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16. Abstract

The objective of this study was to determine the feasibility of developing programs for assisting parents in preventing driving after drinking among their children. This report contains results from a literature review conducted in order to identify information relevant to developing such prevention programs and the key issues for which information was lacking. Findings from focus groups conducted with parents of adolescents appear in a companion report: "Identification of Parental Program Structures for Deterring Adolescent Drinking and Driving. Volume I: Report on Focus Groups with Parents."

This review concentrated on literature published in the last decade, reviews of studies, literature that directly concerned preventing driving after drinking, empirical studies, and material about prevention in the U.S. The literature provided little guidance in developing prevention programs to aid parents. Findings included the following: (1) few studies address how parents can prevent adolescent drinking or drinking-driving; (2) there are few rigorous and positive evaluations of any types of substance abuse prevention efforts; (3) parents feel youth drinking-driving is a major problem, but appear to underestimate drinking and drinking-driving among their own children; (4) adolescents indicate that parents do influence their drinking, but parents tend to feel they have little impact and therefore, many take few actions to try and control teen drinking.

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EXECUTIVE SUMMARY

Background

Although in recent years there has been a decrease in alcohol related fatalities involving young drivers, youth driving after drinking remains a serious problem. One approach to further reduce youth impaired drinking may be to engage more parents in solving this problem.

In 1987, the National Highway Traffic Safety Administration (NHTSA) contracted for a study ("Identification of Parental Program Structures for Deterring Adolescent Drinking and Driving") to determine the feasibility of developing programs for assisting parents in preventing driving after drinking among their children. The project began with a literature review that had two main objectives. The first was to learn what information was available about assisting parents to prevent their teens from driving after drinking. The second objective was to identify issues that might be further explored in the second phase of this study by conducting focus groups with parents. This report discusses the results of the literature review.

Methods

Two methods were used to identify potentially relevant literature. First, we contacted NHTSA staff and approximately 20 knowledgeable colleagues who were either involved in delivering substance prevention programs or were researchers interested in prevention and/or highway safety. Second, we searched five computerized databases that index articles and other materials.

Emphasis was placed on examining: literature reviews, rather than individual articles; literature on alcohol use and driving after drinking; empirical rather than theoretical literature; literature published in the last decade; and literature concerned with prevention in the United States versus other countries. Because studies relevant to some issues were scarce, we included some studies with significant methodological flaws. Although these flaws may be mentioned, we did not undertake a detailed critique of the studies reviewed.

Findings

Findings from the literature are organized below according to the key questions that the entire project attempted to address.

<u>What evidence is there that prevention programs directed at youth drinking and driving, especially those involving parents, are feasible and effective?</u> Two of the most striking findings of the

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literature review were that there is (1) a scarcity of parent prevention programs aimed at reducing substance abuse among youth and (2) little research on the effectiveness of those efforts which do exist. As Beck (1989) has noted and the findings of this review have supported, no evaluation has shown these programs to have a positive impact on substance abuse among the children of parents exposed to these efforts. Furthermore, we were able to locate only one evaluation of a parent prevention program specifically aimed at reducing adolescent drinking and drinking and driving (Atkin, 1986, 1989), and that showed no substantive impact on teen drinking behavior.

How do parents define the youth drinking-driving problem? Data from surveys and focus groups indicate that parents define teenage drinking and driving as a serious social problem. This suggests that parents will accept parent prevention programs which promise to help alleviate the problem. On the other hand, many parents may not feel such programs are appropriate for them because, as several studies indicate, parents tend to underestimate the extent to which their own adolescents drink or drink and drive.

How do parents view their role in addressing youth drinking-driving problems? Relatively little information was located on this topic. Focus groups in three studies indicated that parents tend to feel (1) they have little influence on their adolescents' drinking behavior and (2) the efforts of agencies outside the family would be needed to impact the problem.

How receptive are youth to parental prevention efforts? Although parents may not appreciate the fact that they can influence adolescent drinking, there is a good deal of evidence to indicate that youth are receptive to parental influences. Youth tend to share adults' views that drinking and driving is a serious problem. Many correlational studies have indicated that parents' drinking and attitudes about drinking have a major impact on adolescent drinking. In other studies, adolescents have reported that their parents do or can exert a strong influence on their drinking.

In what ways do parents try to influence their children's attitudes and behaviors? Information from four studies indicated that varying but often substantial minorities of parents fail to attempt to exert much influence over adolescent alcohol use. For example, they fail to supervise parties, fail to discuss drinking-driving on regular basis, etc.

Who should be targeted by programs to reduce adolescent driving-drinking problem? Although some progress had been made on identifying adolescents at risk of abusing alcohol or of having alcohol-related crashes, the precursors that have been found are

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generally too broad to be of practical use in targeting preven-
tion programs. The one exception may be the risk factor of hav-
ing parents who abuse alcohol.

To our knowledge, no program evaluation exists that demonstrates
the benefits of targeting young children. However, an early
start on prevention may be warranted since epidemiological data
make it clear that a substantial proportion of adolescents begin
drinking (57%) or riding with drinking drivers (17%) when they
are 12 to 15 years old.

Should programs deal only with parents or should the entire fam-
ily be involved? We found no evaluative evidence about whether
programs should be delivered only to parents or to parents and
their children together.

What kinds of programs/assistance are appropriate? (What kinds
would parent accept and join? How long should programs be? What
should the content be? How should the program be delivered?)
Focus group data from several studies indicate that parents are
interested in prevention programs, but are unwilling to commit a
substantial amount of time to them. We located no evaluation
studies that would indicate what the content of parent prevention
program should be, though we do report the recommendations of re-
searchers and program planners. Only a handful of the studies
examined provided any evidence about appropriate delivery sys-
tems. One survey found that parents will pay attention to pre-
vention messages about adolescents in newspapers, radio PSAs, and
pamphlets mailed to the home. Another found that parents would
be unlikely to pay attention to material brought home from school
by their children.

Conclusions

There is a shortage of evaluative studies on parent prevention
programs, and rigorous evaluations of prevention programs
delivered directly to adolescents are also rare. Therefore, we
were able to extract few guidelines for the development of parent
prevention programs and these few should be regarded as tentative
because they are supported by a small number of methodologically
weak studies. (For the most part, focus groups and surveys were
not carried out as part of a program evaluation). The guidelines
include the following:

   o   Program planners can safely assume that parents are inter-
       ested in preventing adolescent drinking and drinking-
       driving, but they cannot assume parents feel they play an
       important role in influencing adolescents. One way to
       counter this attitude might be to present research findings
       that show that parents' attitudes/behaviors have a strong
       impact on adolescent drinking.

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o   Most parents are probably not willing to attend a program
     that demands much of their time.

o   Parents may be more receptive to programs that come to them
     (via television, mailed pamphlets, newspaper stories, etc.)
     than to programs to which they must go.

o   It is logical to have parents' efforts to prevent driving
     and drinking begin before these behaviors emerge. To ac-
     complish this means programs must encourage parents to be-
     come active about prevention when their children are no
     older than ages 9 or 10, or younger.

o   Programs must deal with the fact that drinking among older
     adolescents is normative behavior. Parents should be
     equipped with information and techniques for addressing
     responsible use as well as abstinence.

Future Research

Keeping in mind that this review was limited in scope, considera-
tion should be given to a more thorough review of literature con-
cerning parental prevention efforts. However, even without more
extensive review, the need for more research to provide informa-
tion needed to design effective prevention programs. Information
is needed on such topics as parents' views of their role in pre-
venting youth drinking-driving; the reasons why many parents do
not make more effort to influence their childrens' drinking-
driving; and parents' receptivity to various types of programs
(programs with different delivery systems, different content,
different spokespeople, etc.). There is also a need for rigorous
evaluation of programs directed at parents.

INTRODUCTION

Background

In recent years, many important actions have been taken to reduce
driving after drinking among youth. These include the prolifera-
tion of substance abuse education programs, designating the
reduction of substance abuse among youth as a major federal
priority, and the nationwide adoption of laws making it illegal
for persons under 21 years of age to purchase alcohol. There has
also been a corresponding decrease in alcohol related fatalities
involving young drivers: "between 1982 and 1987 the alcohol-
related fatalities of youth under 21 declined by 21%" (National
Commission Against Drink Driving, 1988, p. 1).

Despite these encouraging changes, youth driving after drinking
remains a serious social problem. As pointed out by the
National Commission Against Drunk Driving (NCADD, 1988, p. 1), in
1987 "youths under 21 comprise only 8% of the total driving popu-
lation but accounted for 17% of alcohol-related fatal crashes"
and driving after drinking "continues to be the number one killer
of teenagers... One in five American youths who dies between the
ages of 15 and 20 will die in an alcohol-related crash."

One approach to further reduce youth impaired drinking may be to
engage more parents in solving this problem. This is appealing
both because parents play a crucial role in shaping the drinking
behavior of their children, and because they can be a potent
political force in supporting school-based prevention programs,
local enforcement of drunk driving laws, and other efforts to
reduce drinking-driving (e.g., Atkin, 1986, p. 3).

In 1987, the National Highway Traffic Safety Administration
(NHTSA), contracted for a study ("Identification of Parental Pro-
gram Structures for Deterring Adolescent Drinking and Driving")
to determine the feasibility of developing programs for assisting
parents in preventing driving after drinking among their chil-
dren. More specifically, this project was to investigate:

o The feasibility of using parents to deter drinking and driv-
   ing among adolescents.

o The willingness of parents to participate in such programs.

o The information required by parents to communicate effective
   DWI avoidance strategies to their children.

o The optimal age for parents to begin discussing drinking and
   driving with their children.

o The most effective and acceptable mechanisms for transmit-
   ting DWI avoidance information to parents.

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The project began with a literature review that had two main objectives: (1) to learn what information was available about assisting parents to prevent their teens from driving after drinking; and (2) to identify key topics about which information was missing or inconclusive. Results from this review were then used to help specify the types of information to be collected by conducting focus groups with parents of adolescents.

This report discusses the literature review. The focus groups are discussed in a separate volume: "Identification of Parental Program Structures for Deterring Adolescent Drinking and Driving, Volume I: Report on Focus Groups with Parents."

Organization of This Report

The report consists of four major sections. The first describes the methods used to identify and select the literature.

The second section presents the findings and is organized by the following list of questions that the project attempted to answer:

o   What evidence is there that prevention programs directed at youth drinking-driving, especially those involving parents, are feasible and effective?

o   How do parents define the youth drinking-driving problem? For example, do they see it as a major social problem? Do they approve or disapprove of adolescent drinking and under what circumstances?

o   How do parents view their role in addressing youth drinking-driving problems? For example, do parents see themselves as responsible for preventing their children from drinking and/or from driving or would they prefer to relegate prevention efforts to the schools or other agencies?

o   How receptive are youth to parental prevention efforts? For example, do adolescents share parental concerns about drinking and driving and look to adults for information and advice about drinking and driving?

o   In what ways do parents try to influence their children's attitudes and behaviors? This includes issues such as: the kinds of models parent set, whether they discuss drinking and driving with their children, and whether they establish and enforce rules about drinking and driving.

o   Who should be targeted by programs to reduce adolescent drinking-driving? Should programs deal only with parents or should the entire family be included? What should be the ages of the children?

