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16. Abstract

This report presents the results of a multi-component study, the goal of which was to develop recommendations to improve strategies to prevent youth drinking and driving and riding with impaired drivers. The project was conducted in two phases. The goal of Phase One was to explore the underlying assumptions, premises, objectives, activities and outcomes of existing prevention programs nationwide. The goal of Phase Two was to gather additional data based on the findings of Phase One that would: 1) Determine the validity of program assumptions and premises identified in Phase One, and 2) Identify additional attitudes and skills necessary for the development of DWI avoidance behaviors in youth. The methods and results of Phase One are discussed in two previous Department of Transportation Publications (Report Numbers DOT HS 806 903 and DOT HS 806 904). This report focuses on the methods and results of Phase Two.

Three research studies are described: 1) A survey of youth drawn from junior high schools, high schools, and junior colleges in five diverse geographic locations, 2) interviews with youth in the same five locations who reported engaging in drinking/driving or riding with an impaired driver, and 3) focus groups with youth that explored the acceptability of current popular drinking/driving prevention strategies. The results of this study are discussed as they relate to the refinement and/or reconceptualization of youth drinking/driving prevention efforts.

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I. INTRODUCTION

In October of 1984, the National Highway Traffic Safety Administration (NHTSA), United States Department of Transportation, contracted with the Pacific Institute for Research and Evaluation to conduct basic research that would result in recommendations for improvement of youth drinking/driving (DWI) prevention programs. This multi-component project proceeded in two major phases. The focus of this final project report is on project Phase Two (the results of which have not been previously reported) and on the recommendations that derive from the project as a whole.

The goal of project Phase One was to explore the underlying assumptions, premises, objectives, activities, and outcomes of existing programs nationwide aimed at encouraging youth to take responsible action to avoid drinking and driving. To this end, a Program Analysis was conducted that comprised three major research activities:

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

The results of the Phase One Program Analysis are reported in depth in two Department of Transportation publications (Klitzner, et al., 1985; Marshall, et al., 1985), and are summarized in SECTION II of this report (Background for the Phase Two Research).

The goal of project Phase Two was to gather additional data based on the findings of Phase one that would: 1) determine the validity of assumptions and premises identified in the Program Analysis, and 2) identify additional attitudes and skills necessary for the development of DWI avoidance behavior in youth. To accomplish this goal, a national survey of youth was conducted under a cooperative arrangement with the staff of NIAAA Grant Number RO1 AA6130 (Students Against Driving Drunk: A National Study - M. Klitzner, Principal Investigator). The survey research included:

- An assessment of the validity of five categories of assumptions concerning risk factors for youth drinking/driving derived from the Program Analysis of Phase One (Stable Risk Factors)

- An exploration of the situational variables that surround instances of youth drinking/driving behavior (Situational Risk Factors), and an assessment of the relative contribution of situational vs. stable variables to drinking/driving risk.

- An assessment of the acceptability to youth of eleven popular DWI/RWID prevention strategies.

The results of the Phase Two survey research are presented in SECTION IV of this report (PHASE TWO RESULTS AND ANALYSIS).

II. BACKGROUND FOR THE PHASE TWO RESEARCH

The Phase Two survey research was based upon the results of the Phase One Program Analysis. Accordingly, the key results of the Program Analysis are presented in order to provide a context for discussing the Phase Two research questions, methods, and results.

The Phase One Program Analysis (Klitzner, et al., 1985; Vegega & Klitzner, 1985; Vegega & Blasinsky, 1986) gathered materials from a sample of 133 youth DWI prevention programs nationwide. These materials were reviewed to extract the following information:

- o basic program history (level of funding, program setting, etc.);
- o target population demographics;
- o program assumptions/premises;
- o program objectives;
- o program activities; and,
- o program evaluation results.

Where necessary, follow-up telephone calls were made in order to gather incomplete or missing information, or to clarify information that was ambiguous. In addition, site visits were conducted of twelve programs from the sample in order to gather in-depth data on program operation and program implementation. Descriptive data concerning program history, target population demographics, program objectives, program activities, program evaluation results, and program implementation are reported in Klitzner, et al. (1985) and Marshall, et al. (1985).

The Program Analysis suggests that current youth DWI prevention strategies operate under one or more of five general categories of assumptions and premises concerning the factors that predispose, reinforce, or enable youth DWI or RWID behavior.[1] These five general categories of predisposing, reinforcing, and enabling factors are:

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[1]Klitzner, et al. (1985) list seventeen categories of general assumptions and premises (Table 3). The five categories presented here represent a refinement of the original seventeen categories in which essentially similar categories have been combined.

1. Alternatives-Related Factors. Strategies based on an alternatives orientation derive from the assumption that although alternatives to DWI/RWID are available to youth (e.g., calling parents for a ride, assigning a designated driver, taking a bus, only going to alcohol-free parties, etc.), youth are either unaware of such alternatives or find them unacceptable. Such strategies may attempt to educate youth about available alternatives, motivate youth to use them, or increase their availability (e.g., institute a "Safe-Rides" project).

2. Life Skills-Related Factors. Strategies based on a life skills orientation assume that youth who engage in DWI/RWID are deficient in one or more of three life skill areas: 1) decision-making, 2) communication, and/or 3) self-concept. These initiatives provide experiential learning and skills development activities in order to remediate deficits and to reinforce these qualities.

3. Information-Related Factors. Strategies based on an information orientation assume that DWI/RWID behavior derives from a lack of knowledge of the effects of alcohol on driving performance and/or a lack of knowledge of traffic safety and related laws and ordinances. These provide didactic education in one or both of these areas.

4. Peer Pressure-Related Factors. Strategies based on a peer pressure orientation assume that DWI/RWID behavior results because youth lack the skills to resist peer pressure to drink, drive after drinking, or ride with an impaired driver. Generally, such peer pressure is assumed to be direct (i.e., the result of taunting, teasing, direct social opprobrium, "dares," etc.), although in some cases, peer pressure is assumed to be a more indirect result of a general tendency among youth to conform to social conventions (i.e., youth "go along with the crowd" in order to avoid being viewed as different or deviant). In the former case, youth are taught "resistance skills" including practice in saying "no" to offers of alcohol, to pressures to drive after drinking, or to pressures to accept unsafe rides. In the latter case,

activities focus on individual rights, following individual values, seeking social situations that support healthy choices, etc.

5. Normative Factors. Strategies based on normative factors assume that DWI/RWID behavior results from a perception on the part of youth that DWI/RWID is not deviant. Such normative beliefs may be directed at self ("I believe DWI/RWID are acceptable behaviors"), peers ("My friends believe DWI/RWID are acceptable behaviors") or community ("Most people believe DWI/RWID are acceptable behaviors"). These strategies may attempt to alter either perceptions of norms or the norms themselves. Examples of the former approach are public information efforts such as the "Friends Don't Let Friends Drive Drunk" campaign. Examples of the latter are SADD-type clubs that attempt to alter peer norms though school and community-based action.

Literature reviews conducted as part of the Phase 1 Program Analysis suggests limited empirical support for four of the five categories of assumptions and premises concerning the factors that predispose, reinforce, and enable youth DWI/RWID (life skills approaches, information approaches, peer pressure resistance approaches, and normative approaches). To our knowledge, there is no direct empirical support for approaches based on increased knowledge or acceptability of alternatives to DWI/RWID, although very recent evidence suggests that the availability of drug and alcohol-free alternatives may reduce consumption (Klitzner, et al., 1987).

Support for life skills approaches derive from findings that youth who engage in DWI are less responsible and more impulsive (Kraus, et al., 1970; Grey Advertising, 1975), and may view DWI as a "deviant route to status" (Klein, 1968). Moreover, numerous studies have linked youth alcohol use to stress (Cameron, 1982; Burkette and Carritners, 1980; Firth and Goffey, 1981; Forney, et al., 1984; Herbert, 1980; Koningsberg, et al., 1983; Scoles, et al., 1981; Wagenaar, 1983).

