's has now reversed, with most states raising the legal age in recent years. (President Reagan signed into law a 1984 Act of Congress which requires states to raise to 21 the minimum legal drinking age or ultimately lose Federal highway funds.) A major issue in the controversy concerning the legal drinking age (which also touches on the development of youth DWI prevention programs) is whether high rates of alcohol-related traffic crashes among young drivers can be reduced by measures intended to decrease the availability of alcohol to young drivers.

To answer this question with regard to a minimum drinking age, motor vehicle crashes in Maine and Michigan involving drivers aged 16-45 were investigated. Maine raised its legal drinking age in 1977 and Michigan in 1978. New York and Pennsylvania served as control states with no drinking age changes. Monthly time series of crash involvement, stratified by crash severity, age of driver, and two measures of alcohol involvement, were used in a multiple time series design. Analyses used the time series strategy developed by Box and Jenkins. Although effects of the higher drinking age vary across states and levels of crash severity, results clearly indicate that significant reductions in youth crash involvement can be achieved by raising the legal minimum age to 21. Aggregate sales of alcohol beverages in several states were also examined. Some changes in sales levels were associated with lowering or raising the drinking age. However, the interpretation of these findings was complicated by lack of age-specific consumption data and confounding factors such as the severe economic recession of recent years.

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Wittman, F.D., "Current Status of Research Demonstration Programs in the Primary Prevention of Alcohol Problems," <u>Prevention, Intervention and Treatment: Concerns and</u> <u>Models</u>, Alcohol and Health Monograph 3, DHHS Publication (ADM) 82-1192, 1982.

The chapter reviews alcohol research demonstration programs funded by NIAAA and the state alcohol and health agencies. The first section describes the research demonstration project and its use by the public health field for applying existing knowledge to the development of problem health projects. The second section describes theoretical and political constraints on the application of the research demonstration project to alcohol problems in particular. Section two concludes that alcoholrelated projects which best fit the research demonstration approach are those that work with specific and concrete problems. Section three reviews the findings of specific research demonstration projects. Projects conducted in the early and middle 1970's sought primarily to raise awareness about alcohol problems, expecting that knowledge would catalyze changes in attitudes and choices about drinking. Aimed largely at individual youth, and utilizing school settings, youth organizations, and mass media, these early campaigns generally produced mixed and often disappointing results. Later projects directed at youth and other "at risk" populations emphasized multi-component approaches that worked more closely with educators and administrators at host sites, and emphasized attitudes and behaviors along with the educational part of earlier campaigns. More sophisticated evaluation plans also were added. Of these new programs, results indicate that the programs are popular with target audiences and host organizations.

The fourth section concludes that alcohol and public health agencies are beginning to use research demonstration programs as a national means for exploring the application of new and untried ideas to alcohol problems, moving beyond the raising of awareness. Future projects are likely to take greater care with methodologies and evaluations. In conclusion, the author state that research demonstration projects provide an excellent tool for enlisting a broad spectrum of agencies working in the primary prevention of alcohol problems.

Yaksich, S., "Teenagers Under Attack," <u>Journal of Traffic</u> <u>Safety Education</u>, Vol. 29(2), pp. 7-11, 18, January, 1982.

The Executive Director of the AAA Foundation for Traffic Safety, Sam Yaksich, asserts that there is a strong public movement in the U.S. concerning highway safety, and the principal target for attack is teenagers and their lifestyle. In particular, Yaksich criticizes the Insurance Institute for Highway Safety (IIHS) for taking the lead against teenagers as clearly demonstrated by their recommendations in the September 23, 1981 Status Report, "Teens and Autos: A Deadly Combination." Specific IIHS suggestions for highway safety include: (1) prohibiting or restricting teenage driving; and (2) eliminating driver education in high schools.

The article also summarizes statistical data on teen involvement in fatal crashes and claims many are erroneous. Citing the variance in age parameter (i.e., youth equals persons aged 16-24; 18-21), as an example, the article questions the accuracy of data. Other topics discussed are: (1) the impact of society on teenagers' values; (2) how driver education is not responsible for teenage traffic deaths; (3) shortcomings of driver education, such as the lack of lessons on alcohol education; (4) public policy actions to teach and reinforce responsible behavior among teens; (5) alcohol promotion on television; (6) teens reactions to alcohol and marijuana; and (7) the need for greater impact in driver education. Three suggested methods for preventing teen DWI are to raise the minimum drinking age, to review and change regulations for advertising alcoholic beverages on television, and to provide alcohol education programs for children beginning in kindergarten and continuing through high school.

# APPENDIX B

# PROGRAM SAMPLE

This list contains the entire Program Sample. Programs included in the analyses presented in this report are marked with an asterisk (\*).

## PROGRAM SAMPLE

#### ALABAMA

Alabama Drug and Alcohol Education Program Jefferson County Board of Education 1014 North 22nd Street Birmingham, Alabama 35203

Driving Under The Influence Program Regional Alcoholism Council 141 South 9th Street Gadsden, Alabama 35901

DUI Instructor Service Training Program Department of Mental Health P.O. Box 3710 Montgomery, Alabama 36193-5001

 Student Workshops and Teacher Training Alabama Department of Mental Health P.O. Box 3710 Montgomery, Alabama 36193-5001

#### ALASKA

Chemical People Friday Night Live Here's Looking At You, Two Alaska Highway Safety Planning Pouch North Juneau, Alaska 99811

Drinking, Driving, Deciding 7521 Old Seward Highway, Suite A Anchorage, Alaska 99502

#### ARIZONA

 \* Association for Drug Abuse and Alcoholism Prevention and Treatment, Inc. (ADAAPT) 4500 East Speedway, Suite 21 Tucson, Arizona 85712

Curriculum in Arizona Schools K-12 Arizona Department of Education Director of Driver and Safety Education 1535 West Jefferson Phoenix, Arizona 85007 The Matrix Program 1030 North 4th Avenue Tucson, Arizona 85705

# ARKANSAS

Early Intervention State Prevention Coordinator Office of Alcohol and Drug Abuse Prevention Department of Human Services 1515 West Seventh Street Little Rock, Arkansas 72202

Hi-Way Safety Program + K-12 Curriculum Department of Highway Safety #1 Capital Plaza 48-215 Little Rock, Arkansas 72201

Teens Are Concerned 403 Rosewood Circle Paragould, Arkansas 72450

#### CALIFORNIA

Alcohol Information School 3291 Loma Vista Road Bard Center Ventura, California 93003

"Decisions and Alcohol" 3291 Loma Vista Road Bard Center Ventura, California 93003

California State Alcohol and Drug Prevention Program Department of Alcohol and Drug Programs 111 Capital Mall Sacramento, California 95814

Center For Human Development 3702 Mount Diablo Boulevard Lafayette, California 94549

Community Service Prevention Program 3291 Loma Vista Road Bard Center Ventura, California 93003

\* Comprehensive DUI System Improvement Project for the County of San Mateo 225 West 27th Avenue San Mateo, California 94403 Drivers' Safety Program 721 Capitol Mall State Department of Education Sacramento, California 95814

Friday Night Live 171 Mayhew Way, Suite 210 Pleasant Hill, California 94523

 New Experiences in Affective Training (NEAT) Family Program 3704 Mount Diablo Boulevard, Suite 201 Lafayette, California 94549

The People vs. Drunk Drivers P.O. Box 1032 San Mateo, California 94403

Project Driving Smart c/o Adult School 10251 Yorktown Huntington Beach, California 92646

Safe Rides Program for the South Bay Teen Advocates Center 710 Pier Avenue Hermosa Beach, California 90254

Seatbelts and Sobriety, Humboldt County 529 I Street Eureka, California 95501

Simi Valley "Impact" Program 875 East Cochran Simi Valley, California 93065

West County Alcohol Counseling Program 1068 East Main Street, Suite A Ventura, California . 93001

COLORADO

Adam State College Campus Program Dean of Students Richardson Hall 234 Adams State College Alamosa, Colorado 81102

\* Alcohol and Drug Task Force Student Health Center University of Northern Colorado Greeley, Colorado 80639

- \* Alcohol, Drugs, Driving and You (ADDY) 855 Broadway Boulder, Colorado 80302
- \* All Stars 1209 Quail Street Lakewood, Colorado 80215
- Boulder Youth Services
  Department of Human Resources Development
  Box 791
  Boulder, Colorado 80306
- \* Colorado Teen Institute (Operation Snowball) 2525 West Alameda, Suite 204 Denver, Colorado 80219
- Drinking, Driving and You Colorado Safety Association Dravo Plaza, Suite 550 1250 14th Street Denver, Colorado 80202
- \* Drunk Driving Prevention Project Prevention Resource Center Media Campaign Prevention Resource Center Boulder, Colorado 80302