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o What kinds of programs/assistance are appropriate? What
   kinds would parent accept and join? How long should pro-
   grams be? What should the content be? How should the pro-
   gram be delivered -- should it rely on films, written
   materials, lectures, small training groups?

The third section of the report presents conclusions based on the
review.

Appendix A contains abstracts of the major articles discussed in
the report. (In addition, the references cited in the report are
listed, beginning on page 33).

METHODS

We used two methods to identify potentially relevant literature. First we sought the advice of NHTSA staff and of knowledgeable colleagues. The latter group was comprised of about 20 people most of whom were either involved in delivering substance prevention programs or were researchers interested in prevention and/or highway safety. Second, we searched five computerized databases that index articles and other materials. Three of the databases are: <u>Sociological Abstracts</u> (searched for 1963 to late 1988), <u>Psychological Abstracts</u> (for 1967 through October 1988), and the <u>Educational Resources Information Center</u> (for 1966 through November 1988). (The beginning cut-off dates reflect the way these databases were structured, rather than specific choices we made). The fourth database, Harvard Online Library Information System, lists books, periodicals, and other holdings in the Harvard University Library system. The fifth is an "in-house" database which focuses on alcohol and substance use and contains approximately six hundred entries.

Given limited resources, we placed primary emphasis on identifying and examining the following types of literature:

o   Reviews of prevention program literature rather than individual books or articles.

o   Literature that dealt specifically with alcohol use and with driving after drinking versus, for example, literature which discusses illicit drug use.

o   Literature that was more empirical than theoretical in nature, and especially literature that discussed evaluations of prevention programs.

o   Literature published with the past decade.

o   Literature dealing with prevention efforts in the United States versus other countries.

In a few instances, these guidelines were waived because a source seemed particularly useful, e.g., contained important information that was not otherwise available.

It should also be mentioned that, while we attempted to identify studies which used the best methods, materials about some topics were so scarce that it was necessary to include studies with important methodological shortcomings. Although these shortcomings may be mentioned, for the most part this review reports on the literature rather than critiquing it in detail.

FINDINGS

Notes on Terminology

The following rules about terminology have been applied through-
out this report:

> o The term "substance abuse" will be used to refer to use of
>   both licit (alcohol, tobacco, caffeine, etc.) and illicit
>   substances (marijuana, cocaine, psychedelics, etc.).
>
> o The term "youth" will be used to refer to children of any
>   age up to 21 years old, whereas the terms "adolescent" and
>   "adolescence" will refer more narrowly to children between
>   approximately 11 years of age to 21 years of age.
>
> o The term "prevention" refers to primary prevention efforts,
>   which in the case of drunk driving "would be aimed at pre-
>   venting a person who has been drinking from driving his/her
>   car" (Creative Associates, 1982). In this report, we will
>   also be considering prevention and deterrence of adolescent
>   drinking as a means of preventing drinking and driving. We
>   also include prevention of riding with an intoxicated driver
>   as part of the drinking-driving behavior to be prevented
>   (see for example Simons-Morton and Simons-Morton, 1989 for
>   discussion of broad prevention goals).

We now turn to the information we were able to extract from the
literature. As mentioned above, this information is organized
according to key questions this project attempted to answer.
Obviously, the studies we reviewed were not designed to answer
these specific questions and, therefore, the fit between the
findings and the topics is imperfect and there is some overlap
among the sections.

What Evidence Is There That Prevention Programs Directed at Youth
Drinking and Driving, Especially Those Involving Parents, Are
Feasible and Effective?

Little information on parent prevention programs: There are
numerous examples of advice, opinion, and policy statements to
the effect that parents are potentially a very important resource
in preventing substance abuse among their children (e.g., DuPont,
1980; Korenbaum, 1982, pp. 25-26; NCADD, 1987, pp. 21-22;
National Institute on Alcohol Abuse and Alcoholism [NIAAA], 1983,
pp. 101-134; United States Department of Education [USDOE] 1988,
pp. 13-17; United States Department of Health and Human Services,
1989, p. 40). Unfortunately, one of the most striking findings
of our literature review was that there is a scarcity of research
on the effectiveness of parent prevention efforts.

Among hundreds of articles dealing with substance abuse prevention, we were able to identify only a handful of research reports on parent prevention. As Beck (1989) observed in an introduction to one of the few relevant studies, there is "surprisingly little published research into the specific roles that parents play in terms of intervening to prevent adolescent substance abuse in general, and virtually nothing in the area of alcohol and impaired driving in particular." Beck also reports that while there have been studies of "parental communication programs aimed at preventing adolescent substance abuse" no evaluation has shown a positive impact on "substance abuse or problem behaviors associated with substance abuse among the children of parents exposed to these training programs." As the remainder of this section will make clear, we could find no satisfactory evidence to challenge Beck's pessimistic appraisal of the situation.

Two of the articles we located identified a program involving parents that did show limited positive change in behavior or behavioral intentions concerning smoking (Bry, 1983; DeMarsh and Kumpfer, 1986). According to Bry, a program evaluation conducted by Flay et al. (in press) "compared the impact on junior high school students of (a) a combined school and media prevention/cessation program with written homework assignments to complete with parents and (b) no special school or family component (controls...could watch the TV segments). Students in the group that received the enhanced program were half as likely to start smoking during the two months from pre- to post-test than control students who were not assigned family homework." DeMarsh and Kumpfer (1986) also presented some preliminary data from their own implementation and evaluation (in progress) of a training program for drug-involved parents. The data showed reductions in childrens' intentions to smoke and drink, "but not for drugs." Although their review of literature on parent programs included the evaluation by Flay et al. and their own evaluation, DeMarsh and Kumpfer were obliged to conclude that "there are few outcome studies to support" the view that family prevention programs can keep youth from abusing substances, and those studies which do exist are inadequate: they "typically have small Ns, lack the rigors of experimentally designed and controlled studies, and have yet to provide longitudinal data."

A more recent review article by Moskowitz (1989 - see below for further discussion), identified an additional study (Shain et al., 1980) of a parent prevention program aimed at preventing adolescent alcohol or drug problems. The program trained parents in communications and problem-solving skills. Moskowitz summarized the results as follows:

> This four year quasi-experimental study revealed short
> term improvements in parents' skill levels and in chil-
> dren's perceptions of their families. However, the

participants' children _increased_ [original emphasis]
their alcohol use as the program seemed to potentiate
parental influence, and most of the parents used al-
cohol.

Reports by Atkin (1986, 1989) on another parent prevention pro-
gram were only slightly more encouraging. The program "was
control-oriented, stressing actions to minimize teenager access
to alcohol and opportunities for heavy drinking through rulemak-
ing, surveillance, and punishment" (Atkin, 1989). Information
was disseminated to parents in two communities through newspaper
articles, public service announcements on radio, and pamphlets
mailed to parents of students in grades nine through twelve. A
post-program survey in the exposed communities indicated that
parents attended to this information. For example, all but 8% of
the parents said they read some of the newspaper articles, and
three-quarters reported that they read the pamphlet "closely" and
"almost all of the others" read "some" of the pamphlet (Atkin,
1986). More importantly, parents reported that the program in-
creased their awareness and concern about adolescent drinking and
their prevention activity: networking with other parents, commu-
nication with their teenagers about drinking-driving, and
monitoring of their children. Pre- and post-program surveys of
students in grades nine through twelve in the exposed communities
and in two control communities confirmed that the program in-
creased parental prevention activities. However, "this effect on
parents translated into only a slight indirect effect on bottom-
line teenage drinking and drunk driving," (Atkin, 1989). For ex-
ample, there were no changes in frequency of drinking or the num-
ber of drinks consumed (Atkin, 1986).

Few substance abuse prevention program utilize parents: The lack
of evaluative evidence on parent prevention programs follows (in
part) from the fact that there are very few alcohol/drug abuse
prevention programs that involve families in a substantive way
(Moskowitz, 1989). This, in turn, is probably due to the fact
that involving the family in prevention programs is a relatively
new phenomenon (DeMarsh and Kumpfer, 1986).

A rough idea of the proportion of programs that address families
can be calculated from a recent review of 133 "youth DWI preven-
tion programs" (not all are examples of primary prevention) by
Klitzner et al. (1985). Thirty-three, or about 25%, of these
programs were classified as including a "family focus" (Klitzner
et al., pp. 127-41; see also Marshall et al., 1985, p. 3). Al-
though the term "family focus" was not defined, it appears from
the descriptions provided for selected programs (Marshall et al.,
1985) that the role played by parents in some programs was very
small. For example, in one programs parent participation was
restricted to membership on school committees that help plan pro-
gram implementation.

<u>Little information on prevention programs aimed at reducing</u>
<u>drinking-driving among youth</u>: The lack of information about
parent prevention also reflects the small amount of information
available on program efforts aimed at preventing youth DWI with
or without parental assistance. Klitzner et al. (1985) screened
600 citations and found that "less than fifteen percent" con-
cerned programs aimed at preventing adolescent drinking-driving.

<u>Evaluations of broad prevention programs</u>: There have been many
reports about prevention programs aimed directly at youth, rather
than at youth through parents; and, by now, there have been
several major reviews of this literature. Moskowitz (1989), for
example, listed eleven reviews of alcohol and drug education lit-
erature, three reviews of tobacco education, and three for health
education. These studies, however, provide little evidence that
programs which seek to prevent alcohol abuse, including drinking
and driving, succeed. Consider the following two recent reviews:

o A review of norms and attitudes related to alcohol use and
   driving which considered the impact of prevention programs
   found little data to support the view that the programs had
   been successful in changing attitudes or behavior
   (Korenbaum, 1982, pp. 37-42, 44). Korenbaum (1982) dis-
   cusses several reviews of prevention programs of various
   kinds, but the most relevant for our purposes was a study by
   Stalcup et al. (1979) of 21 primary alcoholism prevention
   projects funded between 1974 and 1978. Only seven of these
   projects were evaluated; 5 reported positive outcomes and
   two negative outcomes. All the evaluations suffered from
   serious methodological weaknesses and none demonstrated a
   link between changes in attitude or knowledge and a change
   in subsequent drinking behavior.

o A review of reviews of substance abuse education programs,
   led Moskowitz (1989) to conclude that "educational programs
   have largely been ineffective in preventing substance use or
   abuse. Whereas many programs are effective in increasing
   alcohol or drug knowledge, few programs influence attitudes
   and even fewer influence use." With specific reference to
   alcohol prevention, Moskowitz noted that the preponderance
   of programs "fail to influence alcohol use" and some may
   stimulate it. Alcohol prevention programs showing positive
   results based on reasonably sound evaluations, were so rare
   and different in nature, that Moskowitz felt he could not
   suggest specific directions for future research.

<u>Lack of rigorous program evaluations</u>: It should be emphasized
that the inability to identify effective prevention approaches
is due more to a lack of rigorous evaluative data than it is to
clear evidence that alcohol abuse prevention programs (or more
specifically family-centered programs) have failed (e.g., DeMarsh

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and Kumpfer, 1986; Hochheimer, 1981; Moskowitz, 1983; Moskowitz, 1989; Polich, 1984; Schaps et al., 1981). Only a minority of prevention programs are evaluated and only some of these use methods which can provide adequate information about program impacts. This is evidenced by Klitzner's (1985) findings concerning the availability of evaluation reports among 133 "DWI prevention programs." Fewer than 20% of the programs provided "adequate" evaluation data. "Adequate" was defined as evaluations 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" (Klitzner, 1985, p. 17). The generous nature of this definition is illustrated by the fact that about 40% of evaluations that were classified as adequate employed no control or comparison groups. Klitzner (1985, p. 18) wrote that if he had applied a more stringent definition "almost none of the program evaluations could have been considered adequate."