Several studies have suggested that young people are generally ignorant of the physiological and psychological effects of alcohol (Blane, 1983; Forney, et al., 1984; Hetherington, et al., 1979), including a lack of knowledge about the amount of alcohol that impairs performance (Pawlowski, 1982). Such studies provide some support for an information approach, although the proposition that knowledge change affects behavior has never been demonstrated.

Support for peer pressure resistance approaches derive largely from studies related to alcohol use. Such studies suggest a strong peer pressure component in youth alcohol use behaviors (Vejnoska, 1982; Scoles, et al., 1981; Krohn, et al., 1982; Nusbaumer and Zusman, 1981; Biddle, et al., 1980), and one study suggests that peer influence may be so pervasive as to negate the effect of countervailing influences such as fear of legal sanctions or parental disapproval (Finley, 1983). Group centeredness, a probable component of susceptibility to peer influence, has also been found to increase DWI risk (Kraus, et al., 1970; Grey Advertising, 1975).

Finally, normative approaches are supported by the finding that normative acceptance of drinking (Kron, et al., 1982; Milgram, 1982; Lowman, 1981; Douglass, 1983), contributes to youth alcohol consumption, and that positive attitudes towards alcohol increase DWI risk (Kraus, et al., 1970; Grey Advertising, 1975). Moreover, Smith-Donals & Klitzner (1985) found that DWI behavior was most common among youth who did not view such behavior as deviant.

In general, available empirical support for the five categories of assumptions underlying current approaches to DWI/RWID prevention is sparse. Moreover, such support is largely inferential since the majority of studies address drinking rather than DWI, per se, and almost no studies have focused on factors that predispose, reinforce, and enable riding with an impaired driver. Accordingly, one major component of the Phase Two research was a direct assessment of the validity of the five categories of assumptions.

A general finding of the Phase One research was that DWI/RWID risk was almost always assumed to be related to relatively stable predisposing, reinforcing, and enabling factors. Indeed, an examination of the factors discussed thus far suggest an almost total emphasis on knowledge, beliefs, attitudes, and skills that are constant for a given youth across the various settings in which DWI/RWID might occur. Focus groups conducted as part of the Phase One Program Analysis suggested that DWI and RWID may be highly dependent on situational factors as well. For example, teenagers strongly opposed to riding with an impaired driver reported doing so because no other transportation was available, or because the driver was a parent or other adult who the teen was reluctant to confront. Similarly, teenagers who felt they generally made positive health choices reported making a bad decision because judgement was temporarily impaired by alcohol.

Little, if any data concerning these situational variables was discovered either in the review of currently operating programs or in the review of relevant DWI literature. Thus, a second major component of the Phase Two research was an exploration of

situational variables that surround instances of youth DWI/RWID-related behavior, and an assessment of the relative contribution of situational vs. stable variables to DWI/RWID risk.

Finally, the site visit data from the Program Analysis suggested that most DWI prevention strategies and related activities are under-utilized. For example, the number of students joining Students Against Driving Drunk (SADD) chapters is limited, as are the numbers of students calling for Safe-Rides, attending Project Graduation alcohol-free parties, and so on. Several factors may contribute to this under-utilization, but one obvious explanation is that these options are unappealing to some sub-groupings of teens. To date, however, almost no data have been collected on the acceptability to youth of various prevention strategies and activities.

No matter how theoretically sound, DWI prevention strategies will not be effective if the strategies and the activities advocated are not acceptable to youth. Thus, data on the acceptability of program options is crucial to accomplishing the goal of improving future youth DWI programming. Accordingly, the third major component of the Phase Two research was an assessment of the acceptability to youth of eleven popular DWI/RWID prevention strategies.

III. PHASE TWO RESEARCH QUESTIONS AND RESEARCH METHODS

As discussed, the Phase Two research comprised three major, interrelated components:

- o Component I was designed to provide a direct assessment of the validity of the five categories of assumptions concerning risk factors for DWI/RWID derived from the Program Analysis of Phase One (Stable Risk Factors).

- o Component II was designed to explore the situational variables that surround instances of youth DWI/RWID-related behavior (Situational Risk Factors), and to assess the relative contribution of situational vs. stable variables to DWI/RWID risk.

- o Component III was designed to assess the acceptability to youth of eleven popular DWI/RWID prevention strategies.

In order to ensure geographic and ethnic diversity of the research samples,[2] each of the three research components were implemented in five geographic locations: 1) Los Angeles, CA, 2) Sacramento, CA, 3) Espanola, NM, 4) Omaha, NE, and 5) Washington, D.C. These locations provided access to Asian (Los Angeles), Hispanic (Espanola), Black (Washington), and White (Omaha, Sacramento) youth. Moreover, these locations represented urban (Washington, Los Angeles), Suburban (Sacramento, Omaha), and rural (Espanola) settings.

Following are the specific research questions and research methods for each of the three research components.

COMPONENT I - VALIDITY OF STABLE RISK FACTORS

The overall goal of Research Component I was to assess the validity of assumptions concerning stable DWI risk factors that form the basis for current DWI prevention strategies. To achieve this goal, Research Component I was designed to answer three specific research questions:

IA. What is the incidence in a general population of teens of the stable risk factors hypothesized to underlie DWI behavior?

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[2]Detailed demographic descriptions of the study samples are provided in SECTION IV (PHASE TWO RESULTS AND DISCUSSION).

IB. How do these stable risk factors vary as a function of basic demographics such as age, sex, and SES, and as a function of lifestyle variables?

1C. What is the association between demographics, lifestyle variables, the risk-factor profile, alcohol use, and frequency and severity of DWI and RWID?

In order to address these research questions, a paper-and-pencil questionnaire was prepared that provides measures of the following variables (a copy of the questionnaire is presented in Appendix A):

1. RESPONDENT DEMOGRAPHICS

   a. Age
   b. Grade
   c. Sex
   d. Race
   e. Socioeconomic status as measured by parents' occupation
   f. School performance
   g. Driver's licensure status

2. LIFESTYLE VARIABLES

   a. Friends' drinking practices
   b. Participation in parties and dating
   c. Attendance at religious services

3. ALCOHOL USE VARIABLES

   a. Lifetime incidence of alcohol use
   b. One-month prevalence of alcohol use
   c. One-month quantity/frequency estimate
   d. Friend's drinking practices

4. STABLE RISK FACTOR VARIABLES

   a. Alternatives-Related Factors

      i) 11 item "Knowledge of Alternatives" scale
      ii) 11 item "Use of Alternatives" scale

   b. Life Skills-Related Factors

      i) 10 item Self-Concept scale
      ii) 10 item Communications Skills scale
      iii) 10 item Decision-Making scale

c. Information-Related Factors

i) 8 item true/false Alcohol Knowledge scale
ii) 8 item true/false DWI Laws scale

d. Peer Pressure-Related Factors

i) 10 item "Susceptibility to Peer Influence" scale[3]

e. Normative Factors

i) 16 item "Perceived Deviance of DWI" scale[4]

5. REPORTED DWI/RWID BEHAVIOR VARIABLES

a. Lifetime incidence of DWI
b. One-month prevalence of DWI
c. Lifetime incidence of RWID
d. One-month prevalence of RWID
e. Lifetime incidence of drinking in cars
f. One-month prevalence of drinking in cars
g. Alcohol related traffic safety problems (citation, crash, license suspension/revocation

Questionnaire items for RESPONDENT DEMOGRAPHICS, LIFESTYLE VARIABLES, ALCOHOL USE VARIABLES, DWI/RWID BEHAVIOR VARIABLES, "Susceptibility to Peer Influence" scale, and "Perceived Deviance of DWI" scale were adapted from the Highschool Drinking/Driving Survey (Smith-Donals and Klitzner, 1985). The Alcohol Knowledge and DWI Laws scales were also adapted from the High School Drinking/Driving Survey supplemented by items from NHTSA's How Much Do you Know About Drinking and Driving: A Self-Evaluation

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[3]This scale measured the extent to which youth endorsed statements indicating that their behavioral choices are susceptible to control by the actions, wishes, or suggestions of others -- e.g. -- "I often worry about what other people think about things I do."