It's Just Not Worth It Denver District Attorney's Office 303 West Colfox Avenue #1300 Denver, Colorado 80204

\* Lake County Drug Task Force P.O. Box 1829 Leadville, Colorado 80461

Stop Chemical Abuse Now (SCAN) P.O. Box 1742 201 South 4th Street Sterling, Colorado 80715

Students Against Driving Drunk SADD State Coordinator 3518 Capulin Drive Loveland, Colorado 80537

Summit County Task Force P.O. Box 326 Breckenridge, Colorado 80424 Wellness Center Campus Box 119 Student Health Center Boulder, Colorado 80309

\* Youth Who Care 2522 Snow Mass Court Grand Junction, Colorado 81503

# CONNECTICUT

 \* A Paramedic's View of Drinking and Driving University of Connecticut Health Center Public Safety Division Farmington, Connecticut 06032

No Booze Tuesday Tumbledown Dick's Waypoint Enterprises 16 Arcadia Old Greenwich, Connecticut 06870

People for Youth 450 Enfield Street Enfield, Connecticut 06082

Remove Intoxicated Drivers (RID) RFD #2 Old Lyme, Connecticut 06371

 Statewide Conference on Youth DWI and Peer Education Program Wheeler Clinic
 91 North West Drive Plainville, Connecticut 06062

#### DELAWARE

Peer Counseling SADD Coordinator Resource Center-YMCA 11th & Washington Streets Wilmington, Delaware 19801

# DISTRICT OF COLUMBIA

Mayor's Advisory Committee on Traffic Safety District Building, D.C. 613 G Street Room 716 Washington, D.C. 20001
Your DWI Decision Curriculum Driver's Education in D.C.
 12 & D Street N.E.
 Washington, D.C. 20002

## FLORIDA

- Boost Alcohol Consciousness Concerning Health of University Students (BACCHUS) Campus Alcohol Information Center University of Florida Gainesville, Florida 32611
- \* Drug Education Program Boward Mental Health Center and Hospitals Inc. 1770 Cedar Street Rockledge, Florida 32955
- \* DUI Self-Monitoring Group (BACCHUS) 1240 Tigent Hall University of Florida Gainesville, Florida 32611

Life Management Skills-Curriculum Florida Department of Education Tallahassee, Florida 32301

Red Cross Youth Council-SADD Project Paramedics Against Drunk Driving (PADD) 4211 East Busch Boulevard Tampa, Florida 33617

## GEORG-IA

Safe Ride Program. 878 Peachtree Street, N.E. Room 319 Atlanta, Georgia 30308

## HAWAII

Project Graduation Safe Rides SADD Chemical People Office of Vehicle Safety, Honolulu 1455 South Berry Tiha Honolulu, Hawaii 96813

## ILLINOIS

Drinking, Driving and You: The Decision National Safety Council 444 North Michigan Avenue Chicago, Illinois 60611

Illinois Teenage Institute (Operation Snowball)<sup>•</sup> 911 South Van Burien Sullivan, Illinois 61951

Operation Snowball Sangamon-Menard Alcoholism and Drugs Council 723 South Fifth Springfield, Illinois 62704

Operation Snowflake
 Operation Snowball
 Mattoon High Schools
 100 North 22nd Street
 Mattoon, Illinois 61938

## . INDIANA

- Indiana Teen Institute
   Schunull-Rauch House
   3050 North Meridian Street
   Indianapolis, Indiana 46208
- Stop and Think (Grades 7-12 Curriculum) Department of Education Division of Traffic Safety Room 229 State House Indianapolis, Indiana 46204

IOWA .

Iowa Course for Drinking Drivers
 Iowa Substance Abuse Information Center
 Cedar Rapids Public Library
 500 lst Street S.E.
 Cedar Rapids, Iowa 52401

Limit: A Drinking Driving Simulation 916 S.E. 3rd Street Ankeny, Iowa 50021

\* Project Graduation In Iowa Department of Public Instruction Des Moines, Iowa 50319-0146

## KANSAS

Alcohol Awareness Project 101 Holton Hall Kansas State University Manhattan, Kansas 66506

- Comprehensive Substance Abuse Prevention Program Wichita Kansas Public Schools
   Substance Abuse Prevention
   640 North Emporia
   Wichita, Kansas
   67214
- Kansas School Team Training Teachers Resource Information Manual (TRIM) Alcohol and Drug Abuse Services
   2700 West 6th Street, Biddle Building Topeka, Kansas 66606
- \* "Know Enough To Say No" Holiday Promotion Campaign Alcohol and Drug Abuse Services 2700 West 6th Street, Biddle Building Topeka, Kansas 66606
- Non-Alcoholic Beverage (NAB) Campaign Alcohol and Drug Abuse Services 2700 West 6th Street, Biddle Building Topeka, Kansas 66606

## KENTUCKY

 Boost Alcohol Consciousness Concerning Health of University Students (BACCHUS) University of Kentucky Chapter 210 Bradley Hall Lexington, Kentucky 40506-0058

Prevention Alcohol Abuse Curriculum (PAA) 100 Winding Circle Lexington, Kentucky - 40502

- Project Graduation Kentucky Kentucky State Police Highway Safety Branch
   919 Versailles Road Frankfort, Kentucky 40601
- Youth Prevention Project, Teenage Drinking and Driving Pathways, Inc. Mental Health Center
   P.O. Box 790
   Lansdowne Drive
   Ashland, Kentucky 41105-0790

## LOUISIANA

MADD State Coordinator 5825 Airland Highway Baton Rouge, Louisiana 70805 Mothers Against Drugs (MAD) Say No and Driver Education Grant

Nothing Against Drugs 907 Kirby Street Shreveport, Louisiana 71104

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## MAINE

- Driver Education Evaluation Program for Teens (DEEP) Division of Driver Education Evaluation Bureau of Rehabilitation 32 Winthrop Street Augusta, Maine 04330
- Maine Alcohol and Drug Clearinghouse Bureau of Health State House Station II Augusta, Maine 04333
- \* Project Graduation Division of Alcohol and Drug Education Service Department of Education Stevens School Complex-State House Station 57 Augusta, Maine 04033
- PSA Evaluation: Youth and DUI Northeast Research
   P.O. Box 30
   Maine National Bank Building Orono, Maine 04473

## MARYLAND

- \* Alcohol, Drugs and Driving (ADD) Driver Education Program P.O. Box 129 Westover, Maryland 21871
- \* Alcohol: The Crutch That Kills Frederick County High School-Frederick, Maryland 21701
- Bowie Alcohol Drug Group Effort (BADGE) Director of Human Resources Bowie City Hall
   2614 Kenhill Drive Bowie, Maryland 20715

Deadly Duo DWI/A Deadly Duo P.O. Box 1831 Annapolis, Maryland 21401-1831

Flaps Up Designated Driver Program 4723 Elm Street Bethesda, Maryland 20814

 \* High Risk Adolescent Trauma Prevention Program Maryland Institute for Emergency Medical Services Systems 22 South Greens Street Baltimore, Maryland 21201-1595

- Just Say No
   Woodstock Job Corps Center
   P.O. Box 8
   Woodstock, Maryland 21163
- \* Traffic Accidents and Trauma (TAT) 10741 Little Patuxent Parkway Columbia, Maryland 21044

Washington Regional Alcohol Program (WRAP) Montgomery County SADD and Alcohol Highway Safety Committee 101 Monroe Street Rockville, Maryland 20850

Washington Regional Alcohol Program (WRAP) Project Graduation Harry Truman Drive Landover, Maryland 20785

#### MASSACHUSETTS

- Drinking, Driving and You
   Massachusetts Safety Council
   286 Summer Street, Suite 300
   Boston, Massachusetts 02210
- Governor Universities Actively Reducing Drunk Driving (GUARDD)
   Governor's Highway Safety Bureau
   100 Cambridge Street, Room 2104
   Boston, Massachusetts 02202
- \* Project BASE (Basic Alcohol Safety Education) Brookline High School 115 Greenough Street Brookline, Massachusetts 02146

School and Community Program Massachusetts Department of Public Health Division of Alcoholism 150 Tremont Street Boston, Massachusetts 02111