The emergence of potentially more effective approaches: It is the "older" prevention approaches which were in vogue during the 1960's and 1970's that have been most studied and most discredited (e.g., Bell and Battjes, 1985a and 1985b; Polich, et al. 1984, pp. xii-xvii, 134). Most of these approaches rested primarily on dissemination of factual information or on affective approaches (e.g., values clarification, decision-making skills). As Polich et al. (1984) have stated, one critical shortcoming of these models was that they "failed to counter the single most important reason for beginning drug use, peer influence." More recent approaches, based on a "social pressures model" teach skills to resist social influences to use and may prove effective as more studies accumulate (e.g., Bell and Battjes, 1985a, 1985b; Polich et al., 1984, pp. xii-xvii, 134).

This "new generation" of programs have been applied to prevention of smoking -- adolescents are shown how to resist social (chiefly peer) pressure to smoke and they are given information about short term negative effects to bolster this capacity. Comparatively well-designed evaluation studies indicate that these programs are effective in deterring smoking among students and raise the question of whether they can be successfully used to prevent other drug use (Polich et al., 1984; Flay, 1985). Polich, et al. argue that these programs may work in preventing marijuana and other illicit drug use, but probably not for alcohol, because its use is so widely accepted by adolescents and the larger culture (1984, pp. 149-151, 160-161). Their pessimistic appraisal seems appropriate when the goal is prevention of alcohol use; however the social pressures model may be effective when the goal is prevention of drunk driving, which is widely disapproved by adolescents and the larger culture. At present, there is no evaluation data to support this speculation.

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How Do Parents Define the Youth Drinking-Driving Problem?

Fortunately, efforts to reduce youth impaired driving begin with the advantage that most Americans recognize that drunk driving (in general) is an important social problem. For example, a national survey conducted in 1974 (Grey Advertising, 1975, p. 12) reported that 76% of adults ranked drink driving as an "extremely" or "very" important social problem. It was ranked the fifth most important after corruption in government, drug abuse, crime in the streets, and inflation. Similarly interviews with 10,000 respondents living in Missouri showed that about two-thirds (67%) believed drink drivers are "a serious problem" on the highways and another one quarter (25%) felt this was a "moderate problem" (NHTSA, 1980). Also, in a statewide survey of 800 Michigan adults, Atkin et al. (1986) found that 71% rated drunk driving as a "very serious" problem in society and another 25% as "fairly serious."

There is also evidence to indicate that parents regard youth drinking and driving as a very serious problem. For example, information collected from two focus groups with parents of adolescents indicates that parents consider "teenage DWI as a serious problem" (Pawlowski, 1982b). A 1986 survey of parents of high school students in two Michigan communities indicated that "most parents regard teenage drinking as leading to numerous significant social and health problems" (Atkin, 1986). When asked "How serious is the problem of teenagers abusing" various substances, 65% of the parents rated use of beer and 60% the use of "hard liquor" as "very serious" problems.

While parents regard adolescent drinking and driving as a serious problem, several studies suggest that parents tend to underestimate both drinking and drinking-driving among their own children. In addition to surveying parents (see preceding paragraph), Atkin (1986) surveyed ninth through twelfth grade students in the same two Michigan communities. He found that 70% of the adolescents reported they drank, and that parents estimated that over half of all teens drink. On the other hand, only 20% of the parents believed their own teenagers were drinkers. Atkin also found that "just one-tenth of the parents believe their teen driver has driven after drinking, and even fewer think he or she has ridden with a drunk driver," but "half of the students admit to recent drunk driving or riding incidents." A telephone survey of 807 randomly selected parents from a middle class community led Beck (1989) to conclude that "parents of teenagers are largely unaware of the true prevalence of alcohol abuse among their children." The parents, who had children between 13 and 19 years of age, "were far more willing to acknowledge that their teenager's friends drink and drive (36.3%) than they are to acknowledge that their own teenager drinks and drivers (10.2%)" (Beck, 1989). Silverman and Silverman (1987a and 1987b) compared

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questionnaire responses by seniors from two high schools and their parents. They concluded that "parents grossly underestimated alcohol and marijuana use and were almost totally unaware of any of the other drugs." One of the sharpest differences was between parents estimate that 35% of their children had used alcohol in the last 30 days as compared to 67% of the students who admitted doing so.

Since these studies had relatively low response rates, it is possible that the apparent discrepancies between parent's beliefs about the drinking behavior of their teens and the self-reported behavior of adolescents are not accurate. Perhaps, for example, the teens who replied tended to be drinkers, whereas the parents who participated in the surveys tended to have children who actually did not drink. This does not seem likely. Even though these studies did not match the responses of parents with those of their own children, the discrepancies between parents and teens was large enough and consistent enough across studies to support the view that parents probably do underestimate their own childrens' drinking behavior.

At the beginning of this section, we indicated that parents tend to view teenage drinking-driving as a serious problem, making them potential allies in efforts to prevent this behavior. In closing, it is appropriate to mention that some parents undermine efforts to reduce youth impaired driving by the police, the schools and other organizations (NCADD, 1988, pp. 21-23). Examples of this counterproductive behavior are parents who express the attitude that the police should be enforcing "serious" crimes rather than arresting their children for DWI, parents who provide alcohol at adolescent parties, and parents who fail to supervise parties. It is not clear whether such parents are unaware of the dangers of adolescent drinking and driving or act as they do for other reasons. Whatever their reasons, prevention efforts should also consider ways to counter their influence on adolescents.

How Do Parents View Their Role in Addressing Youth Drinking-Driving Problems?

However responsible they may feel for managing their childrens' drinking behavior, parents may not feel that they can exert much influence. Based on four focus groups with parents, Beck et al. (1989) indicated that "parents feel out of control and disempowered" when it comes to preventing alcohol abuse among their high school aged children. Similarly, focus group data from parents of adolescents reported by Pawlowski (1982b) indicated that many "felt isolated, frustrated, helpless and powerless about the problem" and "feel the problem is out of their control and they no longer perceive themselves as effective controlling influences."

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It appears that parents' sense that they have relatively little
influence over adolescent drinking-driving is linked to their
view that they need the assistance of other social institutions.
Parents in Pawlowski's (1982b) focus groups indicated "that some-
thing was needed beyond parental influence to really impact upon
the problem" and mentioned legal reforms (e.g., stricter laws),
increased public information, and education campaigns and
school-based prevention programming as examples. Parents in
eight focus groups conducted in four cities for the National
Parent Teacher Association and GTE (a private company) also felt
that schools should supplement parents' efforts (National PTA,
undated; National PTA, 1989). These parents indicated that they
had "the primary responsibility for taking steps to prevent their
children from using alcohol and other drugs," but outside help
was needed because many parents shirk their responsibility:
"prevention doesn't begin at home for the vast majority of
people" (National PTA, undated).

We did not locate comparable data on parents' feelings about
their influence over young adolescents or pre-adolescents.
Presumably, parents feel more in control of younger children.

How Receptive Are Youth to Parental Prevention Efforts?

Youth receptivity to parental influence about drinking-driving
depends in part on whether they share adults' views that drinking
and driving is a serious problem. The 1974 survey of high school
students by Grey Advertising discussed above (1975 p. 12) showed
that roughly the same percentage of students (71%) as adults
(76%) felt drunk driving was an "extremely" or "very" important
problem. And in a recent Gallop poll, alcohol abuse ranked sec-
ond on a list of problems teenagers felt were the "biggest prob-
lems facing people your age" (Gallop, 1987). Drug abuse rated
first place and other choices included teenage pregnancy, peer
pressures, AIDS, and problems with parents.

There have been numerous studies that have shown an association
between alcohol use and drinking behavior by youth and parental
influence (data on the latter is most commonly collected by
asking the child about his/her parent). For example, national
survey data from tenth through twelfth grade students indicated a
"clear and direct" association between perceived parental atti-
tudes and student drinking: students who perceived their parents
approved or didn't care about drinking tended to be heavier
drinkers; students who perceived their parents disapproved of
drinking tended to be lighter drinkers (Lowman, 1982; Rachal,
1982). In a seminal review of this and similar studies on
adolescent drinking, Blane and Hewitt (1977, pp. III-29 to III-
69) concluded that parents' alcohol use (actual or as perceived
by adolescents) and positive parental attitudes toward use (e.g.,
permission to use) are positively related to both the prevalence

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and frequency of adolescent alcohol use. In a more recent review, Glynn (1981) considered other substances, rather than concentrating on alcohol. He also found that parents exert a strong influence on adolescent alcohol use. While peer influences outweigh family influences when it comes to adolescent use of illicit drugs, "family and peer influences on adolescent alcohol use "appear to be relatively equal for alcohol use" (Glynn, 1981). He also concludes that parental alcohol use is a stronger predictor of adolescent alcohol use than drinking by peers. Finally, a survey of students from 75 high schools (Williams et al., 1986) has shown that "those who reported more drinking and driving were less likely to report parental rules and restrictions regarding their travel." The rules included times by which to return home, forbidding travel with drinking drivers, and requiring use of seatbelts.

Information is also available about adolescents' attitudes toward parental input concerning alcohol use and drinking-driving. And, like the correlational studies discussed above, this information suggests that parents could be a potent influence on youth drinking-driving behavior. Atkin (1986) asked high school students to indicate if they felt various measures could reduce teenagers' access to alcohol and drinking. From 54% to 84% responded affirmatively to parental actions such as supervising parties, keeping closer control over home alcohol supplies, asking adolescents about drinking, and enforcing rules about drinking and drinking-driving. Analogous findings emerged from discussions with four groups of eleventh and twelfth grade students who indicated that parents could be effective in preventing alcohol impaired driving by more closely monitoring adolescent parties and by speaking to their children about alcohol use" (Beck et al., 1987). In questionnaires from two high schools, more seniors (37%) chose the family as the "best resource for reducing drug use" than chose church, school, alcohol/drug programs, and the community (Silverman and Silverman, 1987b). Interviews with 40 adolescents and young adults indicated that over half identified their parents as a "discouraging influence on their drinking and driving behavior" (Pawlowski, 1982a, p. 41). Interestingly, this influence did not seem related to parents' discussions. Indeed, many of these subjects "felt that comments by, and/or discussions with, their parents were ineffective and not meaningful in deterring...drinking and driving" (Pawlowski, 1982a). Rather, parental influence appears to have flowed from fears about their parents' reactions to drinking-driving or involvement in a DWI accident (Pawlowski, 1982a, pp. 43, 63).

While this information is encouraging, other data indicate there are limits to youth receptivity. While parental alcohol use and norms are very important factors in shaping childrens' drinking behaviors, peer alcohol use and norms tend to be more important among older adolescents (e.g., Polich et al., 1984, pp. 120-132).

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It also appears that receptivity to parents can vary widely with age and with substance use. Beck (1989) cites a survey of high school students to point out that as students age fewer identify their parents as a preferred source of information about drugs. Studies by Beck and Summons (1988, 1987) indicate that adolescent drug users and abusers rely on their own experience for information about drugs, while non-users and non-abusers seek information from their parents. There is also evidence that adolescents may be reluctant to turn to their parents when they experience difficulty with substance use. In the same survey in which high school seniors chose family as the "best resource for reducing drug use" (Silverman and Silverman, 1987b), students overwhelmingly indicated they would go to a friend for help (70%) before a parent (20%).