[4]This scale measured the extent to which youth endorsed statements indicating that they believed DWI is wrong, their community and friends believe DWI is wrong, and/or they believed DWI laws should be enforced and offenders punished -- e.g., "People who drink and drive should lose their drivers' licenses."

for Teenagers (DOT, 1983).[5] The Self-Concept and Decision-Making scales were adapted from NIDA's Drug Abuse Instrument Handbook (Letteri, 1980), and the Communications Skills scale was adapted from the "Interpersonal Communication Report" (Macklin and Rossiter, 1976).[6]

No existing scales could be found concerning knowledge or acceptability of DWI/RWID alternatives. Accordingly, a scale was developed that listed 11 alternatives (e.g., take a bus, call a cab, sleep over) and asked youth to indicate: 1) Whether or not they had ever thought of each alternative (prior to seeing it in the questionnaire), and 2) whether or not they had ever used the alternative. Because Safe-Ride-type alternatives required a somewhat lengthy description, knowledge and acceptability of this alternative were assessed in two additional items that directly followed the 11-item scale.

Criticisms might be raised concerning the reliance in this study of youths' self-reports of both the risk factor scales and the criterion measures (i.e., DWI and RWID). However, considerable past research has argued for the validity of self-reports of sensitive behaviors in the substance abuse area (O'Malley, et al., 1983), and Smith-Donals and Klitzner (1985) have specifically demonstrated the validity of youths' self-reports of drinking and driving. Moreover, the current data offer a number of internal validity checks (e.g., an assessment of the level of association between variables that theoretically should be associated), and thus allow a determination of the adequacy of self-reports in the current context.

A draft version of the entire questionnaire was pilot-tested on 10 youth drawn from Washington, D.C. area recreation centers.

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[5]Because DWI laws vary from state-to-state, separate scoring keys were developed for each of the geographic locations for the DWI laws scale.

[6]It is extremely difficult to obtain consensus concerning the definitions of self-concept, decision-making, and communication skills. For example, Robinson and Shaver (1973) review dozens of self-concept scales, each of which has a somewhat different orientation. The current instrument reflects a "self-evaluation" orientation (Norem-Hebeisen, 1976) to self-esteem--i.e., a generally measure of self-liking. The decision-making component of the current instrument reflects an impulsivity orientation -- i.e., the extent to which consequences are considered before decisions are made. The communications skills component reflects an emphasis on assertive communication--i.e., the extent to which one lets others know one's true thoughts, beliefs, and desires.

These individuals completed the draft questionnaire and were extensively debriefed concerning the understandability of items, response options, and skip logic. Item analyses were conducted, and 13 items were replaced owing to limited response variance. No items were eliminated based on the debriefing of pilot subjects, but some response options were refined.

In each of the five study locations, surveys were administered in one middle- or junior high school, one high school, and one community college. Target sample sizes for each of six grade levels in each location are given in TABLE I.[7]

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[7]Actual sample sizes by location are given in SECTION IV (PHASE TWO RESULTS AND DISCUSSION).

TABLE I

TARGET SAMPLE SIZE IN EACH OF FIVE GEOGRAPHIC LOCATIONS

GRADE LEVEL	SAMPLE SIZE
8th	25
9th	50
10th	50
11th	50
12th	50
College	25
TOTAL	250

In general, obtaining this sample size in each location required that the survey be conducted in one eighth grade and one college class, and in two to four classes in each of the remaining grade levels.

One potential criticism of the sampling design for the survey is that it misses high-risk youth who may have dropped out of school. Accordingly, a sixth site was added for Research Component I that attempted to capture a high-risk population. This site is a residential school in central Florida for youth grades 7 through college whose behavioral problems preclude their attendance at public schools.

Clearly, the sampling design does not provide a sample which is representative of American youth in a statistical sense. Indeed, the sample was intentionally structured to oversample non-white youth, and relied to some degree on selecting sites in which the research could be conducted most efficiently. Thus, the conclusions drawn from this study must be considered weaker than those which would be derived from a sampling design with a known sampling error. On the other hand, the heterogony of sample in terms of both geographic location and ethnicity lends strength to the study, and we believe the data are sufficiently representative to warrant the development of prevention policy based on them.

The surveys were conducted by trained field staff following a standardized field-operations manual during the period November, 1986 to January, 1987.[8] The survey was anonymous, and subjects received no compensation for participation. In all, 1,323 subjects completed the questionnaire across the six study sites. The difference between the obtained sample of 1,323 and the projected sample of 1,250 derived from the inclusion of the Florida high-risk sample and the fact that intact classrooms were used to obtain respondents.

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[8]As discussed, field data collection was conducted under a cooperative arrangement with the staff of NIAAA Grant Number RO1 AA6130 (Students Against Driving Drunk: A National Study - M. Klitzner, Principal Investigator).

COMPONENT II - EXPLORATION OF SITUATIONAL RISK FACTORS

Research Component II was designed to answer three specific research questions:

IIA. Are there consistent situational factors that are associated with DWI and/or RWID? Do these situational factors vary as a function of demographic variables?

IIB. Do the situational risk factors interact with stable risk factors or lifestyle variables?

IIC. What is the relative importance of these situational factors when compared to the risk factors assessed by the questionnaire from Component I?

In order to address these research questions, two interview protocols were designed -- one for use with youth who reported engaging in DWI and one for use with youth who reported engaging in RWID (copies of these protocols are presented in Appendix A).

Both the DWI and RWID protocols asked respondents to describe their most recent experience with DWI/RWID. Consideration was given to having respondents' describe their most severe or harrowing experiences, but it was felt that by using the most recent experience, a more representative sample of reported DWI and RWID incidents would be obtained.

The DWI interview assessed the contribution to the reported DWI incident of the following situational factors:

1. VEHICLE VARIABLES
   a. Type
   b. Ownership
2. SOCIAL CONTEXT
   a. Number of other individuals in car
   b. Relationship to respondent
3. DRINKING AND DRUG USE VARIABLES
   a. Amount
   b. Setting
   c. Use by others in car
4. SOCIAL PRESSURE TO DRINK/NOT DRINK

5. SOCIAL PRESSURE TO DRIVE/NOT DRIVE AFTER DRINKING

6. MOOD VARIABLES

   a. Prevailing mood
   b. Mood changes with drinking or drug use

7. PERCEPTION OF IMMEDIATE RISK

8. DESTINATION VARIABLES

   a. Where
   b. Urgency to get there

9. ALTERNATIVE TRANSPORTATION VARIABLES

   a. Availability
   b. Reasons for using/rejecting

The RWID interview assessed the contribution to the reported RWID incident of the following situational factors:

1. DRIVER VARIABLES

   a. Age
   b. sex
   c. Relationship to respondent

2. VEHICLE VARIABLES

   a. Type
   b. Ownership

3. SOCIAL CONTEXT

   a. Number of other individuals in car
   b. Relationship to respondent

4. DRINKING AND DRUG USE VARIABLES

   a. Amount
   b. Setting
   c. Use by others in car

5. SOCIAL PRESSURE TO RIDE/NOT RIDE WITH THE IMPAIRED DRIVER

6. PERCEPTION OF IMMEDIATE RISK

7. DESTINATION VARIABLES

   a. Where
   b. Urgency to get there

8. ALTERNATIVE TRANSPORTATION VARIABLES

   a. Availability
   b. Reasons for using/rejecting

9. INTERVENTION ATTEMPTS ON THE PART OF THE RESPONDENT

Because no similar interview protocols have been reported in the literature, the interview items for the DWI and RWID protocols were based on focus group responses gathered in the Phase One Program Review. The interview schedules were primarily closed ended, although open-ended "Other" categories were included for all items. A minority of the questions were completely open ended (e.g., "What did someone do to make you feel pressured to drink?") because it was felt that there was simply too little information to develop closed ended probes.