- \* The School Team Approach (National) Alcohol and Drug Abuse Education Program (ADAEP) 466 Hills South School of Education University of Massachusetts Amherst, Massachusetts 01003
- Students Against Driving Drunk (SADD) SADD National Office
   110 Pleasant Street
   Corbin Street
   Marlborough, Massachusetts 01752

## MICHIGAN

- \* 8:30 A.M. Monday Morning Michigan Council on Alcoholic Problems Alcohol Research Information Service 1120 East Oakland Avenue Lansing, Michigan 48906
- Awareness Campaign Alcohol Research Information Service (ARIS) Box 10212 1120 East Oakland Avenue Lansing, Michigan 48609
- \* Chemical People Groups Macomb County Office of Substance Abuse 6th Floor-County Building Mt. Clemmons, Michigan 48043
- Know Your Driver, Holiday Awareness Campaign Alcohol Resource Information Service (ARIS) P.O. Box 10212 1120 East Oakland Avenue Lansing, Michigan 48909

Michigan Core Curriculum Office of Substance Abuse Services Department of Public Health 3500 North Logan P.O. Box 30035 Lansing, Michigan 48909 Project Graduation MADD 33521 6 Mile Road, Suite 2 Livonia, Michigan 48152

- \* Sincerely Yours
   Gateway Substance Abuse Prevention Evaluation Program
   2650 East Beltline
   Grand Rapids, Michigan 46506
- \* Students of Michigan Against Drunk Driving (SOMADD) East Lansing Public Schools 509 Burcham Drive East Lansing, Michigan 48823
- Youth Drinking and Driving (YDD) Gateway Substance Abuse Evaluation Program 2650 East Beltline Grand Rapids, Michigan 49506
- Youth Drinking and Driving Curriculum Campaign (Michigan Core Curriculum)
   Program Division Office of Substance Abuse Services
   Michigan Department of Public Health
   P.O. Box 30035
   Lansing, Michigan 48909

## MINNESOTA

- \* The Control Factor Whitney House St. Cloud State University St. Cloud, Minnesota 55155
- \* The Control Factor Minnesota Department of Public Safety St. Paul, Minnesota 55155

MADD Coordinator 97 North Blake Road Apartment 130 Hopkins, Minnesota 55343

- Minnesota Prevention Resource Center
   2829 Verndal Avenue
   Anoka, Minnesota 55303
- Partners Institute
   University of Minnesota
   Drug Education Program
   240 Bahannon Hall
   Duluth, Minnesota 55812

SADD Coordinator 633 229th Avenue N.W. St. Francis, Minnesota 55070

#### MISSISSIPPI

The Control Factor R.H. Watkins High School 1100 West 12th Street Laurel, Mississippi 39440

\* Drug Resource and Education Association of Mississippi (DREAM) Suite B, 1991 Lakeland Drive Jackson, Mississippi 39216

DUI Program Pine Belt Mental Health Center P.O. Drawer 1030 Hattiesburg, Mississippi 39401

 Mississippi Alcohol Safety Education Program Alcohol Counter Measures Coordinator 510 George Street, Suite 246 Jackson, Mississippi 39202

Project Graduation Provine High School 2480 Robinson Street Jackson, Mississippi 39209

Students Against Driving Drunk (SADD) Health Services P.O. Box 1046 Clarkdale, Mississippi 38614

## MISSOURI

Alcohol and Drug Education Program Hazelwood Central High School 15875 New Halls Ferry Road Florissant, Missouri 63031

- Community Alcohol Safety Effort (CASE) 302 East Commercial Street P.O. Box 906 Springfield, Missouri 65803
- \* Comprehensive Youth DWI Program Hazelwood West High School Program 6249 Rowder Shell Road Hazelwood, Missouri 63042

Missouri Safety Council S.W. 300 South Jefferson, 214 Springfield, Missouri 65806

- Missouri Youth Network NCA Missouri Teenage Institute 7438 Forsyth Boulevard, Suite 206 St. Louis, Missouri 63105
- \* On Track
   S.W. Missouri Safety Council
   300 South Jefferson, 214
   Springfield, Missouri 65806
- \* The Price is High National Student Safety Program (NSSP) Missouri Safety Center Central Missouri State University Warrensburg, Missouri 64093
- \* Project Graduation Conference Department of Public Safety, Division of Highway Safety P.O. Box 749 Jefferson City, Missouri 65102-0749
- St. Louis County DWI Advisory Committee
   St. Louis County Police Department
   7900 Forsyth Boulevard
   St. Louis, Missouri 63105
- \* Stop Alcohol Violations Entirely (SAVE) 200 North 2nd Street St. Charles, Missouri 63301

#### MONTANA

- \* Awareness Havre Public Schools Box 7791-425 6th Street Havre, Montana 59501-7791
- \* Havre Encourages Long-Range Prevention (HELP) Havre Public Schools Box 7791-425 Leth Street Havre, Montana 59501-7791
- Montana Teenage Institute on Substance Abuse The Rainbow Connection Center for Adolescent Development P.O. Box 345 Helena, Montana 59624

## NEW HAMPSHIRE

Impaired Driver Intervention Program Amethyst Foundation P.O. Box 356 Exeter, New Hampshire 03833

- \* Impaired Driver Intervention Program Department of Health and Welfare Office of Alcohol and Drug Abuse Prevention Hazen Drive Concord, New Hampshire 03301
- \* New Hampshire Teen Institute P.O. Box 3751 Manchester, New Hampshire 03105
- \* Operation Snowball
   New Hampshire Department of Education
   101 Pleasant Street
   Concord, New Hampshire
   03301
  - Resources for Evaluation of Alcohol Problems P.O. Box 726 Manchester, New Hampshire 03105

## NEW JERSEY

- Driver Improvement Program Intoxicated Driver Resource Centers New Jersey State Department of Health 129 East Hanover Street Trenton, New Jersey 08618
- \* Intoxicated Driver Resource Center New Jersey State Department of Health, Division of Alcoholism Trenton, New Jersey 08691
- Preventing Alcohol Abuse K-12 FLI Learning System
   P.O. Box 2233
   Princeton, New Jersey 08540
- Stay Off the Bottle
   Enjoy the Road (SOBER)
   Division of Motor Vehicles
   CN 048 Stuyvesant Avenué
   Trenton, New Jersey 08625

¥	Student Task Forces
	Division of Motor Vehicles
	Office of Highway Safety, CN 048
	Trenton, New Jersey 08625
•	
*	Studente for Ierielation and Education

 Students for Legislation and Education Against Drunk Driving (LEADD)
 Northern Highlands Regional High School Allendale, New Jersey 0.7401

NEW MEXICO

APS Traffic Safety Project Chief Physician 2700 Arizona N.E. Albuquerque, New Mexico 87131

- Farmington Municipal School Traffic Safety Project Director of Elementary Education
   P.O. Box 660
   2001 North Dustin
   Farmington, New mexico 87401
- Gallup McKinley County Public School Traffic Project 700 South Boardman P.O. Box 1318 Gallup, New Mexico 87401
- \* Peers Educating Peers (PEP) Students Against Driving Drunk (SADD) Research Coordinator/Research Office Scholes 102 University of New Mexico Albuquerque, New Mexico 87131

#### NEW YORK

- \* Driver Education: Drinking Driver Demonstration Pine Bark School District Route 302 Pine Bark, New York 12566
- \* Hyde Park School District Alcohol and Highway Safety Project Honiland Road Hyde Park, New York 12538
- Prelicensing Course Guide New York Department of Motor Vehicles Empire State Plaza Albany, New York 12228

- \* 21 Purchase Age Research Youth Alcohol Study
   New York State Division of Alcoholism and Alcohol Abuse Alcohol and Highway Safety Bureau
   194 Washington Avenue Albany, New York 12210
- \* Stop DWI: Project Charlie Kingston City School District 61 Crown Street Kingston, New York 12401
- Traffic Safety Education and Teacher Training New York Department of Education, Safety Education Unit Albany, New York 12234
- Young Highway User Program (K-11 Curriculum) New York Department of Motor Vehicles Empire State Plaza Albany, New York 12228

NORTH CAROLINA

Drive-A-Teen Chapel Hill/Carrboro City Schools Merritt Mill Road Chapel Hill, North Carolina 27514

Students Against Driving Drunk (SADD) NC Governor's Highway Safety Program 215 East Lane Street Raleigh, North Carolina 27601

## OHIO

 Chemical Abuse Program Columbiana County Joint Vocational School 9364 State Route 45 Lisbon; Ohio 44432