In What Ways Do Parents Try to Influence Their Children's Attitudes and Behaviors?

We have already reviewed material which suggests that: (1) parents probably tend to underestimate their own childrens' drinking behavior, and (2) many parents feel they cannot influence their adolescent's drinking. Under these conditions it would not be surprising to find, as discussed below, that parents do not do as much as they might to try and influence their childrens' attitudes and behavior concerning alcohol.

Beck's (1989) telephone survey of parents cited earlier illustrates that "while most parents viewed teen drinking (69%) and drinking and driving (69%) to be a [sic.] prevalent, relatively few seem to be engaging in behaviors likely to influence this." For example, Beck found that 32% of parents never discussed drinking and driving with their children, though this percentage dropped to 7% among a subsample of parents with adolescent children. Atkin's (1986) surveys of parents showed that 6% to 10% of parents never discussed various topics about alcohol with their teenagers (e.g., the importance of not driving after drinking), and another 16% to 26% discussed these topics only once or twice. (Interestingly students surveyed in the same communities reported lower instances of communication by parents.) In another study (Pawlowski, 1982b), interview data from adolescents and young adults indicated that less than half of the subjects who drove recalled having a discussion with their parents about drinking and driving. Data from focus groups with parents have also indicated that parents are rather passive about addressing prevention. Most parents did not initiate discussions about substance use unless their children brought home materials from school, and "even then, many did not pay much attention to the materials, unless they were pointing out a crisis situation demanding immediate attention" (National PTA, undated).

Beck (1989) found that approximately half of the parents studied said they had family rules about drinking and driving, and under

20% had penalties for violating the rules. This situation proved less bleak among the subsample of parents with adolescent children: 80% report having family rules about drinking, and almost 40% have penalties for breaking the rules. Some questions that were asked only of this subsample of parents indicated that while many parents supervise their teens, when it comes to drinking and driving, there is ample room for improvement. About 60% of parents asked if parents would be present at parties that their teens were attending, but about 20% asked only sometimes, and another 20% never asked. Atkin (1986) found that 56% of the parents he surveyed never called to verify that a party would be supervised; another 24% called sometimes. Atkin also reported that between 40% and 47% of the parents surveyed either didn't make a clear cut rules about various drinking issues (e.g., not getting drink), or felt that such a rule was unnecessary.

Parents' ability to influence their adolescents' drinking behaviors can be complicated by their own drinking habits. Many parents who drink responsibly and who may drive after drinking (moderately) are placed in the position of advocating that their adolescents abstain form these same behaviors. Although this "do as I say and not as I do" position is not untenable, some parents express discomfort about the mixed messages their behavior and broader society may be sending adolescents (Pawlowski, 1982b; National PTA, undated). As a parent from one focus group put it: "I ask my son to bring me a beer. But he can't have a sip until age 21" (National PTA, undated).

It must be remembered, as mentioned above, that parental influence on youth can be negative as well as positive. For example, the offspring of parents who drink abusively are at increased risk of developing drinking problems (e.g., Korenbaum, 1982, pp. 25-26) and of riding with an intoxicated adult (Klitzner, 1989). There are also cases where parents provide alcohol to adolescents at parties or fail to supervise the distribution of alcohol at large gatherings (Blane and Hewitt, 1977, pp. III-69 to III-77; Pawlowski, 1982a). It also seems that an important source of alcohol for adolescents is unauthorized use of the family's supply of alcoholic beverages (Blane and Hewitt, 1977, pp. III-69 to III-77; Grey Advertising, 1975, p. 40) which some parents fail to monitor. These types of parents may well be resistant to participating in prevention programs. Nevertheless, it may be important for prevention programs to try to engage them in some fashion in order to reduce their negative influence on their own and on other adolescents. This brings us to the next question of who programs should target.

Who Should Be Targeted by Programs to Reduce Adolescent Driving-Drinking?

One approach to planning prevention programs would be to attempt to reach all parents, all parents of adolescents, or some other

large group. The problem with this global approach is that it often requires more resources than a program designed to reach those parents who are the most receptive, or the most in need of information, or the most likely to exert a great influence (e.g., opinion leaders), etc. Even when resources are not scarce, program effectiveness may well be enhanced by tailoring it to the needs and interests of various subgroups. This section considers what information is available about at least a few targeting options.

Targeting at-risk families: One approach to targeting scarce resources would be to concentrate on "high risk" families: those with characteristics that appear to be associated with greater alcohol abuse among children and, if possible, a greater likelihood of drinking-driving. One risk factor, above which there is widespread consensus in the literature, is that parents who abuse alcohol are more likely to rear children who manifest alcohol problems (e.g., Blane and Hewitt 1977, pp. III-29 to III-69). Korenbaum (1982, pp. 26-28) states that studies aimed at determining factors predictive of drinking behavior have identified additional factors:

o "higher degree of value placed on independence than on successful school performance.

o "higher degree of involvement in deviant behavior.

o "higher degree of tolerance for deviant behavior.

o "higher degree of perceived support for drinking from others, especially peers.

o "lower degree of involvement with parents and with friends whose outlook is similar to that of parents.

o "lower degree of religiosity and involvement with church.

o "lower degree of expectation for academic achievement."

Using such information to target prevention programs is difficult in that, with the exception of parental alcoholism, the factors are quite broad and difficult to detect. Another problem is that there appear to be no well-tested programs that have been specifically designed to address high risk groups. One suggestion program planners might consider, however, is to introduce information about the risks of adolescent drinking-driving behavior in treatment programs for adult alcoholics/problem drinkers and for families of alcoholics/problem drinkers.

Beyond the factors listed above, "little is definitely known about adolescent drinking patterns, how these patterns and re-

lated attitudes are formed and what can be done to influence and control both the attitude formation and patterns of use" (Korenbaum, 1982, pp. 26-28).

The situation is also unclear with respect to isolating factors predictive of which adolescents are at greater risk of having alcohol-related crashes. The factors identified again define very broad groups, e.g., males, 20 to 40 years of age, one or more prior arrests, high quantity and frequency of drinking, history of alcoholism or problem drinking, prefer beer, one or more previous crashes, etc. (Douglass, 1983; Jones and Joscelyn, 1978, pp. 44-46; NHTSA, 1985 pp. 38-40; Perrine et al., 1989). Again, it is difficult to see how this general information can be used to target programs efficiently. The information does suggest, however, that prevention programs could advise parents of the risk factors so they might be better able to identify possible problem behaviors in their children. This is akin to teaching parents and others about possible indicators of drug abuse.

Before moving on to consider the age at which prevention efforts should begin, it should be noted that some studies indicate that there may be many separate pathways to substance abuse involving many different risk factors (e.g., Bry, 1983). One rather pessimistic implication of this viewpoint is that "no single modality, no 'most effective' prevention program will be found. Multiple causation calls for multifaceted prevention programs, perhaps a different approach for each psychosocial precursor" (Bry, 1983).

Age at which prevention should begin: Many school-based substance prevention programs begin in kindergarten and grammar school, and this approach is widely recommended (e.g., NCADD, 1988, p. 13; USDOE, 1987, p. 27). Nevertheless, we could find no program evaluations which clearly support the view that prevention should begin at an early age. This is not to say that programs delivered to young students are ineffectual. Students may well learn facts about alcohol and drugs, may adopt desirable attitudes, and may pledge abstinence. The critical question, however, is whether these same students will refrain from the abusing substances and other undesirable behavior when they reach adolescence. Long-term evaluative data to answer this question are not available. Programs must be in existence for several years before the relevant behavioral measures can be applied and the cost of following-up youth exposed to prevention programs (and suitable controls) is extremely high.

One way to approach the question of the ages at which prevention program for children and/or their parents should begin is to consider when the problem behaviors emerge and then target prevention programs to begin sometime beforehand. Obviously, the possibility that teens will drink and drive begins in earnest when

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they first obtain a driver's license, and this is clearly an ap-
propriate occasion for parental input about drinking-driving is-
sues and for establishing or reinforcing family rules about
drinking-driving. However, there are other behaviors that emerge
earlier and underscore the need for parents to address prevention
issues well before they are licensed to drive. For example:

o   A national household probability survey indicated that in
    1985, 24% of 12 to 13 year-olds have used alcohol in the
    past year and about 11% have used it in the past month.
    These figures increase sharply for 14 to 15 year-olds to 57%
    who have used in the past year and 35% in the past month
    (NIDA, 1988, pp. 76, 81; Rachal et al., 1982). Similar data
    were generated in a national survey of high school seniors
    which asked when the students began alcohol use. Approxi-
    mately 22 percent reported beginning alcohol use in grades
    seven and eight, and another 25 percent said they began by
    grade nine (Johnson et al., 1987, pp. 85-87).

o   Klitzner et al. (1985, p. 5) refer to a 1984 Gallop poll (no
    citation provided) showing that by ages 13-15 17% of teens
    report riding in a car driven by someone under the in-
    fluence.

o   A 1983 survey of students in 75 high schools in seven states
    showed that by age 16 about one third of the male students
    and about 25% of the females reported they drove after
    drinking at least once in the past month (Williams et al.,
    1986)

This sort of information suggests that parent prevention efforts
should begin no later than the onset of adolescence at age ten or
11, before many children have begun to use alcohol without paren-
tal permission. This time is also opportune in that family in-
fluence on alcohol use appears to be greater with young versus
older adolescents (Glynn, 1981).

Alcohol use among high school seniors is statistically normative
behavior (about two-third have used alcohol in the past 30 days)
and that the prevalence of such use has been very stable for
about ten years (Johnston et al., 1987, pp. 49-69). It is safe
to assume therefore, that many parents will want to augment their
prevention messages about abstinence from alcohol with informa-
tion about avoiding irresponsible use as their children enter age
groups when drinking outside the home becomes common (e.g.,
Polich, 1984, p. 126). We located no evidence about when or how
parents should be assisted to shift from an abstinence only
stance toward accommodating responsible use.

Should Programs Deal Only with Parents or Should the Entire Family Be Involved?

Some feel that involving the entire family in prevention programs is preferable to targeting only the parents (e.g., DeMarsh and Kumpfer, 1986; NIAAA, 1983, pp. 100-102). Among the reasons for this is the idea that teaching and practicing new communication and other skills will be more effective if it is done with both parties present (children and parents) under the supervision of a qualified trainer. We should also note that programs do not face an either or choice with respect to this issue; they can combine approaches and choose to segregate family members for some activities and bring them together for others.

We could locate no evaluative data to indicate which of these strategies (segregation, integration or some combined approach) might be more effective in preventing substance abuse.

What Kinds of Programs/Assistance Are Appropriate? (What Kinds Would Parent Accept and Join? How Long Should Programs Be? What Should the Content Be? How Should the Program Be Delivered?)