One difficulty encountered in designing the interviews was providing a clear cue to the respondents concerning the point in time which marked the beginning of the reported DWI or RWID incident. For example, a DWI incident might be considered to have begun when a respondent began to drink or, alternately, when he/she began to drive. Similarly, a reported RWID incident might be considered to have begun when the driver started drinking, when the driver started driving, or when the rider started riding.

Because of the complexity of determining a consistent "start point," it was finally determined that the report of the incident should begin at the point that seemed most reasonable to the individual respondent. As a result, the level of descriptive data concerning the circumstances proceeding the incident varied somewhat from respondent to respondent.

Draft interview protocols were pilot tested on five clerical staff (ages 18-25) from Pacific Institute's East Coast Facility. Pilot data resulted in the addition of some response probes, although the general format of the pilot protocol proved satisfactory in pilot testing.

Interviews were conducted by trained field staff following a standardized field-operations manual during the period November, 1986 to January, 1987. Interview subjects were recruited in the five geographic locations through announcements placed in the schools and through capture in school cafeterias and lounges, and

in local "youth hangouts" (malls, video arcades). In each geographic location, approximately twenty-five youth who had engaged in DWI and twenty-five youth who had engaged in RWID were interviewed. If a youth volunteered for the interview, but then reported that he/she had never engaged in DWI or RWID, he/she was thanked and excused.

Some consideration was given to sampling the DWI interviews from youth who had been adjudicated for DWI or from chronic repeat offenders. However, it was felt that recruiting general population youth would provide a more representative sample and would also provide data more directly germane to prevention planning.

Again, the representativeness of the interview sample can be questioned. However a sampling strategy other than the convenience sample employed would have required prior knowledge of the DWI/RWID experiences of the youth respondents. Any data collection that would have allowed such a determination would have raised issues of confidentiality when youth you reported DWI or RWID were recontacted for interviews. Thus, although the convenience sample of self-identified DWI's and RWID's has some methodological limitations, it appeared to be the strongest feasible option.

Upon completing the interview, subjects filled out the questionnaire from Component I in order to allow a comparison of stable and situational risk factors. Subjects who completed both the interview and the questionnaire were paid a $5.00 fee. One subject did not complete the questionnaire, and thus provided only interview data.

COMPONENT III - ACCEPTABILITY OF PREVENTION STRATEGIES

Research Component III was designed to address three research questions:

IIIA. What is the general acceptability of various prevention strategies and activities to a general population of teens?

IIIB. What demographic factors determine differential acceptability of prevention strategies and activities?

IIIC. What factors underlie the attractiveness or lack of attractiveness of various strategies and activities?

To address these questions, a focus group protocol was designed that described eleven popular prevention strategies. The following are exact wordings from the protocol. (A copy of the focus group protocol is presented in Appendix A):

1. SADD-TYPE CLUBS: These clubs have committees that plan activities in the school that encourage students not to drink and drive such as information campaigns, rallies, special exhibits on campus about drinking and driving, and sponsoring speakers and assemblies. SADD is an example of this type of program.

2. CONTRACTS: Some students and their parents sign a contract that says that if the student ever needs a ride because he or she or the people he or she are with have been drinking too much to drive, the student will call the parent for a ride and discuss the incident later.

3. ALTERNATIVE PARTIES: Some students or schools sponsor alcohol free parties or dances, particulary at prom or senior week time, or during holidays like Christmas or the 4th of July. If you come to these parties and have been drinking, you are not allowed in, and if you drink at or outside the party, you must leave. People who plan these parties try to have good bands and good food. Project Graduation is an example of a group that sponsors such parties.

4. SAFE-RIDE PROGRAMS: In some communities, there is a telephone number you can call if you or the person driving you has been drinking too much to drive safely. When you call this number, someone comes and gives you a free ride. Safe Rides is an example of such a program.

5. SCHOOL CLASSES: Some classes take some class time to teach about or discuss the effects of alcohol and drinking and driving. These classes use films, outside speakers, student discussions, and demonstrations.

6. PARENT INTERVENTIONS: Some parents take young peoples' car keys when the young people arrive at a party at the parent's home. The parents won't give the keys back if they think the young person has been drinking too much to be able to drive safely.

7. JUST NOT DRINKING: Obviously, if you don't drink and don't hang around with young people who do drink, you will never have to drink and drive or ride with a young person who has been drinking. Therefore, some young people try never to drink and choose friends who don't drink.

8. FEAR AROUSAL: Some programs show young people the results of drinking and driving. For example, youth might be shown pictures of people who have been injured, or might visit a hospital where people injured in drunk driving accidents are being treated. Also, youth might be taken to a jail where drunk drivers are serving sentences.

9. JUST SAY NO: Some programs try to get youth to just say no to drinking or drinking and driving. They give youth buttons and t-shirts, and some youth even form clubs to try to get other youth to say no to drinking or drinking and driving.

10. DESIGNATED DRIVER: Some youth avoid driving after drinking by choosing a driver who agrees not to drink on that occasion.

11. IMMERSION PROGRAMS: Some programs train a few youth from a school or community at an intensive summer program that lasts a week or more. These youth then develop drinking driving programs for their schools or communities when they return.

For each strategy, the focus groups were asked to discuss the following topics:

- Perceived effectiveness of the strategy (e.g., Do you think clubs like this would be effective in preventing or reducing drinking and driving?)
- Perception of acceptability to a general population of youth (e.g., Do you think many people your age would join such a club?)
- Personal acceptability to the respondents (Would you personally join such a club?)

For contracts, safe-rides, parent interventions, and designated driver, youth were also asked to assess whether the strategy would have an effect on drinking behavior (e.g., Do you think signing such a contract would have an effect on the amount youth drink?).

A face page on the focus group protocol provided space for the researcher to record participants' age, sex, race, and drivers licensure status. Because race might be considered sensitive, the researcher approximated the race of each respondent based on observation.

Two focus groups were conducted in each of the five geographic locations. Junior high school and high school student respondents were invited to participate during free periods or study halls. Community college respondents were recruited through announcements in introductory psychology classes. The focus groups were conducted in empty classrooms or meeting rooms which ensured complete privacy for respondents as they talked about potentially sensitive subjects.

As is the case in most focus group samples, the data gathered depends to some degree on the composition of the specific groups used. Thus, such data must be interpreted rather broadly, extracting those themes that are repeated across groups conducted in a number of different contexts. In the current study, the use of groups in five different cities strengthens the conclusion that may be derived, although these conclusions will always be somewhat tentative. Therefore, the focus group data have been interpreted in light of the data from the surveys and interviews,

and only those conclusions which are consistent with other themes in the data have been used to develop recommendations.

The focus groups were conducted by trained field staff following a standardized field-operations manual during the period November, 1986 to January, 1987. During the focus groups, the researchers adopted a supportive communication style, probing for elaboration and responding to interviewee comments in a non-evaluative way in order to create a non-threatening environment for disclosure about sensitive issues. Interviews lasted from 35 to 60 minutes at the end of which interviewees were paid a $5.00 fee for their participation.