District Youth Seminar 450 Grant Street, Suite 301 Akron, Ohio 44311

\* Drinking and Driving Prevention Project Course Northeastern Ohio Regional Council on Alcoholism, Inc. 4959 Mahoning Avenue Youngstown, Ohio 44515

- Drunk and Drugged Driving Awareness Department of Highway Safety 240 Parsons Avenue Columbus, Ohio 43205
- Residential Program
   4959 Mahoning Avenue
   Youngstown, Ohio 44501

Teenage Institute N.W. Ohio Regional Council on Alcoholism 5461 Southwyck Building, Suite 2-0 Toledo, Ohio 43614

 Teenage Institute Regional Council on Alcoholism 4959 Mahoning Avenue Youngstown, Ohio 44515

Teenage Institute, Lima Putnam County Alcoholism Center 135 South Hickory Street Ottawa, Ohio 45701

- Teenage Institute, Region Six Central Ohio Regional Council on Alcoholism
   1755 Alum Creek Drive Columbus, Ohio 43207
- Teenage Institute, Region Seven Regional Council on Alcoholism 3101 Euclid Avenue, Suite 707 Cleveland, Ohio 44115
- \* Teenage Institute, Region Eight Peer Support Training Workshops S.E. Ohio Regional Council on Alcoholism Daisy Lane P.O. Box 1254 Athens, Ohio 45701
- \* Teenage Institute, Region Ten 450 Grant Street, Suite 301 Akron, Ohio 44311
- \* Teenage Institute, Western Ohio Region 379 W 1st Street, Suite 300 Dayton, Ohio 45402

- \* Teen-Leader Directors Weekend Intervention Program Wright State University School of Medicine, Department of Medicine in Society P.O. Box 927 Dayton, Ohio 45401
- Youth Alcohol and Drug Assessment Program (YADAP) Department of Public Health, Alcoholism and Drug Division 405 East Market Street P.O. Box 1503 Lima, Ohio 45802

## OKLAHOMA

Young Oklahoman Drinking Driver Alternative (YODDA)
 Oklahoma Highway Safety Office
 200 N.E. 21 Street
 Oklahoma City, Oklahoma 73105

## OREGON

- \* Oregon Student Safety On The Move (OSSOM) Department of Health
   Oregon State University Corvallis, Oregon 97331
- Project Graduation
   Beaverton School District
   Traffic Safety Facilitator
   2855 S. W. 107th Avenue
   Portland, Oregon 97225
- \* The Status of Alcohol and Drug Education in Oregon Schools Health Specialist Oregon Department of Education 700 Pringle Parkway S.E. Salem, Oregon 97310
- Youth Traffic Project Oregon Student Safety On The Move (OSSOM) Department of Health Corvallis, Oregon 97331

## PENNSYLVANIA

Court Reporting Network (CRN) 1200 Walnut Street 2nd Floor Philadelphia, Pennsylvania 19107

- Drug and Alcohol Educatión Resource Guide for Pennsylvania Driver Education Instructors
   Department of Education
   33 Market Street
   P.O. Box 911
   Harrisburg, Pennsylvania 17120
- \* Here's Looking At You, Two Department of Education
   33 Market Street
   P.O. Box 911
   Harrisburg, Pennsylvania 17108

On Highway Safety Curriculum K-12 Bureau of Safety Program and Analysis 212 Traffic and Safety Building Harrisburg, Pennsylvania 17120

 Pennsylvania Alcohol Traffic Safety Program Department of Transportation Bureau of Safety Programs and Analysis Traffic and Safety Building #212 Harrisburg, Pennsylvania 17120

Pennsylvania Association of Women Highway Safety Leaders (PAWHSL) MADD, Berks County Chapter 1026 Franklin Street Reading, Pennsylvania 19602

 Pennsylvania Governor's Youth Traffic Safety Council Highway Safety Center
 R & P Building
 University of Pennsylvania
 Indiana, Pennsylvania
 15705

RHODE ISLAND

Drug Education Peer Approach Alcohol and Highway Safety Coordinator Department of Transportation Governor's Office on Highway Safety 345 Harris Avenue Providence, Rhode Island 02902

\* Partners in Prevention (PIP-FEST) 22 Hayes Street Providence, Rhode Island 02908

\* Peer Intervention Program (PIP) Rhode Island Department of Education 22 Hayes Street 02908 Providence, Rhode Island SOUTH DAKOTA Castle Curriculum Box 447 57638 Lemmon, South Dakota Here's Looking At You, Two Midwest Regional Training Center (Region Five) 17-72 Box 7760 Mitchell, South Dakota 57301 The Miraculous Me Box 447 Lemmon, South Dakota 57638 The New Model Me Box 447 Lemmon, South Dakota 57638 The Omsbudsman Box 447 Lemmon, South Dakota 57638 \* School Drunk Driving Prevention Materials S.E. Regional Drug Abuse Prevention Resource Center 1107 South Minnesota Sioux Falls, South Dakota 57105 S.E. Regional Drug Abuse Prevention Resource Center 1107 South Minnesota Sioux Falls, South Dakota 57105 Starting Early (Growing Up Healthy In Mitchell) 17-72 Box 7760 Mitchell, South Dakota 57301 Student Awareness Day -Prevention Resource Center Watertown, South Dakota 57301

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#### TENNESSEE

 Greene County Youth Alcohol Highway Safety Project
 Department of Mental Health and Mental Retardation James K. Polk State Office Building
 505 Deaderick Street
 Nashville, Tennessee 37219-5393

Nashville Youth Network Youth Highway Traffic Safety Coordinator State of Tennessee Department of Mental Health and Mental Retardation James K. Polk State Office Building 505 Deaderick Street Nashville, Tennessee 37219-5393

- Washington County Youth Alcohol Highway Safety Project Department of Mental Health and Mental Retardation James K. Polk State Office Building 505 Deaderick Street Nashville, Tennessee 37219-5393
- Youth Alcohol Highway Safety Program Nashville Youth Network Alcohol Safety Program P.O. Box 120655 Nashville, Tennessee 37212

## TEXAS

All Star Program The Driving Force Center for Educational Development 6800 Park Ten Boulevard, Suite 171 West San Antonia, Texas 78213

- \* "No" Power Texas Department of Highways and Public Transportation La Costa Annex 11 and Bargos Streets Austin, Texas 78701
- Project Graduation Traffic Safety Section (D-18TS) State Department of Highways and Public Transportation llth and Brazos Streets Austin, Texas 78701

Smile Marshall High School 1900 Maverick Drive Marshall, Texas 75670

#### UTAH

Family Enhancement and Parenting Training Community Counseling Center 355 South 600 East Salt Lake City, Utah 84102

\* Peer Helper and Teen Hotline Program Four Corners Community Mental Health Center P.O. Box 387 Castledale, Utah 84513

Peer Interaction Program Community Counseling Center 355 South 600 East Salt Lake City, Utah 84102

Peer Leadership Teams Community Counseling Center 335 South 600 East Salt Lake City, Utah 84102

Peer Pressure Resistance Project Community Counseling Center 355 South 600 East Salt Lake City, Utah 84102

\* Project Graduation 150 West North Temple, Suite 350 P.O. Box 45500 Salt Lake City, Utah 84145-0500

Quest Community Counseling Center 355 South 600 East Salt Lake City, Utah 84102

Truancy Intervention Project Community Counseling Center 355 South 600 East Salt Lake City, Utah 84102  \* Utah K-12 Alcohol, Drug and Tobacco Prevention Education Program
 150 West North Temple, Suite 350
 P.O. Box 45500
 Salt Lake City, Utah 84140500
 Utah Teen Institute (Operation Snowball)
 355 South 600 East
 Salt Lake City, Utah 84102

#### VERMONT

- AL-CO-HOL Vermont Department of Education State Office Building State Street Montpelier, Vermont 05602
- \* Alcohol Peer Intervention Program Vermont Department of Education State Office Building State Street Montpelier, Vermont 05602
- Green Mountain Prevention Projects, Inc.
   109 South Winooski Avenue, Room 201
   Burlington, Vermont
   05602

Green Mountain Teen Institute (Operation Snowball) 45 Clark Street Burlington, Vermont 05401

- If You Drive...What About Drinking? Vermont Department of Education State Office Building State Street Montpelier, Vermont 05602
- Starting Early NSPRI Peer Intervention Program State Office Building State Street Montpelier, Vermont 05602

## VIRGINIA

\* AL-CO-HOL 8111 Gatehouse Road Falls Church, Virginia 22047 Alcohol Safety Program (ASAP) 9520 Iron Bridge Road Chesterfield, Virginia 23832