Recruitment and attrition: Although high levels of participation in parent programs may not be necessary to effect changes in youth drinking, the following observational data collected by the first author make it clear that recruiting even a few parents can be difficult. A call for parents with children of all ages to attend a presentation about substance abuse appeared on the front page of the local newspaper for two weeks, and was announced in several school-system notices (to be brought home by students). This advertising emphasized that key community leaders would address the meeting including the assistant superintendent of schools, the high school principal, the police department spokesperson for substance abuse, director of the community youth counselling center, etc. There were approximately 3398 students enrolled in grades one through twelve of this Boston suburb. On the appointed evening no more than 20 parents appeared.

There a few studies which suggests that recruitment and attrition are serious problems for programs aimed at parents. Beck (1989) found that about two-thirds of parents he surveyed would not "be interested in meeting with other parents who have similar concerns about teenage drinking." Parents were considerably more receptive to less demanding forms of assistance: about 70% said they would watch a "special show on T.V. about how parents can talk to children about alcohol." Focus groups with PTA leaders also indicated that, although many parents are concerned about substance abuse, they are unlikely to attend lengthy and complex prevention programs (Vaslow & Associates, 1989). Data from focus groups with parents led Beck et al. (1989) to conclude that there was "considerable interest" among parents in receiving "informa-

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tion, instruction, or training that will enable them to communicate more effectively with their children." These parents also indicated, however, that programs which required "substantial time commitments" of them would not be attractive. In their review of parent and family centered prevention programs of varying kinds, DeMarsh and Kumpfer (1986) stated that "recruitment and attrition can threaten both cost and outcome effectiveness" and cite Seldin (1972) who referred to this as a "monumentally discouraging task."

Program content: There is little agreement about how to categorize prevention programs in terms of their basic approach or philosophy. However, one approach which seems to be relatively exhaustive divides programs into three four types (Polich et al., 1984, pp. 134-144):

1. The information model assumes that increased knowledge about the consequences of substance use will produce less positive/more negative attitudes towards use/misuse and, in turn, these attitudes will inhibit use/misuse. Programs based on this model tend to stress negative consequences of use and to go "beyond a `just the facts' approach to include an exhortation not to use drugs" (p. 136).

2. The individual deficiency model assumes that children use drugs "to compensate for a lack of self esteem, or because they lack adequate tools for making rational decisions" (p. 136). Accordingly, programs based on this approach seek to promote self-esteem and responsible decision-making.

3. The alternatives model "assumes that adolescents may start using drugs for a variety of reasons, including both internal and external pressures, but emphasizes providing alternative activities to keep them busy and productive as the solution" (p. 138).

4. The social pressures model assumes that peer, parental and other *external influences "push" adolescents toward sub*stance use/abuse and programs based on this model teach skills to resist negative social influences (social inoculation).

Although very reasonable arguments can be made as to why each of the basic strategies should reduce adolescent alcohol abuse, clear empirical evidence to support the effectiveness of any of these models (or various combinations of these models) is not available (see Evaluations of broad prevention programs and Lack of rigorous program evaluations, p. 14).

One source offers some insight in program content at least from the point of view of what parents would like. Atkin (1986) asked

parents from two high schools if they would "be interested in reading pamphlets, newsletter items, or newspaper stories presenting information about" eight topics. As shown in Table 1, parents clearly preferred to hear about statistics on local teenage drinking, while between 35% and 49% expressed interest in the remaining items (586 parents returned questionnaires; the schools had 2150 students).

Given the dearth of empirical evidence it seems worthwhile to indicate some topics that various investigators and planners have suggested for inclusion in parent prevention programs:

1. The extent and consequences of adolescent alcohol use (NCADD, 1988, p. 25; USDOE, 1987, p. 17; Grey Advertising, 1975). To counteract parents' tendency to think the problem does not lie with their children it would be useful to: (1) present local statistics on adolescent drinking, and (2) present data (e.g., Beck, 1989; Silverman and Silverman, 1987a, 1987b) showing that parents tend to underestimate their own adolescent's use/abuse of alcohol (driving after drinking, attendance at unsupervised parties, etc.).

2. The potential for influencing adolescents through communication and role modeling (NCADD, 1988, p. 25; NIAAA, 1983, pp. 101-102; USDOE, 1987, pp. 13-14). This might include information showing that adolescents feel they can be influenced by parents, and data showing that parental attitudes and behavior toward alcohol use is correlated with adolescent use.

3. Parenting skills (DeMarsh and Kumpfer, 1986; NCADD, 1988, p. 25; NIAAA, 1983, pp. 101-102; Vaslow and Associates, 1989). These skills may include discipline and management of problem behaviors, enhancing the child's self esteem, and improving family communications (Beck et al., 1987; DeMarsh and Kumpfer, 1986; Williams et al., 1986).

4. Identification of warning signs that indicate drinking and drinking problems (NCADD, 1988, p. 25; USDOE, 1987, pp. 16-17).

5. Information about the relationship between the amount of alcohol consumed and level of impairment (Atkin et al., 1986; Beck et al. 1987; Grey Advertising, 1975, pp. 46ff; Pawlowski, 1982a, 1982b).

6. Help with helping children cope with negative peer pressure (NIAAA, 1983, pp. 101-104; Simonds-Morton and Simons-Morton, 1989; Vaslow and Associates, 1989).

TABLE 1
PARENT PREFERENCES FOR INFORMATION (a)

PERCENT	TYPE OF INFORMATION
66%	Statistics on the amount of local teenage drinking
49	Techniques for detecting if your teenager has been drinking
49	Reports describing the problems associated with teenage drinking
47	Arguments to use when your teenager says that other parents allow drinking, or that everybody drinks, or that drinking is harmless.
46	Suggestions for discussing the subject of drinking with your teenager.
46	Suggestions for preventing opportunities for your teenager to drink alcohol
46	Ideas on how parents can work with other parents to reduce teen drinking
35	Suggestions for better ways to bring up the topic of drinking for discussion with your youngster

(a) Table adapted from Atkin (1986)

7. Factual unbiased information about alcohol/drugs (NIAAA, 1983, pp. 101-104; National PTA, undated; Vaslow and Associates, 1989).

8. Information on local and national organizations that can assist families with prevention and treatment needs (Atkin, 1986; USDOE, 1987). Examples of these organizations are: National Federation of Parents for Drug-Free Youth; Parent's Resource Institute for Drug Education, Inc.; and Committees of Correspondence, Inc.

9. Information about how to supervise teen parties, including the legal liability parents face when serving alcohol to under-aged drinkers (Atkin, 1986; Beck et al., 1989).

Program delivery system: Identifying the optimum delivery sys-
tem(s) for parent prevention programs is difficult, in part, be-
cause so many alternatives exist. There are a variety of commu-
nications channels: radio/television advertising,
radio/television programming, programs delivered in the workplace
(e.g., a lunch-hour presentation), school-based programs, com-
munity wide meetings, pamphlets, parent support groups, telephone
hotlines, information disseminated through health facilities,
club meetings, and so on (for additional examples see Creative
Associates, 1982, pp. 15-22; Harding et al., in press; NHTSA,
1978; Onder, undated, pp. 113-128; and Uniworld Group, 1989).
Comparisons among these alternatives are also complex because a
variety of factors should be considered and weighed, among them:
the program's appeal to parents in general and to special sub-
groups (e.g., minorities); how appeal and effectiveness may vary
with the type of presenter (a peer, a celebrity, etc.); the cost
per parent, the time required to develop and deliver the program;
and so on.

Only a handful of the studies examined provided any evidence
about appropriate delivery systems. As mentioned earlier (see
Recruitment and attrition, p. 25), Beck (1989), Beck et al.,
1989; and Vaslow and Associates (1989) have indicated that
parents are interested in programs which demand much of their
time. We also discussed (see Little information on parent pre-
vention programs, p. 11) Atkin's (1986) finding that parents did
pay attention to prevention messages in newspaper articles, radio
PSAs, and pamphlets mailed to their home. To this information we
can add only two more pieces of evidence. First, parents in
focus groups (National PTA, 1989) indicated that would be unlike-
ly to pay attention to written prevention materials their chil-
dren brought home from school. Second, some general ideas about
affective health prevention approaches were found in a meta-
analysis of 37 primary prevention studies by Nagy (1982). Fea-
tures he found were associated with effective prevention efforts
were the following:

   o They concerned health or reducing accidents as opposed to
      substance abuse, mental health, and deviance.

   o They used technological, pharmacological, or a combination
      of educational and public information (primary prevention
      programs based on only education or public information were
      not as successful).

   o They involved 3 or more contacts with the participants.

   o The setting for the program was a home, place of work,
      clinic, etc., rather than a school.

   o They did not demand change in long established habits.

It should be emphasized that Nagy's guidelines were derived by comparing programs targeting a broad array of issues (smoking, poisoning, littering, drug abuse, etc.). None of the program directly concerned drinking-driving, much less programs aimed at helping parents prevent drinking and driving.

CONCLUSIONS AND RECOMMENDATIONS

In this section of the report we will consider the degree to which we were able to locate literature that provided answers to our major questions and implications of the answers for programs to help parents prevent drinking-driving among their children. The section closes with recommendations concerning future research.

What Evidence Is There That Prevention Programs Directed at Youth Drinking and Driving, Especially Those Involving Parents, Are Feasible and Effective?

There are few parent prevention programs aimed at reducing substance abuse and fewer still have been evaluated. Evaluations that do exist have yielded mixed results, and evidence of positive changes in behavior is rare. We were able to locate only one evaluation of a program specifically aimed at assisting parents to prevent drinking-driving among their children (Atkin, 1986, 1989), and this showed no substantive impact on teen drinking behaviors.

In an effort to identify any general principals which might be applied to the development of parent programs, we also reviewed literature on prevention programs delivered directly to adolescents. We easily identified many evaluation studies, including over a dozen reviews of relevant literature. Unfortunately, these studies provide little evidence that programs which seek to prevent adolescent alcohol abuse, including drinking and driving, succeed in changing behavior.

Those interested in developing prevention programs may be discouraged by the lack of evidence to show that prevention programs can reduce adolescent alcohol/substance abuse. They may also be encouraged to learn that there is also a shortage of rigorous evaluations to show that prevention programs have failed. Put another way, the literature leaves open the question of whether parent prevention programs can succeed.

How Do Parents Define the Youth Drinking-Driving Problem?

Data from surveys and focus groups are available which indicate that parents define teenage drinking and driving as a serious social problem. This suggests that parents will accept parent prevention programs which promise to help alleviate this problem. On the other hand, many parents may not feel such programs are appropriate for them because, as several studies suggest, parents tend to underestimate the extent to which their own adolescents drink or drink and drive. Prevention efforts may be able to counter this by providing information about the true extent of

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adolescent drinking and drinking-driving and/or by demonstrating that parents tend to minimize their childrens' drinking behavior.

How Do Parents View Their Role in Addressing Youth Drinking-Driving Problems?

Relatively little information was located on this topic. Focus groups in three studies indicated that parents tend to feel that: (1) they have little influence on their adolescents' drinking behavior and (2) the efforts of agencies outside the family would be needed to impact the problem. One can view parents' feelings of powerlessness as an expression of their need for assistance by a prevention program. These feelings may also be an obstacle to involving parents in prevention. Some parents may be so pessimistic about their effect on adolescent drinking that they can not be easily convinced that a program can do much for them.

We did not locate information about how parents view their roles with respect to young adolescents or pre-adolescents. We hypothesize, that parents feel they can exert a much greater influence over younger children. If so, prevention programs might be more appealing if they target parents with younger children.

How Receptive Are Youth to Parental Prevention Efforts?