IV. PHASE TWO RESULTS AND DISCUSSION

The results of each of the three research components of Phase Two are presented and discussed separately. A general discussion of the Phase Two results and recommendations for the project as a whole are presented in SECTION V (SUMMARY AND RECOMMENDATIONS).

For each of the three research components, an overview of the analyses strategies are presented, as are preliminary analyses which describe the study samples. The results for each component are presented and discussed following these preliminary sections.

COMPONENT I - VALIDITY OF STABLE RISK FACTORS

Overview of the Analysis Strategy

As discussed on page 8, Research Component I was designed to address three research questions:

IA. What is the incidence in a general population of teens of the stable risk factors hypothesized to underlie DWI behavior?

IB. How do these stable risk factors vary as a function of basic demographics such as age, sex, and SES, and as a function of lifestyle variables?

IC. What is the association between demographics, lifestyle variables, the risk-factor profile, alcohol use, and frequency and severity of DWI and RWID?

These questions were addressed through a paper-and-pencil questionnaire survey of 1,323 youth in five geographic locations (Los Angeles, Sacramento, Espanola, Omaha, Washington, D.C.) and in a Florida residential school for high-risk youth.

The first step in the analysis of the Component I data was to derive risk factor scores for the nine stable risk factors assessed in the questionnaire (Knowledge of Alternatives, Use of Alternatives, Self-Concept, Communications Skills, Decision-Making Skills, Alcohol Knowledge, DWI Laws Knowledge, Susceptibility to Peer Influence, and Perceived Deviance of DWI) using a simple additive model.[9] The reliability of each scale

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[9]Recent psychometric theory suggests that simple, additive scales provide adequate representations of underlying variables while avoiding the complexities of weighting. See, for example

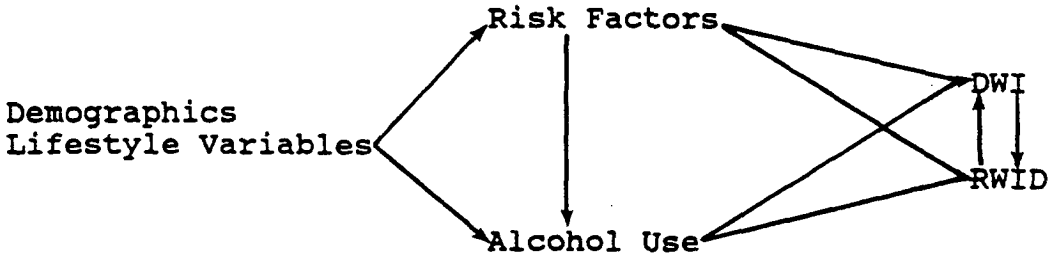
was then evaluated using an item-response model drawn from Item-Response Theory (Lord, 1980), and the validity of the scales was assessed by examining the scale inter-correlations.

The answers to Research Questions IA and IB derive from descriptive analyses based on frequencies and cross-tabulations conducted on the risk-factor scores, demographic data, and lifestyle variables. Multivariate regression analyses[10] were used to assess the extent to which demographics and lifestyle variables predict the risk factor profile.

The answer to Research Question IC derives from analysis of a general model that includes subject demographics, lifestyle variables, the eight risk factors, alcohol use, and reported DWI and RWID behavior. This model is presented in FIGURE 1.

FIGURE 1

A GENERAL MODEL OF DWI/RWID RISK



[10]These analyses considered all of the risk factors simultaneously. If the multivariate analyses are significant, univariate follow-up analyses may be used to determine which specific risk factors are predicted by which specific lifestyle and demographic variables.

Multivariate ranked dependent variable regressions[11] were employed to test the general model in FIGURE 1 using 30 day prevalence of DWI, 30 day prevalence of serious DWI (driving after drinking enough to get in trouble with the police), 30 day prevalence of drinking in cars, and 30 day prevalence of RWID as dependent variables.

Description of the Component I Study Sample

As shown in TABLE I, page 13 a target sample of 250 youth in grades eight through college were sought in each of the five major geographic locations (Los Angeles, Sacramento, Espanola, Omaha, Washington, D.C.). In the Florida school for high-risk youth, the sample was simply those youth who were in school on the day of the survey administration.

TABLE II presents the obtained sample sizes for each of the five geographic locations and the Florida school.

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[11]These analyses follow the logic given in footnote 13. The only difference is that dependent variables (in this case reported DWI and RWID) are ranked across subjects before entering them into the analyses.

TABLE II

DEMOGRAPHIC DISTRIBUTIONS OF COMPONENT I SAMPLE BY SITE EXPRESSED AS PERCENTS--RAW NUMBERS IN BRACKETS

	LA	SACTO	ESPANOLA	OMAHA	DC	FLORIDA	ALL SITES
SAMPLE SIZE	248	261	281	232	234	67	1,323
SEX							
Male	52.4 [130]	56.3 [138]	50.2 [141]	40.5 [94]	41.9 [98]	56.7 [38]	49.0 [648]
Female	47.5 [118]	43.7 [123]	49.8 [140]	59.5 [138]	58.1 [136]	43.3 [29]	51.0 [675]
RACE							
Hispanic	34.2 [85]	15.8 [41]	85.3 [240]	----	1.3 [3]	1.6 [1]	27.9 [369]
American Indian	3.3 [8]	1.5 [4]	5.4 [15]	0.4 [1]	0.8 [2]	1.6 [1]	2.4 [32]
Asian	25.5 [63]	3.8 [10]	0.1 [1]	0.4 [1]	1.7 [4]	1.6 [1]	6.0 [79]
Black	23.0 [57]	2.7 [7]	----	1.7 [4]	80.5 [188]	1.6 [1]	19.4 [257]
White	14.0 [35]	76.2 [199]	9.0 [25]	97.4 [226]	15.6 [37]	93.9 [63]	44.3 [586]
GRADE							
7th	0.4 [1]	0.8 [2]	----	----	----	----	0.2 [3]
8th	9.8 [24]	9.5 [25]	16.0 [45]	9.5 [22]	11.2 [26]	----	10.8 [143]
9th	21.7 [54]	16.7 [44]	11.7 [33]	20.8 [48]	11.2 [26]	14.1 [9]	16.2 [214]
10th	18.0 [45]	24.3 [63]	20.3 [57]	22.9 [53]	11.2 [26]	18.8 [13]	19.5 [258]
11th	23.8 [59]	18.6 [49]	24.2 [68]	8.7 [20]	41.4 [97]	42.2 [28]	24.2 [320]

TABLE II (continued)

	LA	SACTO	ESPANOLA	OMAHA	DC	FLORIDA	ALL SITES
SAMPLE SIZE	248	261	281	232	234	67	1,323
GRADE (continued)							
12th	15.6 [39]	19.0 [50]	21.0 [59]	30.7 [71]	16.4 [38]	20.3 [14]	20.5 [271]
College	10.2 [25]	11.4 [30]	6.8 [19]	7.4 [17]	8.6 [20]	4.7 [3]	8.7 [115]
DRIVERS LICENSURE STATUS							
License	25.3 [63]	38.0 [99]	44.8 [126]	51.7 [120]	29.5 [69]	35.8 [24]	37.4 [495]
Learners Permit	15.4 [38]	7.6 [19]	5.7 [16]	22.4 [52]	12.0 [28]	11.9 [8]	12.2 [161]
Neither	59.3 [147]	54.4 [135]	49.5 [139]	25.9 [60]	61.5 [144]	52.2 [35]	50.4 [667]
LIFETIME INCIDENCE OF DWI/RWID VARIABLES							
RWID	48.1 [119]	65.2 [170]	72.5 [204]	68.5 [159]	48.7 [114]	82.5 [55]	62.2 [823]
Drinking in Cars	31.5 [78]	44.2 [115]	59.5 [167]	52.7 [122]	23.9 [56]	85.7 [57]	45.0 [595]
DWI	39.2 [97]	52.0 [136]	59.9 [168]	58.4 [135]	15.1 [35]	77.1 [52]	49.3 [652]
Serious DWI	17.9 [44]	33.6 [88]	30.0 [84]	32.1 [74]	9.4 [22]	51.4 [34]	27.3 [361]

The use of intact school classes to administer the survey made it difficult to obtain exactly 250 student respondents in each location. However, inspection of TABLE II reveals that the target sample sizes were well approximated in each of the five major locations.