\* Cambridge and Sommerville Program for Alcohol Rehabilitation (CASPAR)<sup>2</sup> Valley Substance Abuse Service 123 West Frederick Street Room 101 Staunton, Virginia 24401

Starting Early 8111 Gatehouse Road Falls Church, Virginia 22047

Think, Don't Just Drink P.O. Box 12074 Norfolk, Virginia 23502

Youth Alcohol Abuse Prevention Project Department of Mental Health and Mental Retardation Office Of Prevention, Information and Training P.O. Box 1797 Richmond, Virginia 23212

### WASHINGTON

 An Analysis of Drunk Driving Behavior Among 16-19 Year Olds University of Washington, Division of Adolescent Medicine CDMRC: WJ-10 Seattle, Washington 98195

Bethel High School Program Stop Auto Fatalities Through Youth Effort (SAFTYE) 2215 38th Avenue East Spanaway, Washington 98387

Chemical People Project Safe Ride Washington State Substance Abuse Coalition 5211 117th Avenue S.E. Bellevue, Washington 98006

Citizens Against Alcohol Related Traffic Accidents (CARTA) North 811 Jefferson Spokane, Washington 99260

\* Everett High School Safe Ride 2416 Colley Avenue Everett, Washington 98201

- \* Friday Night Live: A Matter of Time Washington Traffic Safety Commission 100 South Cherry Olympia, Washington 98504
- Here's Looking At You, Two Drinking, Driving and Deciding Health Education Foundation 30832 Pacific Highway Street Seattle, Washington 98188
- \* Kent Drinking Driver Task Force 220 4th South Kent, Washington 98032

Marineer High School SAFTYE Club 200 120th S.E. Everett, Washington 98204

North Central High School SAFTYE club North 1600 Howard Spokane, Washington 99205

Washington Teenage Institute
 Washington State Council on Alcoholism
 360 Bellevue Square-Room 217
 Bellevue, Washington 98005

WEST VIRGINIA

Peer Intervention West Virginia Department of Education Capital Building 6 Room B-330 Charlestown, West Virginia 25305

Project Charley 136 South Main Street Box 1179 Petersburg, West Virginia 25305

Project Graduation
 West Wilson High School
 200 South Kanawha Street
 Beckley, West Virginia 25801

Project Graduation The Chemical People 200 South Kanawak Street Beckley, West Virginia 25801 Teens On The Town 500 Washington Street St. Albans, West Virginia 25177

- West Virginia Chemical People Task Forces Youth Speaker Bureau
   200 South Kanawha Street
   Beckley, West Virginia 25801
- West Virginia Collegiate Alcohol Awareness Seminar
   57 90-A MacCorkle Avenue S.E.
   Charleston, West Virginia 25304

WISCONSIN

\* Peer Resource Education Project (PREP) Ozaukee Council on Alcohol and Other Drug Abuse 125 North Franklin Avenue Port Washington, Wisconsin 53704

WYOMING

DWI School Intervention Program Division of Community Programs Hathaway Building 3rd Floor Cheyenne, Wyoming 82002

#### NATIONAL PROGRAMS

- Boost Alcohol Consciousness Concerning Health of University Students (BACCHUS)
   Campus Alcohol Information Center
   University of Florida
   Gainesville, Florida 32611
- Drinking, Driving and You National Safety Council
   444 North Michigan Avenue Chicago, Illinois 60611
- Here's Looking At You, Two (K-12 Curriculum) Comprehensive Health Education Foundation 20832 Pacific Highway South Seattle, Washington 98188

Know Your Driver-Holiday Awareness Campaign Alcohol Research Information Service (ARIS) 1120 East Oakland Avenue Lansing, Michigan 48906

- \* National Student Safety Program (NSSP) Humphreys 213 Safety Department Central Missouri State University Warrensburg, Missouri 64093
- \* Preventing Alcohol Abuse P.O. Box 2233 Princeton, New Jersey 08540
- \* The Price is High National Student Safety Program (NSSP) Missouri State University Warrensburg, Missouri 64093
- Project Graduation Division of Alcohol and Drug Education Service Stevens School Complex State House Station 57 Augusta, Maine 04033
- \* School Team Approach 2700 West 6th Street Topeka, Kansas 66606
- Students Against Driving Drunk (SADD)
   66 Diana Drive
   Marlborough, Massachusetts 01752

Students To Remove Intoxicated Drivers (STRIDE) Remove Intoxicated Driver (RID) 2451 Troy Road Schenectady, New York 12309

# APPENDIX C

## CHARACTERISTICS OF 133 PROGRAMS

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PROGRAM TITLE AND LOCATION		- P In	NOGH	AH I TY		OR I	ESSAC	E FION	IHP	LEHE SCO	NTAT PE	ION	EVA HA	LUAT	10N AL		<u>.</u>	TAR	GET E				21 1	IOGILA OCUS	м	
	Single presentation	Hulti-	Intensive	Extensive curriculum	Resource Center	DVI T1sk Teduction	Life skills	Alcohol problems	Locel area program	Multi-com-	Statevide Drogram	Nationwide Program	None available	Hinimal eveilable	Adequate available	12 or less vears	13-15 years	- 16 - 18 years	- 19 - 20 years	- 21 - 26 Vears	No ake distinction	[ndjvidua] focus	Peer focus	School focus	focus	Broader environment
ALABAMA																										
Student Worksnops and Teacher Training Hontgomery, Alabama	x					x					x		x			x	x					x				
ARIZONA											1		Ĩ							l						
Association for Drug Abuse and Alcoholism Prevention and Treatment, Inc. (ADAAPT) Tucson, Arizona		'X			x	x	x			x			х					x	x	Ŷ		(x)	(X)	(X)	(X)	
CALIFORNIA																										
Comprenensive DUI System Im- provement Project for the County of San Mateo San Mateo, California		x				x				X			x								x	x	x			x
New Experiences in Affec- cive Training (NEAT) Family Program Larayecce, California		x					x	x		x					x		·x	x				x			x	
COLORADO																										
Alcohol and Drug Task Force Greeley, Colorado		x				x			x				x						х	Х		x	х	х		X
Youth Who Care Grand Junction, Colorado		x				x	x		x				x				х	x				x	Х			x
CONNECTICUT																										
A Paramedic's View of Drink- ing and Driving Farmington, Connecticut	x					x				x				х				x				х				

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ROGRAM TITLE AND LOCATION		I I	PROC	RAM SITY		M OR1	ESSAC	E LION	LMP	LEME SCO	NTAT PE	ION	EV/ H/	LUAT	TON AL			TAR AC	GET IE				P	ROCE FOCU	AH S	
	Single	Presentation Multi-	Intensive	Tetreat Extensive	Resource center	DWI 115k	Life skills	Alcohol problems	Local area program	Hult1-com- munity	Statewide Dropram	Nationwide program	.None aveilable	Hintes) available	Adequate available	12 of less	75515  3 - 15 Years	16 - 18 years	19 - 20 Years	21 - 26 Vears	No age distinction	[ndividua]	L'eere	School	Family force	Broader
			T																							
Statewide Conference on Youth DWI and Peer Education Program Plainville, Connecticut		x			x	x	Ì		x		x		x					x				x				x
DISTRICT OF COLUMBIA						].											Į									
Your DWI Decision Curriculum Washington, D.C.	x					x			х				X					x				x				
FLORIDA							{																			
DVI Self-Honicoring Group Gainesville, Florida		x		x			x	x	x					x					X	x		x				
Drug Education Program Rockledge, Florida				x			x	x	x		{		x						X			x				
ILLINOIS		.																								
Operation Snowflake Mattoon, Illinoia			x				x		Х				x				x						x			
INDIANA														[												
Indiana Teen Institute Indianapolis, Indiana			Х				x	x		x					х			х				x	x	x	x	x
Scop and Think Indianapolis, Indiana		x		x		х				x			x				x	х				x				
10MA		1				1	ļ						}													
loua Course for Drinking Drivers Cadar Rapids, loua				x			x	X	x				x								x	x				
Project Graduation in lova Des Noines, lova	X	x				x					x				х			x				x	x		λ	