Although parents may not appreciate the fact that they can influence adolescent drinking, there is a good deal of evidence to indicate that youth are receptive to parental influences. Youth tend to share adults' views that drinking and driving is a serious problem. Many correlational studies have indicated that parents' drinking, parental attitudes about drinking, etc., have a major impact on adolescent drinking. Other studies have indicated that youth feel their parents can exert a moderating influence on their drinking by discussing alcohol use more often, making and enforcing rules about drinking, supervising parties and other teen activities, etc.

This information indicates that parent programs that succeed in encouraging parents to become active about prevention with their teens could have significant impacts on adolescent drinking-driving.

In What Ways Do Parents Try to Influence Their Children's Attitudes and Behaviors?

Data about this issue were essentially limited to surveys and focus groups from four studies. In general, these studies indicated that varying but often substantial minorities of parents fail to fully exert their influence over adolescent alcohol use. That is, they failed to discuss drinking, to make and enforce clear rules about alcohol, or to verify that parties for

teenagers were properly supervised. An optimistic interpretation of this information is that the opportunity exists for parent prevention programs to increase the frequency of fairly simple parental activities, such as monitoring teenage parties, which should help reduce adolescent alcohol use/abuse.

Who Should Be Targeted by Programs to Reduce Adolescent Driving-Drinking Problems?

Although some progress had been made on identifying adolescents at risk of abusing alcohol or of having alcohol-related crashes, the precursors that have been found are generally too broad to be of practical use in targeting prevention programs. The one exception may be the risk factor of having parents who abuse alcohol. Prevention programs could be developed and delivered to parents in treatment programs for alcohol abuse to make them aware that their children are at greater risk of abusing alcohol (including drinking and driving).

The conventional wisdom is that alcohol and substance abuse prevention programs should begin when children are very young (in kindergarten or fist grade). However, to our knowledge, no program evaluation exists that demonstrates the benefits of targeting young children. We suggested targeting prevention programs that emphasize abstinence to parents with children who are no more than approximately ten to eleven years of age. As we discussed, this recommendation is based on the fact that substantial minorities of adolescents begin drinking (57%) and riding with intoxicated drivers (17%) when they are 12 to 15 years of age. The goal is to intensify parental prevention activity in order to encourage abstinence shortly before drinking usually begins and at time when parental influence is still strong.

So many people become drinkers by later adolescence that it seems appropriate for parent prevention programs to offer advice about when and how parents should address responsible alcohol use. We could find no evidence, however, about how this might best be done. It may be useful to include information about both abstinence (don't drink) and avoiding abuse (e.g., don't drink and drive) even in programs for parents with younger adolescents. The chief rationale for a combined approach is that the information will be useful to the many parents who either have or know children from older age groups. There may also be some benefit gained from telling parents of young adolescents what to do as they're children mature, rather than assume they will get more training about this later.

We found no evaluative evidence about whether programs should be delivered only to parents or to parents and their children together.

<u>What Kinds of Programs/Assistance Are Appropriate?   (What Kinds
Would Parent Accept and Join?   How Long Should Programs Be?   What
Should the Content Be?   How Should the Program Be Delivered?)</u>

Only a handful of the studies examined provided any evidence
about appropriate delivery systems. As mentioned earlier (see
<u>Recruitment and attrition</u>, p. 25), Beck (1989), Beck et al.
(1989); and Vaslow and Associates (1989) have indicated that
parents are interested in programs which demand much of their
time. We also discussed (see <u>Little information on parent pre-
vention programs</u>, p. 11) Atkin's (1986) finding that parents did
pay attention to prevention messages in newspaper articles, radio
PSAs, and pamphlets mailed to their home. The most relevant ad-
ditional evidence comes from a focus group with parents (National
PTA, 1989) which indicated they would be unlikely to pay atten-
tion to written prevention materials their children brought home
from school.

We identified many recommendations concerning what the content of
programs should be, but we could not locate evaluative evidence
to support these suggestions.

<u>Future Research</u>

Keeping in mind that this review was limited in scope, considera-
tion should be given to a more thorough review of literature con-
cerning parental prevention efforts. However, even without a
more extensive review, there appears to be a clear need for more
surveys, focus groups and other research to provide information
needed to design effective prevention programs. Topics for which
information is scarce include parents' views of their role in
preventing youth drinking-driving; the reasons why many parents
do not make more effort to influence their childrens' drinking-
driving; and parents' receptivity to various types of programs
(programs with different delivery systems, different content,
different spokespeople, etc.).

We also add our voice to the many reviewers who have called for
more emphasis on careful evaluation of program effectiveness
(e.g., Bell and Battjes, 1985b; DeMarsh and Kumpfer, 1986;
Klitzner et al., 1985; Moskowoitz, 1983; Moskowitz, 1989; Polich
et al., 1984). There is no arcane method for conducting the
needed studies. In an effort to promote evaluation studies, the
direct application of good evaluation practices to prevention
programs has even been spelled out in detailed manuals (e.g.,
Hawkins and Nederhood 1987; NIDA, 1981). The methods are the
standard hallmarks of good evaluation practices: random assign-
ment to experimental conditions, comparison of post-program to
pre-program measures, comparison of program participants to non-
participants, measurement of behaviors as well as knowledge and
attitudes, verifying proper program implementation, repeated fol-
lowup, etc.

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APPENDIX A:
ABSTRACTS OF KEY ARTICLES REVIEWED

As indicated in the REFERENCES section of the report, not all the references cited in this review were selected to be abstracted. The articles abstracted below were those which we felt contributed the most important information to this review. Note that the abstracts summarize the articles rather than critiquing them.

Atkin, C.K., Mass Communication Effects on Drinking and Driving. In: U.S. Department of Health and Human Services, <u>Surgeon General's Workshop on Drunk Driving: Background Papers</u>, Rockville, Maryland: U.S. Department of Health and Human Services, 1989, 15-34. This paper reviews "the role of mass communication in both preventing and encouraging alcohol consumption and drink driving, particularly among young people." It includes "an overview of public communication concepts relating to drunk-driving behavior to advertising and public service campaigns and to entertainment and news media presentations." The article closes by discussing how media influence might be improved and avenues for future research.

Atkin, C.K., <u>Michigan Parent Group Handbook: Preventing Teenage Drinking and Other Drug Problems</u>, Lansing, Michigan: Michigan Substance Abuse & Traffic Safety Information Center, September, 1986. This manual is intended to "aid the formation and operation of local groups of concerned parents." Information is presented on "research findings on teenage drinking patterns, parent attitudes, and the effectiveness of parent group campaigns in [two] Michigan communities." The campaign was an effort to increase parent involvement in preventing teenage drinking, drinking and driving, and riding with intoxicated drivers by disseminating information through newspaper articles, public service announcements, and pamphlets. Post-program data collected from parents in the target communities and limited pre-program data indicated that the program increased parents' efforts to prevent drinking and alcohol abuse among their adolescent children. Pre- and post-survey data from students in grades nine through twelve in the same communities and two control communities confirmed greater parental activity, but showed no significant change in drinking behavior. This manual also presents information about how to organize a parent group and about local, state, and national organizations that provide substance abuse prevention and treatment services.

Atkin, C.K., Garramone, G.M. and Anderson, R., Formative Evaluation Research in Health Campaign Planning: The Case of Drunk Driving Prevention, Paper presented at annual conference of International Communication Association, Health Communication Division, Chicago, May, 1986. This paper reviews the role of "formative evaluation research in collecting background information about audience orientations" as a mechanism for developing more effective prevention programs. It also presents findings from two surveys on attitudes and behaviors concerning drinking and driving: one of Michigan adults and one which included youth. Survey data on knowledge levels, beliefs about the risks of crashes and arrest, attitudes toward drink driving, etc. are discussed in relation to the development of more effective mass media strategies for reducing drunk driving.

Beck, K.H., Monitoring Parent Concerns about Teenage Drinking and Driving: A Random Digit Dial Telephone Survey. Accepted for publication in American Journal of Drug and Alcohol Abuse, 16, 1989. This article discusses findings from a random telephone survey conducted with 807 parents in a middle class, suburban located in metropolitan Washington, D.C. The response rate was 58%. Data reported include attitudes and parenting behavior concerning adolescent drinking/driving. "Results indicate a significant lack of parental awareness of teen drinking and a denial of their own teens involvement in it."

Beck, K.H., Summons, T.G. and Hanson-Matthews, M.P., Monitoring High School Drinking Patterns and Influences: A Preliminary Focus Group Interview Approach, Psychology of Addictive Behaviors, 1(3), 154-162, 1987. This article discusses a series of four focus groups convened to explore parental attitudes and behavior concerning adolescent drinking and driving. Each group was comprised of eight to 12 parents of high school students from a suburban, middle class community in the greater Washington, D.C. metropolitan area. To paraphrase the authors, "the results indicated: (1) low levels of parental awareness about the true extent of teen drinking, especially among their own children, (2) low levels of parental control over teen drinking, (3) feelings of detachment or isolation from other parents who may share similar concerns, (4) considerable receptivity to receiving skill training in the ares of DWI and other substance abuse prevention issues, and (4) feelings of resistance to such programs that may require substantial time commitments of them..."

Blane, H.T. and Hewitt, L.E., Alcohol and Youth: An Analysis of the Literature 1960-1975, Rockville, Maryland: National Institute on Alcohol Abuse and Alcoholism, NTIS Report No. NIAAA/NCALI-77/07, 1977. This review of the literature concerning alcohol and youth includes chapters on: trends in high school drinking practices, influences on adolescent drinking, college-age drinking practices, children and alcohol (e.g., in-

itiation and patterns of use), alcoholism and youth, juvenile
delinquency and alcohol use, children of alcoholics, racial and
ethnic variations, other special populations (e.g., dropouts,
abused or neglected children), and theories of youthful drinking.
The authors describe the review as "exhaustive" (p. I-1) for the
period indicated in the title. Some literature from earlier
years is also included and some topics are omitted from the
review, e.g., fetal alcohol syndrome, genetic influences on al-
cohol use/abuse, etc. Youth refers to the "period between the
earliest years of life and completion of the twenty-first year"
(p. I-2).

Bry, B.H., Empirical Foundations of Family-Based Approaches to
Adolescent Substance Abuse, In: T.J. Glynn, C.G. Leukefeld, and
J.P. Ludford, (Eds.), Preventing Adolescent Drug Abuse:
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D.C.: U.S. Government Printing Office, DHHS Publication No. ADM
83-1280, 154-177, 1983. Bry reviews literature on precursors
(risk factors) in adolescent substance abuse. She emphasizes her
own research which indicates that it is the number of risk fac-
tors rather than the presence or absence of any one factor which
best predicts heavy drug use. Bry argues that since "causal fac-
tors combine non-linearly and uniquely in each individual, that
multiple prevention strategies must be used to prevent substance
abuse." She discusses various strategies that may be useful, in-
cluding mass media, modeling the "saying no" approach, encourag-
ing greater parental influence, family effectiveness and communi-
cation training, and religious training.