TABLE II also presents the distributions of basic demographic descriptors for each of the five major locations and the Florida school. As can be seen in TABLE II, males and females are equally represented in the total sample, and the distribution of males and females was generally equivalent across the individual study locations. The grade distribution of the total sample approximates the target distribution given in TABLE I (ten percent 8th grade, twenty percent each 9th, 10th, 11th, and 12th grades, and ten percent college), although some site-to-site variation is evident.

The distributions of race in TABLE II suggest that the multi-site sampling strategy was generally successful in obtaining a racially mixed sample. Whites, Hispanics, and Blacks are represented in sufficient numbers to allow sub-analyses by race. Unfortunately, the number of Asians in the sample is lower that anticipated (79 total individuals)[12], and is too small to allow inclusion of Asians in quantitative sub-analyses. Based on recent data (Stewart, et al., 1987), Asians were combined with Hispanics owing to the similarity of their drinking practices.

It should be noted that race and location are inextricably confounded, a result of the sampling plan which called for an emphasis on different racial groups in each study location. Accordingly, study location was not included as a variable in the analyses of Component I.

In terms of licensure status, approximately half the sample had either a drivers license or a learners' permit (thirty-seven and twelve percent respectively). Thus, the sample contains a sizable number of youth who may legally drive, although a license or permit does not appear to be a necessary prerequisite for driving. Of the approximately seven hundred respondents in the sample who report driving a car, motorcycle, or motor scooter, twenty-one percent do not have either a license or permit.[13]

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[12]It had been expected that the L.A. sample would be predominantly Asian. However, when a predominantly Asian High School refused participation, a more racially mixed school was substituted.

[13]The possibility arose that a license or permit might not be required to drive a motor scooter or moped in some of the study locations. A check of local laws revealed that in all sites, either a license or permit was required.

Finally, TABLE II presents the lifetime incidence of DWI, serious DWI (driving when drunk enough to get in trouble if stopped by the police), drinking in cars, and RWID. As can be seen in TABLE II, a large proportion of the study subjects report at least some experience with the target behaviors. As would be expected from the literature on racial differences in drinking patters (Lowman, et al., 1983; Rachel, et al., 1982), the reported incidence of the DWI variables is lowest in the predominantly Black Washington, D.C. sample. Also, as expected from the composition of the Florida special school sample, the incidence of all DWI/RWID variables is highest in this population.

Reliability and Validity of the Risk Factor Scales

Item characteristics (item-total correlations) were calculated for each item that comprise the nine risk-factor scales. For two scales (Alcohol Knowledge and Decision-Making), one item in each scale showed a strong negative correlation with the total scale.[14] These items were eliminated from the remaining analyses of the Component I data. The final risk factor scales were then constructed by adding the scores on the individual items for each study subject.

TABLE III presents the range and direction for each scale. TABLE III also presents Cronbach's Alpha (Carmines and Zeller, 1979) for each risk-factor scale. Cronbach's Alpha provides a assessment of the internal consistency each scale with higher numbers representing higher consistency (the upper limit of Alpha is 1.00).

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[14]The deleted items were 19-G ("I prefer to make my own decisions"), and item 20-H (Alcohol in your system makes it harder to distinguish colors so it becomes harder to tell red from green traffic lights").

TABLE III

RANGE, DIRECTION, AND CRONBACH'S ALPHA FOR NINE RISK-FACTOR SCALES

SCALE	NUMBER OF ITEMS	RANGE	HIGH SCORE INDICATES	ALPHA
Knowledge of Alternatives	11	1-11	More Knowledge	.716
Use of Alternatives	11	1-11	More Use	.781
Self-concept	10	1-10	Better Self-Concept	.726
Communications Skills	10	1-10	More Skilled	.744
Decision-Making Skills	9*	1-9	More Skilled	.606
Alcohol Knowledge	7*	1-9	More Knowledge	.650
DWI Laws Knowledge	8	1-8	More Knowledge	.493
Susceptibility to Peer Influence	10	1-10	More Susceptible	.511
Perceived Deviance of DWI	16	1-16	DWI Perceived as Deviant	.687

*Item deleted from scale before calculation of Alpha

As can be seen in TABLE III, most of the scales have acceptable reliability. The reliability of the "DWI Laws Knowledge Scale" and "Susceptibility to Peer Influence" scales are low. Item analyses did not identify any single item that was depressing the reliability coefficients, nor did any of the items show strikingly poor item characteristics. Thus, it must be assumed that these constructs are either multidimensional or simply too complex to be measured with high reliability given the number of items that comprise the scales. It should be noted, however, that Alpha provides a very conservative estimate of reliability.

The validity of the risk factor scales may be explored by examining their inter-correlations. TABLE IV presents Pearson correlations among the scales for the Component I sample.

TABLE IV
INTER-CORRELATIONS AMONG NINE RISK FACTOR VARIABLES

	UOA	S-C	CS	DMS	AK	DLK	SPI	PDD
Knowledge of Alternatives (KOA)	.28	.11	.14	.21	NS		-.18	.27
Use of Alternatives (UOA)	---	NS	.11	NS	NS	.09	-.09	-.10
Self-Concept (S-C)		---	.43	.48	NS	NS	-.30	.20
Communications Skills (CS)			---	.32	.13	.13	-.45	.13
Decision-Making Making (DMS)				---	NS	NS	-.37	.32
Alcohol Knowledge (AK)					---	.42	-.11	NS
DWI Laws Knowledge (DLK)						---	NS	NS
Susceptibility to Peer Influence (SPI)							---	-.19
Perceived Deviance of DWI (PDD)								---

All correlations are Pearson's r, and are significant at alpha = .05 (significance level adjusted to reflect study-wise error-rate)

As can be seen in TABLE IV, the pattern of inter-correlations among the scales is highly consistent. For example, the three life skills risk factors (Self-Concept, Communications Skills, and Decision-Making) are all positively correlated. In addition, these three factors are negatively correlated with Susceptibility to Peer Influence (i.e., youth high in Self-Concept, Communications Skills, and Decision-Making are low in Susceptibility to Peer Influence) and are positively correlated with Perceived Deviance of DWI (i.e., youth with good life skills perceive DWI as more deviant). Similarly, Knowledge of Alternatives is positively correlated with Use of Alternatives, and is positively correlated with Perceived Deviance of DWI. Finally, Alcohol Knowledge is positively correlated with DWI Laws Knowledge. Overall, then, the pattern of associations among the risk factor scales suggests a high level of construct validity (Anastasi, 1985) for the nine risk factor measures.

Risk Factor Profile of the Study Population

In general, the nine stable risk factors assessed in Component I (Knowledge of Alternatives, Use of Alternatives, Self-Concept, Communications Skills, Decision-Making Skills, Alcohol Knowledge, DWI Laws Knowledge, Susceptibility to Peer Influence, and Perceived Deviance of DWI) are normally distributed within the population studied. The only exceptions are Self-concept, which was positively skewed -- i.e., all subjects tended to score high -- and Use of Alternatives, which was bimodal -- i.e., about seventeen percent of subjects had used no alternatives.

TABLES Va-Vc present the distributions of the nine stable risk factors as a function of grade, sex, race, SES, and licensure status. Risk factors that are significantly predicted by each demographic variable are indicated with a single or double asterisk (*).[15]

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[15]Univariate F for regression significant at $p<.05$.