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PROGRAM TITLE AND LOCATION		LN.	ROGK. TENS	NH I TY		HI OH I I	SSAG	E	IMP	LEMEI SCO	NTATI	ON	EVA Ma	LUAT TERI	ION AL			TARC	E E				PR F	OCUS	M	
	Single presentation	Mult1- component	Intensive retreat	Extensive curriculum	Resource center	DWI risk reduction	Life skills	Al coliol proù lems	local area program	Phulci-com-	Statevide program	Nationuide Profram	None available	Minima] evailable	Adequate available	12 or less years	3-15 years	16 - 18 years	19 - 20 years	21 - 26 years	No age distinction:	Individual focus	feer focue	[Sclipe] focus	Faully focus	Broader environment
KANSAS																										
Comprenensive Substance Abuse Prevention Program Wicnita, Kansas				x			x	x		x					x	x	x	x				x	x	x	х	х
Kansas School Team Training Topeka, Kansas			x	.			x			x			x			x	x	х						x	x	x
'"Know Enougn to Say 'No'" Holiday Promotion Campaign Topeka, Kansas		х				x			X				x								x	x			x	
Non-Aicoholic Beverage (NAB) Campaign Tupeka, Kansas		x		:		i X					x		x								x					x
KENTUCKY																										
Boost Alconol Consciousness Concerning Health of Univer- sity Students (BACCHUS) Lexington, Kentucky		x						X	X					x					X	x		x	x			x
Project Graduation Franktört, Kentucky	x					x				x			x					x				x	x		х	
Youth Prevention Project Teeuage Drinking and Driving Amhlana, Kentucky	x					x			x				x					x	X	x		x				1
HAINE																										
Driver Education Evaluation Program for Teens (DEEP) Augusta, Maine	x						x			x			х					x				x				
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PROGRAM TITLE AND LOCATION		PI IN	ROGR	AH I TY		in 11 ro	ESSAC	E ION	IWb	LEME SCO	NTAT PE	ION	EV A MA	LUAT	10N AL			TAR AL	ICET Ge				PI	HOC <b>R</b> J FOCU:	лм S
	Single presentation	Hulti- component	Incensive retreat	Extensive curriculum	Resource center	DWI TISK reduction	Life skills	Alcohol probleme	Local area program	Hulti-com- munity	Statevide Program	Nacionwide Program	None available	Minimal available	Adequate available	12 of Jess verts	13 - 15 Years	16 - 18 Years	19 - 20 Vears	21 - 26 vere	No age distinction	Individual focus	Peer focus	School	Family
Haine Alcohol and Drug Clear- inghouse Jugusra, Maine					х	x	x	x		x			x								X				
Projact Graduation Augusta, Maine	x					x					x				x			x				x	x		
PSA Evaluacion: Youth and DUI Orono, Maine		x				x				x				x				x				x	x		
HARYLAND							ļ																		
Alconol, Drugs and Driving (ADD) Driver Education Program Wescover, Maryland				x		x			x					x				x				x			
Alconol: The Cruccn That Kills Frederick, Maryland		x					x	x		x			x					x				x		x	
Bowie Alcohol Drug Group Effort (BOWIE) Bowie, Maryland		. <b>x</b>				x			x	-			x				x	x				x	x		
Hign Risk Adolescent Trauma Prevention Program Baltimore, Marviand		x				x	x			x				x				х				x			
Juar Say "No" Woodstock, Maryland		x					x	x	x				x						x			x	х		
Traffic Accidents and Trauma (Τ.Α.Γ.) Columpia, Maryland				x		x			x					x				х				x			
HASSACHUSETTS																									
Drinking, Driving and You Boston, Massachusetts	x					x				x				х			x					x			

PROGRAM TITLE AND LOCATION		PI Int	ROGR. TENS	AH LTY		OR 11 HI	ESSAC ENTAT	E ION	IMP	LEHE SCO	NTAT Pe	101	EV/ Ma	LUAT ATERI	ION AL			TAR AC	GET Se				۴	ROGRA	\Н ;	
	Single presentation	Nulti- component	Intensive Tettest	Extensive curriculum	Rebuirce Center	DUI risk reduction	Life skille	A) culul problems	Local ures program	thulti-com- mundty	Statevide	Nat Junuide program	Nonc	[[] n ] uu ] aval ] ub ] e	Adequate available	12 OT Jess	13 - 15 Vearb	16 - 18 veure	19 - 20 Veara	21 - 26 VENTE	distinction	Individual	ביר ב ער כי ביר כי	Schuel focus	- Fumily focus	broader environment
Project BASE (Basic Alcohol Sarety Education) Brookline, Massachusetts					x	x				X				X		X	X	x					X	x		
Governor and Universities Ac- tively Reducing Drunk Driving (GUARDD) Boston, Massachusetts		x				x					X	   	X					x	x	x		X			x	
HICHIGAN					·													 								
Chemicul People Mc. Clemmons, Michigan		x				x				x	1			x			X	X	i I	! 1		x	:		X	, x
8:30 A.M. Honday Morning Lansing, Michigan				x			x	x		x	i 1		X				x	X				x	x			
Know Your Driver Lansing, Michigan		x				x					x		x								X	X	:			X
Sincarely Yours Granu Rapids, Michigan				x			x	x	x				X					X.				x	X	X I	X	x
Youch Drinking Driving (YDD) Grand Rapids, Michigan		x		X		x			X				X					X				X	X		X	
HINNESOTA	{																		Ì						}	
Parcners Inscitute Puluch, Minnesota				X			X	X			X		X					X				X	X	' X 		X
The Concrol Faccor St. Cloud, Hinnesota		x				x					x		x								x	X				X
The Control Factor St. Paul, Minnebota		x	X			X	x		X	-	x	Í		x				X					x	X		

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PROGRAM TITLE AND LOCATION		P) In	rocr. Fensi	ан [ТҮ		M 081	ESSAG ENTA	ce Fion	IMP	LEHE SCO	NTAT PE	ION	EV. M	LUAT TERI	ION AL		•	TAR AC	CET E				84 1	OCUS	1.M 5	
	Single presentation	Mult1- component	Intensive retreat	Extensive curriculum	Resource center	DVI risk reduction	Life skills	Al cohol problems	Local area program	Hult1-com- munity	Statevide program	Nationvide program	None	Minimal evallable	Adequate available	12 DT less vears	13 - 15 Veara	16 - 18 Years	19-20 .	21 - 26	No age distinction	[ndividua]	Peer focue	School focue	Family focus	Broader
MISSISSIPPI																								1		
Drug Resource and Education Association Jackson, Mississippi	x	x						x			x		x								х	x	x	x	x	x
Mississippi Alcohol Safety Education Program Jackson, Mississippi				x		x			x				x					x				x			x	
MISSOURI											.															
Alcohol and Drug Education Program Florissanc, Missouri	x					х			x				x								x	x				x
Community Alcohol Safety Effort (CASE) Springfield, Missouri		x				x			x				x								x	x				x
Comprehensive Youth DWI Program Hazelwood, Missouri		X				x	x		x				x				x	x				x	x		x	x
Missouri Youth Network St. Louis, Missouri		x	x				x	x			x			x			x	x				х	x			
On Track Springfield, Missouri		x					x	x	x				x	ŀ				x				x			х	
Project Graduation Jefferson City, Missouri		х				x			x		x		x	i i				x				х	х	x		
St. Louis County DWI Advisory Committee St. Louis	x	x				x			x				x					x				x				
Stop Alcohol Violations Entire- ly (SAVE) St. Charles, Missouri		x				x	.		х				х								x				x	x

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Honcana Teenage institute Name   New Bampshire   New Bampshire   Naw	Havre Encourages Long-Range Prevention (HELP) Havre, Montana		x		x			X	x		x				x		x	x	·х			x	x	x	x	x	
NEW HAMPSHIRE       X       <	Montana Teenage institute on Substance Abuse Heimma, Montana			x				x	x			<b>. X</b>		х					x				x	x			х
Impaired Driver Intervention Program Concord, New Hampshire X	NEV HAMPSHIRE									- 4 - E																	
New Hampshire Teen Institute Manchester, New Hampsnire       X </td <td>Impaired Driver Incervention Program Concord, New Hampshire</td> <td>x</td> <td></td> <td></td> <td></td> <td></td> <td>x</td> <td></td> <td></td> <td></td> <td></td> <td>x</td> <td></td> <td></td> <td>(X)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>x</td> <td>x</td> <td></td> <td></td> <td></td> <td></td>	Impaired Driver Incervention Program Concord, New Hampshire	x					x					x			(X)							x	x				
NEW JERSEY:         Driver improvement Program         Trencon, New Jersey         X          X          X         X         X         X          X         X          X          X          X         X         X         X         X         X         X         X         X	Nov Hampshire Teen Institute Manchester, Nev Hampsnire		x	x				x	x		x				x				x				x	x			x
Differing for ment program     X	NEW JERSEY		ĺ																								
Inconstracted Driver Resource Cancer Trenton, New Jersey       X <td>Trencon, New Jersey</td> <td></td> <td></td> <td>X</td> <td></td> <td></td> <td></td> <td>X</td> <td>X</td> <td></td> <td></td> <td>X</td> <td></td> <td>X</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>X</td> <td>x</td> <td></td> <td></td> <td></td> <td></td>	Trencon, New Jersey			X				X	X			X		X								X	x				
Stay Off the Bottle/Enjoy the Road (SOBER)       X<	Intoxicated Driver Resource Canter Tranton, New Jarsey	x					х					x		x					x	x	x	x	x				
Students for Legislation and Education Against Drunk Driving X X X X X X X X X X X X X (LEADD) Allendale, New Jersey	Scay Off the Bottle/Enjoy the Road (SOBER) Trenton, New Jersey		x				x				x					х			x			x	x	x			x
· · · · · · · · · · · · · · · · · · ·	Students for Legislation and Education Against Drunk Driving (LEADD) Alleodale, New Jersey		x				x			x				x			x	x	<b>X</b>				x			x	x