Creative Associates, Suggestions for Developing Prevention Pro-
grams to Reduce the Incidence of Alcohol-Impaired Driving, In:
National Highway Traffic Safety Administration, Norms and
Attitudes Related to Alcohol Usage and Driving: A Review of the
Relevant Literature, Washington, D.C.: U.S. Department of
Transportation, National Highway Traffic Safety Administration,
Pub. No. DOT HS 806 333, September, 1982. This booklet was de-
veloped to assist highway safety program officials in assimilat-
ing recent research findings on primary prevention into their DWI
community-based prevention programming. The DWI prevention ac-
tivities and program suggestions presented are based on the find-
ings of a review of DWI literature and attitude behavior re-
search; a quantitative analysis of primary prevention public
health programs; and primary data collected through interviews
and focus groups on knowledge, beliefs, attitudes, and behaviors
related to drinking and driving. Topics discussed include:
background information on the drunk driving problem, approaches
for establishing an integrated community-based prevention pro-
gram, and resources that can support DWI prevention efforts. The
suggestions contained in this booklet have not been tested spe-
cifically for preventing drinking and driving; however, they are
based on statistically factored features of successful public

health primary prevention programs. Information on the other aspects of the project can be found in other volumes of this report as follows: Volume I - Review of the Literature (Korenbaum, S., 1982); Volume II - A Meta-Analysis of Primary Prevention Studies (Nagy, 1982); Volume III - Report of Individual Interviews (Pawlowski, 1982a); Volume IV - Report of Focus Groups (Pawlowski, 1982b).

DeMarsh, J. and Kumpfer, K., Family-Oriented Interventions for the Prevention of Chemical Dependency in Children and Adolescents, In: S. Ezekoye, K. Kumpfer and W. Bukoski, (Eds.), Childhood and Chemical Abuse: Prevention and Early Intervention, Hayworth Press, 1986. This paper reviews family-oriented substance abuse prevention/intervention programs designed to prevent/reduce substance abuse among youth. The report concludes that few outcome evaluation studies exist to support the success of these programs. Those that do exist typically have small Ns, lack the rigors of experimentally designed and controlled studies, and have yet to provide longitudinal data documenting the lasting effectiveness of family-oriented prevention programs. The authors believe that the present lack of supporting data is indicative of the current "state" of prevention research and not a "trait" of family-oriented prevention programs. They argue that family-oriented prevention efforts appear to hold great potential in decreasing the high rates of adolescent substance abuse.

Glynn, T.J., From Family to Peer: A Review of Transitions of Influence Among Drug-Using Youth, Journal of Youth and Adolescence, 10 (5), 363-383, 1981. Glynn reviews "theories that support either the greater impact of family or peer influence on adolescent behavior." He then reviews research literature which concentrates on the relative influence of family versus peers on adolescent substance use (including alcohol). His conclusions include the following, which are especially relevant to our project: (1) "there does not appear to be any point at which the drug behavior of adolescents is wholly influenced by either family or peers," [original is italicized] rather the balance shifts with time and substance; (2) "Family and peer influences on adolescent alcohol use appear to be relatively equal"; (3) parental alcohol use is a better predictor of adolescent alcohol use than peer alcohol use.

Grey Advertising, Inc., Communications Strategies on Alcohol and Highway Safety. Volume 2: High School Youth. Washington, D.C.: U.S. Department of Transportation, National Highway Traffic Safety Administration, Pub. No. DOT HS 801 401, February, 1975. This report discusses interview and questionnaire data collected from 397 students in grades nine and ten in 25 geographic locations across the U.S. Topic reported include: demographic characteristics, prevalence and frequency of alcohol use, circum-

stances of use, personality characteristics of alcohol users, knowledge about drinking-driving, and willingness to intervene to prevent drinking-driving.

Johnson, L.D., O'Malley, P.M. and Bachman, J.G., National Trends in Drug Use and Related Factors Among American High School Students and Young Adults, 1975-1986. Rockville, Maryland: U.S. Department of Health and Human Services, National Institute on Drug Abuse, DHHS Pub. No. (ADM)87-1535, 1987. "This report is the tenth in an annual series reporting the drug use and related attitudes of America's high school seniors" (p. 1). Data have been collected from national representative samples of high school seniors in private and public schools for the classes of 1975 through 1986. "The study also includes representative samples of young adults who complete followup surveys by mail." These annual studies emphasize prevalence of use, but include data on grade of first use, intensity of use, student attitudes and beliefs, and student perceptions of social issues.

Klitzner, M., Youth Impaired Driving: Causes and Countermeasures. In: U.S. Department of Health and Human Services. Surgeon General's Workshop on Drunk Driving: Background Papers. Rockville, Maryland: United States Department of Health and Human Services, 192-193, 1989. Topics this brief review of research literature include: individual characteristics associated with driving while intoxicated and riding with an impaired driver, social influences (e.g., peer and parental influence), countermeasures that attempt to reduce youth drinking, and countermeasures that attempt to separate drinking from driving.

Klitzner, M., Blasinsky, M. Marshall, K. and Paquet, U., Determinants of Youth Attitudes and Skills Towards Which Drinking/Driving Prevention Programs Should be Directed. Volume 1: The State-of-the-Art in Youth DWI Prevention Programs. Washington, D.C.: U.S. Department of Transportation, National Highway Safety Traffic Administration, Pub. No. DOT HS 806 903, November, 1985. This report summarizes the methods, results, and conclusions of the first task of a multi-component project to an- alyze existing programs nationwide aimed at encouraging youth to avoid drinking and driving. The project included three major re- search activities: a review of programmatic, conceptual, and empirical literature; a program review, intended to provide an overview of the assumptions, premises, objectives, activities, and outcomes of 133 existing youth DWI prevention programs; and a site visit review, intended to provide an in-depth analysis of a limited sample of 12 programs as they actually operate. The report identifies four shortcomings shared by many programs: lack of a strong theoretical grounding for program activities; a tendency to view DWI problems as located within the individual to the exclusion of other influences (e.g., mass media, family,

peers, legislation, etc.); the need for additional attention to careful program implementation (e.g., better staff training, improved monitoring of implementation, etc.); and the need for more sophisticated and widespread program evaluations. Additional information appears in a related article: Klitzner, M.D. and Vegega, M.E., Youth anti-drinking-driving programs: An examination of program assumptions. 29th Annual Proceedings of the American Association for Automotive Medicine, October 7-9, 1985, Washington, D.C.

Korenbaum, S., Norms and Attitudes Related to Alcohol Usage and Driving: A Review of the Relevant Literature. Volume 1: A Review of the Literature. Washington, D.C.: U.S. Department of Transportation, National Highway Safety Traffic Administration, Pub. No. DOT HS 806 329, September, 1982. This report contains a review and analysis of the literature pertaining to attitude formation and change, attitudes towards alcohol use/abuse, attitudes associated with drinking and driving, and primary prevention approaches for reducing drinking and driving. Recommendations included the following: a national survey on attitudes towards drinking and driving should be conducted to identify and assess peoples' attitudes towards drinking and driving; alcohol education programs should be studied to determine whether they can provide an effective means for impacting on the drinking driving behavior of students; and a three-year pilot program should be conducted on community-based prevention of drinking and driving. Information on the other aspects of the project can be found in other volumes of this report as follows: Volume II - A Meta-Analysis of Primary Prevention Studies (Nagy, 1982); Volume III - Report of Individual Interviews (Pawlowski, 1982a); Volume IV - Report of Focus Groups (Pawlowski, 1982b); and a booklet entitled "Suggestions for Developing Prevention Programs to Reduce the Incidence of Alcohol-Impaired Driving" (Creative Associates, Inc., 1982).

Lowman, C., Facts for Planning No. 6: Parental Dimensions in Teen-age Drinking. Alcohol Health and Research World, 6(4), 58-62, 1982. This is one of a series of reports on a national probability survey of drinking practices of tenth through twelfth grade students conducted in 1974 and 1978. This particular report focuses on issues concerning the relationship between parents and adolescent drinking behavior. The report concludes that "teenager's perceptions of parental drinking and attitudes toward teenage drinking do influence teenage drinking..." More details concerning these and other findings from the surveys are discussed in Rachal et al., 1982 (see below).

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Marshall, K.M, Smith-Donalds, L., Cooke, P., DeLucas, P., Blasinsky, M., Determinants of Youth Attitudes and Skills Towards Which Drinking/Driving Prevention Programs Should be Directed. Volume II: An In-depth Review of Twelve Youth DWI Prevention Programs. Washington, D.C.: U.S. Department of Transportation, National Highway Safety Traffic Administration, Pub. No. DOT HS 806 904, November, 1985. This report summarizes the results of the first task of a multi-component project to analyze existing nationwide programs aimed at encouraging youth to avoid drinking and driving. The project included three major research activities: a review of programmatic, conceptual, and empirical literature, a program review, intended to provide an overview of the assumptions, premises, objectives, activities, and outcomes of 133 existing youth DWI prevention programs; a site visit review, intended to provide an in-depth analysis of a limited sample of 12 programs as they actually operate. See also Klitzner, M., Blasinsky, M., Marshall, K., and Paquet, U. 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, 1985.

Moskowitz, J.M., Preventing Adolescent Substance Abuse Through Drug Education. In: T.J. Glynn, C.G. Leukefeld, and J.P. Ludford, (Eds.) Preventing Adolescent Drug Abuse: Intervention Strategies. NIDA Research Monograph 47, DHHS Publication No. ADM 83-1280, 233-249, 1983. This article reviews three theoretical approaches that underlie many substance abuse prevention programs: (1) a knowledge/attitudes approach, (2) a values/decision-making approach, and (3) a social competency approach. Moskowitz finds no satisfactory evaluative evidence to indicate that programs based on any of these approaches are effective. The article includes a brief review of evaluation research on substance abuse prevention programs and discusses the need for more rigorous process and outcome evaluation studies in the future.

Moskowitz, J.M., The Primary Prevention of Alcohol Problems: A Critical Review of the Research Literature, Journal of Studies on Alcohol, 50(1), 54-80, 1989. This review focuses on evaluations of the impact of programs and policies on reducing alcohol problems. Four types of prevention efforts are considered: policies concerning the availability of alcohol (e.g., minimum drinking ages, price, advertising); formal social controls (e.g., drunk-driving laws); primary prevention programs; and environmental safety measures (e.g., automobile airbags). Approximately 290 references are cited. Excluding unpublished work, the most recent articles cited are from 1986. One section of the review deals explicitly with "family oriented programs" for "preventing adolescent alcohol or drug problems," but the author located only two evaluations of such programs. Related topics discussed in the review are: college education program evaluations, cigarette

education studies, alcohol education studies, and alcohol and drug education studies. The method for sampling literature is not presented.

Nagy, Thomas. <u>Norms and Attitudes Related to Alcohol Usage and Driving: A Review of the Literature. Volume II: A Meta-Analysis of Primary Prevention Studies</u>. Washington, D.C.: U.S. Department of Transportation, National Highway Traffic Safety Administration, Pub. No. DOT HS 806 330, September, 1982. This report presents the methodology, findings, discussion, and conclusions of a meta-analysis of primary prevention studies. Thirty-seven controlled studies dealing with the prevention of non-infectious diseases (e.g., heart attack, obesity, hypertension) were analyzed to determine what factors were associated with improvement in recipients receiving primary prevention interventions. Note that none of the studies included in the meta-analysis concerned drinking and driving. The findings indicated that programs in areas related to health or reducing accidents were more effective than programs in areas of substance abuse, mental health, and deviance. Technological, pharmacological, and combinations of education, information, technology, and drug interventions were the most effective interventions. Further, when the site of the intervention was other than a school, the recipients experienced greater improvement. The author concluded that primary prevention interventions can reduce the incidence of drinking and driving. Information on the other aspects of the project can be found in other volumes of this report: Volume I - Review of the Literature (Korenbaum, S., 1982); Volume III - Report of Individual Interviews (Pawlowski, 1982a); Volume IV - Report of Focus Groups (Pawlowski, 1982b); and a booklet entitled "Suggestions for Developing Prevention Programs to Reduce the Incidence of Alcohol-Impaired Driving" (Creative Associates, Inc., 1982).