TABLE Va
MEANS BY GRADE FOR NINE RISK FACTOR VARIABLES

	8	9	10	11	12	COL
Knowledge of Alternatives	*5.73	6.91	6.47	6.96	6.67	7.18
Use of Alternatives	*2.16	3.68	3.53	3.47	4.34	4.90
Self-Concept	7.46	6.83	6.99	6.81	7.97	7.75
Communications Skills	5.16	5.29	5.49	5.63	6.09	6.34
Decision-Making Skills	*5.73	5.36	5.32	5.98	5.95	6.36
Alcohol Knowledge	*2.71	3.52	4.15	4.31	4.54	4.37
DWI Laws Knowledge	*2.41	2.81	3.35	3.36	3.72	5.89
Susceptibility to Peer Influence	*4.14	3.72	3.67	3.12	2.71	2.84
Perceived Deviance of DWI	10.77	10.72	10.48	10.79	10.11	9.80

*Differences predicted by grade ($p<.05$) -- i.e., differences in grade are associated with differences in the risk factors.

TABLE Vb
MEANS BY SEX AND RACE FOR NINE RISK FACTOR VARIABLES

	SEX		RACE		
	Male	Female	White	Black	Hisp/Other
Knowledge of Alternatives	*6.37	6.95	**6.83	7.65	5.86
Use of Alternatives	3.64	3.79	3.71	3.81	3.71
Self-Concept	*7.52	7.04	7.35	7.20	7.09
Communications Skills	5.51	5.80	6.05	5.55	5.09
Decision-Making Skills	5.50	5.96	5.63	6.21	5.70
Alcohol Knowledge	4.06	4.14	**4.78	3.53	3.25
DWI Laws Knowledge	3.40	3.30	**3.79	2.78	2.90
Susceptibility to Peer Influence	*3.53	3.10	**3.38	2.76	3.48
Perceived Deviance of DWI	10.20	10.69	**10.56	11.76	9.52

*Differences predicted by sex ($p<.05$) -- i.e., males and females differ significantly in the risk factor scores

**Differences predicted by race ($p<.05$) -- i.e., at least one racial group differs significantly in the risk factor scores

TABLE Vc
MEANS BY SES AND LICENSURE FOR NINE RISK FACTOR VARIABLES

	SES		LICENSURE		
	High	Low	License	Permit	None
Knowledge of Alternatives	*7.02	6.35	6.72	6.38	6.77
Use of Alternatives	3.94	3.49	4.11	3.52	3.44
Self-Concept	*7.49	6.98	**7.72	6.80	6.95
Communications Skills	5.92	5.41	6.07	5.82	5.28
Decision-Making Skills	5.79	5.72	**6.04	5.21	5.66
Alcohol Knowledge	*4.39	3.80	4.70	4.47	3.46
DWI Laws Knowledge	3.49	3.18	3.87	3.26	2.90
Susceptibility to Peer Influence	*3.08	3.52	3.00	3.38	3.53
Perceived Deviance of DWI	*10.69	10.25	**10.31	10.50	10.62

*Differences predicted by SES ($p<.05$) -- i.e., high and low SES youth differ significantly in the risk factor scores

**Differences predicted by licensure status ($p<.05$) -- i.e., at least one license status group is significantly different in the risk factor scores

Inspection of TABLES Va-Vc reveals a number of interesting relationships between demographic variables and stable risk factors. Both Knowledge of Alternatives and Use of Alternatives increase with grade level, and across all grade levels, youth know about more alternatives than they have actually employed. Females are more knowledgeable about alternatives than are males, and Black youth are more knowledgeable than either Whites or Hispanics. Low SES youth are lower in Knowledge of Alternatives than are high SES youth, although why this should be the case is not clear.

Life skills (Self-Concept, Communication Skills, and Decision-Making) were somewhat less strongly related to demographics. Males and high SES youth were higher in Self-Concept, as were licensed drivers when compared to non-licensed youth or youth with permits. Decision-Making Skills increased with grade, and were also related to drivers licensure, but were unrelated to sex. This latter finding is somewhat surprising, given the usual finding of higher impulsivity among boys (see, for example Smith-Donals and Klitzner, 1985). Finally, Communication Skills were unrelated to any demographic variable studied.

Both Alcohol Knowledge and DWI Laws Knowledge increased with grade, and Whites were more knowledgeable than either Blacks or Hispanics. This last effect may be explained by exposure to school-based alcohol and traffic safety education -- Whites were significantly more likely to have attended such classes than were Blacks or Hispanics (Pearson Chi-Square = 53.54, $p>.0005$). SES was positively associated with knowledge, an effect that may also be mediated by exposure to education.

Males and low SES youth are more susceptible to peer influence than are females and high SES youth, and Black youth are less susceptible to peer influence than either Whites or Hispanics. Somewhat in contradiction to current theory (e.g., Jessor and Jessor, 1977), Susceptibility to Peer Influence <u>decreases</u> with grade (i.e., younger children are more susceptible).

Perceived Deviance of DWI is predicted by race (Blacks perceived DWI as more deviant than do Whites or Hispanics) by SES (high SES youth perceive DWI as more deviant), and by licensure status. Despite clear sex differences in DWI incidence (e.g., Williams, et al., 1984), Perceived Deviance of DWI is <u>not</u> predicted by sex. Rather, as discussed later, sex differences in DWI are probably mediated by alcohol consumption patterns.

TABLES Vd-Vf present the distributions of the nine stable risk factors as a function of participation in dates and parties, access to cars, friends' drinking practices, and religiosity. Risk factors that are significantly predicted by each lifestyle variable are indicated with a single or double asterisk (*).[16]

[16]Univariate F for regression significant at $p<.05$.

TABLE Vd

MEANS BY AVERAGE NUMBER OF PARTIES AND DATES PER MONTH FOR NINE RISK FACTOR VARIABLES

	DATES AND PARTIES PER MONTH					
	0	1-2	3-5	6-10	11-15	16+
Knowledge of Alternatives	6.34	6.66	6.60	6.91	6.66	6.86
Use of Alternatives	*2.06	3.11	3.33	4.41	4.84	4.68
Self-Concept	7.37	6.66	7.53	7.65	7.27	6.72
Communications Skills	*4.34	4.77	5.69	6.36	6.09	6.56
Decision-Making Skills	*6.66	5.76	5.95	5.89	5.11	5.00
Alcohol Knowledge	*2.71	3.61	3.92	4.56	4.73	5.00
DWI Laws Knowledge	*2.83	2.97	3.08	3.74	3.84	3.90
Susceptibility to Peer Influence	*3.60	3.69	3.27	2.99	3.12	3.12
Perceived Deviance of DWI	10.68	10.84	10.85	10.29	9.96	9.32

*Differences predicted by dates and parties/month ($p<.05$) -- there is a significant association between the number of dates and parties and the risk factor score

TABLE Ve

MEANS BY FRIENDS' DRINKING AND ACCESS TO CARS FOR NINE RISK FACTOR VARIABLES

	FRIENDS' DRINKING		ACCESS TO CARS	
	High	Low	Drive Self	Others Drive
Knowledge of Alternatives	*6.34	6.95	6.52	6.80
Use of Alternatives	4.25	3.35	4.06	3.52
Self-Concept	*6.79	7.58	7.43	7.14
Communications Skills	5.72	5.64	5.96	5.50
Decision-Making Skills	*5.21	6.15	5.83	5.71
Alcohol Knowledge	4.52	3.81	4.58	3.81
DWI Laws Knowledge	3.60	3.16	3.88	3.02
Susceptibility to Peer Influence	*3.45	3.18	3.07	3.43
Perceived Deviance of DWI	*9.16	11.41	9.97	10.78