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	Single presentation	Mult1- component	Intensive recreat	Extensive cutriculum	Resource center	DWT risk reduction	Life skills	Alcotic] problems	local area program	Nulti-com- munity	Statevide program	Nationvide program	None svailable	Minima] available	Adequate available	12 of less vears	13 - 15 Vears	16 - 18 Years	19 - 20 Veara	21 - 26 Veara	No age distinction	Individual focue	Peer focus	School focus	Family focus	Broader
NEW MEXICO																										
APS Traific Safery Project , Albuquerque, New Mexico		x			x	Υ.			<b>X</b> -				x			х	x	x				(x)	(X)			
Farmington Municipal Schools Traffic Safety Project Farmington, New Mexico					x	x			x		,		x			x	x	x				x				x
Gallup McKiniey County Public School Traffic Project Gallup, New Mexico					x	x			x				x			х	x	x								x
Peers Educacion Peers (PEP) Albuquerque, New Mexico	x	x				x				·x			x				x	x	x	x			x			
NEW TORK		·								ł														-		
Hyde Park School District Alcohol and Highway Safery Pro- ject Hyde Park, New York		:	x	x			х	x	x				x			x	x	х				x		x		x
Driver Education: Drinking Driver Demonstration Pine Bark, New York	x					x				x			x					x				x				
Prelicensing Course Guide Albany, New York	x					x					x			x					х	х	x	x				
21 Purchase Age Research Albany, New York						x					x				x			x	х	x						х
Stop DWI: Project Charlie Kingston, New York				x			x	x	х				x			x				     .		x	x	x		x
Traffic Safery Education and Teacher Training Albeny, New York	x			x		X	х				x			X				x			x	x		x		

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	Sing) e Dresentacion	Multi-	Intensive	Extensive curriculum	Resource center	DVI risk reduction	Life ekille	Alcohol problems	local area brogram	Hulti-com-	Statevide program	Nacionwide Program	None	Minimul . available	Adequate	12 or less	13 - 15	16 - 18 Veara	19 - 20	years	21 - 25 years	No age discinction	Individual focus	reer focus	School focus	Family focus	Broader environment
Young Highway User Program (K-ll Curriculum) Albany, New York				x		x					x				x	x							x				
0110																											
Drinking and Driving Prevention Project Course Youngstown, Ohio			x	.		x				x				·X				x						x			
Drugged and Drunk Driving Awareness Columbus, Ohio		x				x					x		x									x	x				x
School Chemical Abuse Program Libson, Ohio		x					x	x	x				x					x						x		x	
Teenage Institute, Region Six Columbus, Ohio			x				x			x				x				X					x	x	x	x	x
Teenage Institute, Region Seven Cleveland, Ohio			x				x			x			x				.	x					x	x	x.	x	x
Teenage Inscitute, Region Eight Athens, Ohio			x				x			x				x			{	x					x	x	x		
Teenage Inscituce, Region Ten Akrou, Uhio			x			x				x			x					x					x	x			x
Taenage Institute, Western Ohio Ragion Dayton, Ohio			x				x			x			x					X.					x	x	x	x	x
Teenage Institute Youngstown, Ohio			x				x			x	x				(X)		x	x					x	x	x	. 	x
Youth Alcohol and Drug Assess- ment Program Lima, Ohio			x	x				x	x					x				x	x	ĸ			x			X	
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	Single presentation	Hult1- component	Incensive retreat	Extensive curriculum	Resource center	DWI risk reduction	Life skille	Al colio! problems	Local area	Nulti-com- Bunity	Statevide prugram	Nationuide Profram	None available	Minimal available	Adequate available	12 or 1ess years	13-15 yeara	16 - 18 vears	19 - 20 Vears	21 + 26 year6	No age distinction	Individual -	Peer	School forue	Fam: 1y	Broader
oklahoma													l								.		1	}		
oung Oklahoman Drinking Driver Uternative Iklahoma City, Oklahoma			x			x	x			x					x	X		х	x	1		x	X	!		x
DRECON		.																1			 i					
Dregon Student Safety On the Move (USSOM) Curvallis, Oregon		x		x		x	x			X	x		X			х	X	x				X	x			
Project Graduation Portland, Oregon	x					x			X		· X			x				X				X	x	+ }		x
The Status of Alcohol and Drug Education in Oregon Schools Salam, Oregon											X			x	x	x	x	x								<b>!</b> :
Youth Traffic Project Curvellis, Oregon		x			x	x					x		x					X				X				
PENNSYLVAN LA																										
Here's Looking at You, Two+ Herrieburg, Penneyivania				x			x	x			x			x		X						X	{ 			
Pennøvlvania Governor's Youth Traffic Satery Council Indiana, Pennøylvania	x	x		x	x	x	x				x		x			x	x	X								
Resource Guide for Penneylvania Driver Educación Instructors Herrisburg, Pennsylvania				x		X					x		x					х				x	   			
Penneylvanta Alcohol Traffic Satery Program Department of Transportation Harrisburg, Penneylvania		x		x		X					x				x	X	X .	X			X	X				х

PROGRAM TITLE AND LOCATION		L	P RO NTE	GRA NS 1	H TY		OK	HESS I ENT	NGE NTIC	DN	Inp	LEME SCO	NTAT PE	ION	E\ ł	ALU.	ATIC RIAL	<b>DN</b> L			TAR( AG	GET E				P	RÓGI FOCI	RAH JS	
	Single	Mult1-	Intensive	TETEL	Extensive curriculum	Resource center	DWI TISK	reduction Life	akills Alcohol	problems	Local area program	Hulti-com- munity	Statevide	Nationvide	None	available Minimal	available Adequate	available	12 or less years	13-15 years	16 - 18 yeara	19 - 20 Years	21 - 26 Verf	No age distinction	Individual	Peer	School	focus Family	focus Broader
RHODE ISLAND		<b>—</b>	Т	-1				1	1						11								1						1
Peer Intervention Program (PIP) Evaluation Providence, Rhode Island					X		2	x				x					3	x			x					x			
Partners in Prevention PIP-FEST Providence, Rhode Island				x	•			X		x			x		×		ľ				х				X	x			
SOUTH DAKUTA																			1										
School Drunk Driving Prevention Materials Sloux Falls, South Dakota				x	X			Х					x		x				x	x	x								
TENNESSEE																			ļ										
Greene County Youth Alcohol Hignway Safety Project Nashville, Tennessee		x					1	c x			x							x ,		x	x				x	x			x
Washington County Youth Alcohol Highway Satety Project Nashville, Tennessee		x						<u>د</u>			x							x		х	x				x	x			x
Nashville Youth Network Nashville, Tennessee		x	:				:	(			x							x		x	x				x	- <b>x</b>			x
"No" Power Auslin, Texas		K			X	i		X		x			x		X	۲				x					x				
UTAH																													
Peer Helper and Teen Hotline – Program Castledate, Utah		X		x				2	۲ ا			x			K	:				:	x				x	x			
Project Graduation Sait Lake City, ULub	X							ĸ			x		x		X						x				x	x			x
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PROGRAM TITLE AND LOCATION		PI Int	ROCE	ин 1 ТҮ		M	ESSAG ENTAT	E	IMP	LEHE SCO	NTAT. PE	ION	EVA HA	LUAT TERI	ION AL			TAR( AC	CET E		PROGRAM FOCUS						
	Single presentation	Mult1- component	Intensive retreat	Extensive curriculum	Resource center	DVI risk reduction	Life skille	Alcohol prablems	local area program	Hult1-com-	Statevide program	Nationvide Program	None available	Minima] available	Adequate svailable	12 of less years	13 - 15 years	16 - 18 yeare	19 - 20 Years	- 21 - 26	No age distinction	[Individua] focue	Feer focus	School focue	[Family focus	Broader environment	
Utah K-12 Alcohol, Drug and Tobacco Prevention Education Program Salt Lake Ciry, Utah		X		x			x	x			x			x		x	x	x				x		x	x		
VERMONT			ŀ							}				Ì			1						· ·	]			
AL-CO-HOL Moncpelier, Vermont				x		х	x				x	х			x		x					x					
Drinking/Driving Peer Interven- tion Hontpelier, Vermont	x		x		x	х									x			x				x		x			
Green Hountain Prevention Projects Burlington, Vermont			x				x			x					х		x	x				x	x			х	
lf You Drive What About Drinking? Montpelier, Vermont			ŀ	x		x					х				x			x				x					
Starting Early NSPRI Peer Intervention Program Montpelier, Vermont				x			x	x			X				x	x						x					
VIRGINIA					1																						
Cambridge and Sommerville Program for Alcohol Rehab- ilitation (CASPAR) Staunton, Virginia WASHINGTON An Analysis of Drunk Driving				x			x	x	x				x		x	x	X	x				x		x			
Behavior Among 16-19 Year Olds Seattle, Washington															~												