National Commission Against Drunk Driving, <u>Youth Driving Without Impairment: Report on the Youth Impaired Driving Public Hearings</u>, Washington, D.C.: U.S. Department of Transportation, National Highway Traffic Safety Administration, Pub. No. DOT HS 807 347, December, 1988. During 1987-88, the National Commission Against Drunk Driving in concert with the National Highway Traffic Safety Administration, conducted public hearings in 5 cities on the "problem of youth impaired driving." This report reviews the public testimony and the Commission's recommendations for action in nine areas: school responsibilities, extracurricular activities, community responsibilities, work-based activities, enforcement, licensing, adjudication, supervision, and legislation. The role of parents is a primary topic addressed under the heading of community responsibilities.

National Institute on Alcohol Abuse and Alcoholism, Prevention Plus: Involving Schools, Parents, and the Community in Alcohol and Drug Education, Rockville, Maryland: National Institute on Alcohol Abuse and Alcoholism, DHHS Publication No. (ADM) 84-1256, 1984. This is a resource guide for development and implementation prevention/intervention programs for alcohol and drug abuse. Several programs are described in detail. A chapter is devoted to parent education which includes a description of a family interaction program. Appendices identify and describe existing prevention programs and approaches. Note that a very similar publication is also available: National Highway Traffic Safety Administration, NHTSA Prevention Guide: The Best Prevention: Model Alcohol and Drug Education Program. U.S. Department of Transportation, National Highway Traffic Safety Administration: Washington, D.C., Report No: DOT HS 806 542, September, 1984.

National Institute on Drug Abuse, National Household Survey on Drug Abuse: Main Finings 1985, Rockville, Maryland: U.S. Department of Health and Human Services, National Institute on Drug Abuse, DHHS Pub. No. (ADM)88-1586, 1988. This is the eighth in a series of reports on annual household surveys about substance use. The primary goals of the surveys is to measure prevalence and correlates of drug use. This report is based on interviews with over 8,000 subjects age 12 and older.

National Parent Teacher Association, Parents Speak Out On Alcohol and Drug Use, PTA/GTE Report Launches Drug and Alcohol Awareness Week. Press Release, Chicago, Illinois, March 6, 1989. Also: National Parent Teacher Association, Summary of PTA/GTE Focus Group Research. Chicago, Illinois, undated. These two brief reports contains findings from focus groups conducted with eight groups of parents of fourth through eighth grade students in four major cities. The purpose was "To determine parent's information and education needs for preventing drug and alcohol use by their children..." (PTA, undated). The project was carried out by a marketing research firm, Vaslow and Associates, Inc. on behalf of GTE (Stamford. Connecticut) and the National PTA (Chicago, Illinois) who have entered a partnership for development and implementation of alcohol and drug abuse prevention programming. Issues explored included: parents' perceptions of why children use drugs, when and how parents discuss substance use with their children, and what parents want to know about prevention. See also below: Vaslow & Associates, Inc., PTA/GTE Alcohol and Other Drugs Prevention Project: Local Unit Interviews, Final report. Vaslow and Associates, Bethesda, Maryland, May 9, 1989.

Pawlowski, W.V., Norms and Attitudes Related to Alcohol Usage and Driving: A Review of the Relevant Literature. Volume III: Report of Individual Interviews. Washington, D.C.: U.S. Department of Transportation, National Highway Traffic Safety Administration, Pub. No. DOT HS 806 331, September, 1982a. This report presents findings from 40 interviews conducted with early adolescents (ages 13-14), middle-late adolescents (ages 17-18), and young adults (ages 18-25). The interviews were conducted to explore norms and attitudes of drivers who drive after drinking and those who do not. Discussion deals with the following areas: general perceptions and beliefs about drinking, knowledge and beliefs about drinking and driving, behavior patterns and attitudes regarding drinking and drinking and driving, factors that may influence attitude formation, and behaviors regarding drinking and driving. The findings suggest that there are strong influences in our society that encourage drinking and driving; that there needs to be more information 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 laws); and that individuals, community organizations and social institutions in our society can have a countering effect on pro-drinking and driving influences. Information on the other aspects of the project can be found in other volumes of this report as follows: Volume I - Review of the Literature (Korenbaum, S., 1982); Volume II - A Meta-Analysis of Primary Prevention Studies (Nagy, 1982); Volume IV - Report of Focus Groups (Pawlowski, 1982b); and a booklet entitled "Suggestions for Developing Prevention Programs to Reduce the Incidence of Alcohol-Impaired Driving" (Creative Associates, Inc., 1982).

Pawlowski, W.V., Norms and Attitudes Related to Alcohol Usage and Driving: A Review of the Relevant Literature. Volume IV: Report of Focus Groups. Washington, D.C.: U.S. Department of Transportation, National Highway Traffic Safety Administration, Pub. No. DOT HS 806 332, September, 1982b. This report discusses findings from three focus groups: two with parents of teenaged drivers and one with adult males ages 30-59. The parent groups were conducted to explore parents' perceptions of the teenage drinking/driving problems and what can be done to help parents prevent their teenagers from DWI. Similarly, the adult male group was conducted to explore adult males' perceptions of the DWI problem and what can be done to prevent adult males from DWI. Participants from all the groups agreed that there needs to be a massive public information and education campaign effort to prevent drunk driving. In general, the findings suggest that (1) adults are concerned about the DWI problem in our society and (2) adults feel that there needs to be more support systems (e.g., public information, government intervention/programming) to create a social environment that is less tolerant of drinking and driving. Information on the other aspects of the project can be found in other volumes of this report as follows: Volume I -

Review of the Literature (Korenbaum, S., 1982); Volume II - A
Meta-Analysis of Primary Prevention Studies (Nagy, 1982); Volume
III - Report of Individual Interviews (Pawlowski, 1982a); and a
booklet entitled "Suggestions for Developing Prevention Programs
to Reduce the Incidence of Alcohol-Impaired Driving" (Creative
Associates, Inc., 1982).

Polich, M.J., Ellickson, P.L., Reuter, P. and Kahan, J.P.,
Strategies for Controlling Adolescent Drug Use. Santa Monica,
California: Rand, 1984. "This study encompasses a broad review
of the scientific literature on the nature of drug use and the
effectiveness of drug law enforcement, treatment and prevention
programs. It evaluates the prospects for each of the major meth-
ods of controlling drug use and suggests an agenda of possible
actions. In addition, it identifies the crucial information
needed for better articulation of future national efforts to com-
bat drug use" (preface). The primary conclusion is "that while
intensified law enforcement is not likely to reduce adolescent
drug use, and the benefits of expanded treatment remain un-
certain, prevention programs hold more promise. The most en-
couraging evidence comes from the success of school-based pro-
grams to prevent cigarette smoking, which offer a strategy that
may be adaptable to other drugs" (p. v). Discussion of preven-
tion concentrates on school-based programs and, with respect to
alcohol, deterring drinking rather than preventing drinking-
driving or other abuse.

Rachal, J.V.; Maisto, S.A.; Guess, L.L.; Hubbard, R.L., Alcohol
Use Among Youth. In: National Institute on Alcohol Abuse and
Alcoholism, Alcohol and Health Monograph No. 1: Alcohol
Comsumption and Related Problems. Rockville, Maryland: National
Institute on Alcohol Abuse and Alcoholism, 55-95, DHHS Pub. No.
(ADM)82-1190, 1982. This article review a variety of studies on
(1) the prevalence and patterns of adolescent alcohol use/misuse;
and (2) correlates of use/misuse. The article concentrates on
discussion of data from two national probability surveys of tenth
through twelfth grade students conducted in 1974 and 1978. (See
Lowman 1982 above for summary of data from these studies concern-
ing parental influences on adolescent alcohol use).

Silverman, W.H. and Silverman, M.M., Using Demographic Data in a
Primary Prevention Substance Abuse Program for Teenagers and
Parents, Psychology of Addictive Behaviors, 1(3), 163-172, 1987b.
The study concerns the manner in which information collected from
potential target populations can guide development of prevention
programs. Questionnaire data were collected in two high schools
from both seniors and their parents. "Information about teens'
drug use, attitudes, alternative activities, and preferred help-
ing resources was compared to parents' knowledge of and attitudes
toward their children's drug use." In a companion article (Sil-
verman and Silverman, 1987a) the authors also compare community

leaders' views about adolescent substance abuse to those of adolescents and parents.

United States Department of Education, <u>What Works: Schools Without Drugs</u>, Washington, D.C.: U.S. Government Printing Office, 1987. This publication presents recommendations concerning activities and policies that should be used to reduce substance abuse. The role of parents, schools, students, and the larger community are discussed. Information is also presented on drug use, the effects of drugs, topics which prevention programs should include, and resources for assistance and information. This 78 page pamphlet can be viewed as a major public policy statement directed at lay audiences. Over 1.5 million copies have been distributed.

United States Department of Health and Human Services, <u>Surgeon General's Workshop on Drunk Driving: Proceedings</u>, Rockville, Maryland: United States Department of Health and Human Services, 1989. In December 1988, the Surgeon General, C. Everett Koop, convened a workshop to formulate policy recommendations concerning drunk driving. Panels comprised of experts addressed pricing and availability of alcohol, advertising and marketing, epidemiology and data management, education, judicial and administrative processes, law enforcement transportation and alcohol service policies, injury control, youth and other special populations, treatment, and citizen advocacy. Recommendations by the panels on education and on youth are especially relevant to assisting parents to prevent alcohol abuse among their children.

Vaslow & Associates, Inc., PTA/GTE Alcohol and Other Drugs Prevention Project: Local Unit Interviews: Final report, Bethseda, Maryland: Vaslow and Associates, May 9, 1989. This report contains findings from interviews with members and leaders from six local Parent Teacher Associations across the United States. The project was carried out by a marketing research firm, Vaslow and Associates, Inc., on behalf of GTE (Stamford. Connecticut) and the National PTA (Chicago, Illinois) who have entered a partnership for development and implementation of alcohol and drug abuse prevention programming. Issues explored included: perceptions of parents' needs, strategies for addressing identified needs, resources required by PTAs to respond to needs, and methods for distributing information. See also above: National Parent Teacher Association, Parents Speak Out On Alcohol and Drug Use, PTA/GTE Report Launches Drug and Alcohol Awareness Week. Press Release, Chicago, Illinois, March 6, 1989.

Williams, A.F.; Lund, A.K.; and Preusser, D.F. Drinking and driving among high school students. <u>The International Journal of the Addictions</u>. 21(6):643-655, 1986. This article reports on a survey of 52,304 students carried out in 75 high schools in seven states during 1983. The survey included information on the ex-

tent of student drinking, drinking and driving, and the personal and social characteristics of those who drink and drive. The paper also discusses the implications of the results for reducing alcohol-related crashes.