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PROGRAM TITLE AND LOCATION		PROCRAM INTENSITY					ESSAC	E	LHP	LEHE SCO	NTAT PE	10N	EVA	LUAT TERI	ION AL	TARGET AGE							PROGRAM FOCUS					
		Hult1- component	Intensive	Extensive curriculum	Resource center	DWI riek reduction	Life akille	Al coliol probleme	Local area Drogram	Hult1-com-	Statevide	Nationvide Program	None	Minime] available	Adequate available	12 or less vears	13 - 15 years	16 - 18 years	19 - 20 years	- 21 - 26	No age distinction	[ndividua] focus	Peer focu	School tocue	femily focus	Broader		
Everect High School Safe Rides (Teen Institute) Everect, Wasnington	X	x				x			x				x					x				x	x					
Friday Night Live: A Matter of Time Olympia, Washington	x			(X)		x					x		·		x		x	x				x				x		
Kent Drinking Driver Task Furce Kunt, Washington		x		•		x			x						(X)			x	x	x		x			x	x		
Washington Teenage Institute Bellevue, Washington		x	x				x	x	x		x				x			х				x	x	x				
WEST VIRGINIA Project Graduation Becklay, West Virginia	x					x			x	· · ·				x				x				x	x			x		
Wesc Virginia Chemical People Task Forces Beckley, Wesc Virginia		x				x			x				x				. 				x	x			x	x		
West Virginia Collegiate Alcohol Awareness Seminar Charleston, West Virginia		x	x			x					x		x						x	X		x	x	-		х		
VISCONSIN Peer Resource Education Project																												
(PREP) Port Washington, Wisconsin			X				X	x		X				X		x	X	X					х		X			

PROGRAM TITLE AND LOCATION	<u> </u>	PROCEAM INTENSITY					MESSAGE ORIENTATION				IMPLEMENTATION SCOPE					LUU LUU			LAT A	IGET GE		PROGRAM FOCUS					
	Single Dresentetion	Mult1- component	Intensive Tetrest	Extensive curriculum	Resource center	DWI risk	Life	Alcohol problems	Local area	program	Mult1-com-	Statevide prograw	Nacionvide Program	None	Minigal abje	Adequate available	12 or less	years 13 - 15	years 16 - 18	19 - 20	74615 21 - 26 Vears	No age discinction	[ndjvjdua] [ocue	Peer	School	Family	Broader
NATIONAL PROGRAMS							T		Π																		
Boost Alcohol Consciousness Concerning Health of University Students (BACCHUS) Gainesville, Florida		х 					x	x			x		x	x						x	x		x	x			x
Drinking, Driving and You Nacional Safety Council Boston, Massachusetts	x					x					x			x								x	x				ļ
Here's Looking at You, Two Seattle, Washington				x			x	x					x			(X)	Х	x	x				х			x	
Prevencing Alcohol Abuse Princeton, New Jersey				x		x	x				x			x			x	x	x				х	x			
The Price is High Nacional Student Safety Program (NSSP) Warrensburg, Missouri		x				x	x			x			x	X					X				x	x		x	x
Project Graduation Augusta Maine	x					x				x			x	x		.			x				x	x			x
School Team Approach Topeka, Kansas			x				x	x			x		x			(X)		x	x						x	x	x
Student Against Driving Drunk (SADD) Marlborough, Massachusetts		x		x		x					x		x	x					x				x	x	x	x	x
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## APPENDIX D

## DETAILED METHODS FOR EXTRACTING AND CODING OF ASSUMPTIONS AND PREMISES

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## EXTRACTION AND CODING OF ASSUMPTIONS AND PREMISES

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The first step in analyzing the assumptions and premises underlying the 133 programs studied was the simple extraction of assumptions and premises from the program materials reviewed. Ιn some cases, this task proved simple because each program component was associated with one or more clearly articulated assumptions. For example, one well packaged curriculum guide began each lesson plan with a statement of the assumption underlying the lesson and the learning objective to be accomplished. Here, assumptions and premises could be extracted simply from the curriculum guide. In most cases, however, the extraction of assumptions and premises required careful reading of the materials, and in some cases, even assumptions and premises underlying the general approach had to be imputed based upon mission statements, objectives, or descriptions of activities. In cases where imputation was necessary, more than one researcher reviewed the materials in order to check the validity of the imputation.

The raw assumptions and premises extracted in step one required refinement before any analyses were attempted. Many of the raw assumptions and premises contained several assumptions and premises, each of which might be analyzed separately. Moreover, these assumptions and premises were generally not described in terms of the variables familiar to prevention researchers (e.g., social support, normative change, fear arousal, social modeling, etc.). Finally, no consistent format was evidenced in the raw assumptions and premises and it was sometimes difficult to ascertain which statements concerned predisposing, reinforcing, or enabling factors, and which concerned outcomes.

Accordingly, the second step of the analysis of assumptions and premises was to "translate" the raw assumptions and premises into a consistent format using variable descriptors that could be tied to the theoretical, conceptual, and empirical prevention literature. The general format adopted was to translate the

assumptions and premises into simple structural models of the form:

PREDISPOSING, OUTCOME REINFORCING, ----> VARIABLE OR ENABLING FACTOR

So, for example, a simple assumption (and a common one) could be stated:

INCREASED KNOWLEDGE---->DWI REDUCTION.

Assumptions and premises might also reflect the relationship between an activity and a predisposing, reinforcing, or enabling factor--e.g.,

COMMUNITY ORGANIZATION---->STRICTER ENFORCEMENT, or the relationship between two predisposing, reinforcing, or enabling factors:

INCREASED KNOWLEDGE---->IMPROVED DECISION MAKING SKILLS These latter two examples illustrate the "linking" assumptions and premises of Figure 1. (see p. 22, Volume I)

Some assumptions and premises were more complex, reflecting the interaction of more than one predisposing, reinforcing, or enabling factor, e.g.,

> INCREASED KNOWLEDGE + ---->DWI REDUCTION. DECISION SKILLS

A limited number of assumptions and premises coupled a predisposing enabling, or reinforcing factor with a mediating variable. For example, one program explicitly stated that a knowledge-based program could only work if presented to predrivers. This assumption took the form,

INCREASED KNOWLEDGE + ---->DWI REDUCTION.

AGE APPROPRIATENESS

Many of the assumptions and premises extracted from the program materials contained more than one causal proposition. This was especially the case for assumptions and premises that guided the overall program design. For example, a program might be based on the overall assumption that peer education leads to improved decision making-skills regarding DWI. This overall

assumption contains within it the separate assumption that youth can be trained to function as effective youth educators as well as the implied assumptions that the decision-making skills will be applied, thus reducing DWI.

For the purposes of some of the analyses described in section III, Volume 1, assumptions and premises with multiple causal propositions posed no particular problems. For other analyses, however, it was necessary to disaggregate the assumptions and premises such that each contained only one causal proposition. Thus, two sets of assumptions and premises were analyzed - disaggregated, and combined.

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