*Differences predicted by friends' drinking ($p<.05$) -- i.e., the risk factor scores differ between youth whose friends drink more when compared to friends' who drink less or do not drink

TABLE Vf
MEANS BY RELIGIOSITY FOR NINE RISK FACTOR VARIABLES

	RELIGIOSITY	
	High	Low
Knowledge of Alternatives	6.62	6.75
Use of Alternatives	3.78	3.68
Self-Concept	*7.11	7.36
Communications Skills	5.61	5.73
Decision-Making Skills	5.48	5.97
Alcohol Knowledge	4.36	3.91
DWI Laws Knowledge	3.56	3.18
Susceptibility to Peer Influence	3.30	3.28
Perceived Deviance of DWI	*10.02	10.83

*Differences predicted by religiosity ($p<.05$) -- i.e., high and low religiosity youth differ significantly on the risk factor scores

As can be seen in TABLE Vd, youth who go to parties and who date are more likely to have used alternatives to DWI or RWID, although they are no more knowledgeable about these alternatives than youth who party less. Youth who party and date more are more knowledgeable about alcohol and DWI laws. Interestingly, communications skills increase with amount of partying and dating, but decision-making skills decrease.

Consistent with a life-skills orientation to alcohol-related risk, youth whose friends drink heavily are lower in self-concept and have poorer decision making skills, although their communication skills are similar to youth whose friends do not drink heavily. Consistent with a peer-pressure orientation, they are also more suspectable to peer influence. Interestingly, youth with heavy drinking friends are less knowledgeable about alternatives to DWI, although their use of alternatives is similar to youth whose friends drink less heavily.

Religiosity, long considered a protective factor for youth, was not a particularly strong predictor of the stable risk factors. As seen in TABLE Vf, religiosity predicts Self-Concept (religious youth are lower) and Perceived Deviance of DWI. Interestingly, religious youth tend to view DWI as less deviant, a finding that would appear to contradict the notion that religiosity is protective.

Finally, access to cars failed to predict any of the stable risk factors, although as discussed shortly, this lifestyle variable is a direct predictor of DWI.

Analysis of the General Model of DWI and RWID Behavior

The general model of DWI and RWID behavior presented in Figure 1 represents a hypothesized set of relationships among demographics, lifestyle variables, risk factors, alcohol use, and reported DWI/RWID. The model was analyzed in three phases. The first phase explores the ability of demographics and lifestyle variables to predict the risk factors. The second phase of the model explores the ability of demographics, lifestyle, variables, and risk factors to predict alcohol use patterns. The final stage of the model explores the ability of demographics, lifestyle variables, risk factors, and alcohol use patterns to predict DWI and RWID.

The first phase of the model has already been discussed. The analyses presented in the previous section clearly demonstrate the ability of demographics and lifestyle variables to predict risk factors. As discussed, multivariate regressions were significant for all demographics and for all lifestyle variables except access to cars.

In order to test the second phase of the general model, multivariate regressions with ranked dependent variables were conducted employing the demographics, lifestyle variables, and risk factors as independent variables, and 30 day prevalence of drinking (total drinks consumed) and 30 day prevalence of heavy drinking (five or more drinks in a row) as dependent variables. Lifetime incidence of drinking was not included as a dependent variable because of its weak overall correlation with the other drinking measures.

The Phase 2 analyses revealed that two demographic variables (Sex and Race), two lifestyle variables (Parties/Dates and Friends' Drinking), and three risk factors (Decision-Making, Use of Alternatives, and Perceived Deviance of DWI) predict drinking practices. Univariate follow-up analyses revealed that all significant predictors predicted both dependent variables. TABLE VI presents the predictors, direction of effects, F statistics and p-values for the Phase 2 Analysis.

TABLE VI

PREDICTORS OF ALCOHOL USE PATTERNS

PREDICTOR	DIRECTION OF EFFECT	F	df	p
Sex	Males > Females	3.6	2,398	.028
Race	Hispanics > Whites > Blacks	4.8	4,796	.001
Parties/ Dates	More partying and dating > Less partying and dating	21.6	2,398	.0005
Friends' Drinking	Friends who drink more > Friends who drink less	5.2	2,398	.006
Decision Making Skills	Poor decision making > Good decision making	5.6	2,398	.004
Use of Alternatives	High use of alternatives > Low use of alternatives	5.2	2,398	.006
Perceived Deviance of DWI	Perceived less deviant > Perceived more deviant	18.4	2,398	.0005

Consistent with the alcohol literature, males and Hispanics drink more, as do youth whose decision making skills are poor or whose friends' drink heavily. Not surprisingly, youth who go out on more dates and to more parties are heavier drinkers, as are youth who do not perceive DWI as deviant.

Perhaps the most interesting result of the Phase 2 Analyses is the finding that youth who have used more alternatives to DWI drink more. This finding may support the concern expressed by some prevention professionals that use of DWI alternatives increases alcohol consumption. It is also possible, however, that youth who drink more have more opportunities or necessity to use alternatives.

The final phase of the model analysis assesses the combined ability of all the predictor variables to predict DWI and RWID. This phase employed multivariate ranked regressions with demographics, lifestyle variables, risk factors, and drinking practices (30 day prevalence of drinking and heavy drinking) as dependent variables. Two models were constructed -- one for DWI and one for RWID. The former used 30 day prevalence of DWI and 30 day prevalence of DWI when drunk enough to get in trouble with the police (Serious DWI) as dependent variables. The latter used 30 day prevalence of drinking in cars and 30 day prevalence of RWID.

DWI was significantly predicted by one demographic variable (Access to Cars), one risk factor (Perceived Deviance of DWI), and both drinking practices variables. Univariate follow-up analyses revealed that Access to Cars and 30 day prevalence of drinking predicted only DWI, while Perceived Deviance of DWI and 30 day prevalence of heavy drinking predicted both DWI and serious DWI. TABLE VII presents the predictors, direction of effects, F statistics and p-values for the DWI analysis.

TABLE VII
PREDICTORS OF DWI AND SERIOUS DWI

PREDICTOR	DIRECTION OF EFFECT	F	df	p
Access to cars	Youth who primarily drive themselves > Youth primarily driven by others	7.8	2,216	.001
Perceived Deviance of DWI	Perceived less deviant > Perceived more deviant	9.9	2,216	.0005
30 day prevalence of drinking	Higher consumption > Lower consumption	4.1	2,216	.018
30 day prevalence of heavy drinking	More frequent heavy drinking > Less frequent heavy drinking	4.2	2,216	.016

RWID was significantly predicted by one lifestyle variable (Parties/Dates), one risk factor (Perceived Deviance of DWI), and both drinking practices variables. Univariate follow-up analyses revealed that Parties/Dates predicted only RWID, and 30 day prevalence of drinking predicted only drinking while riding, while Perceived Deviance of DWI and 30 day prevalence of heavy drinking predicted both RWID and drinking while riding. TABLE VIII presents the predictors, direction of effects, F statistics and p-values for the RWID analysis.

TABLE VIII

PREDICTORS OF RWID AND DRINKING WHILE RIDING

PREDICTOR	DIRECTION OF EFFECT	F	df	p
Parties/ Dates	Youth who party and date more > Youth who party and date less	3.9	2,391	.020
Perceived Deviance of DWI	Perceived less deviant > Perceived more deviant	9.1	2,391	.0005
30 day prevalence of drinking	Higher consumption > Lower Consumption	10.1	2,391	.0005
30 day prevalence of heavy drinking	More frequent heavy drinking > Less frequent heavy drinking	7.0	2,391	.001

Figures 2 and 3 summarize the findings from all three phases of the general model analyses in schematic form.

FIGURE 2

OVERALL DWI MODEL

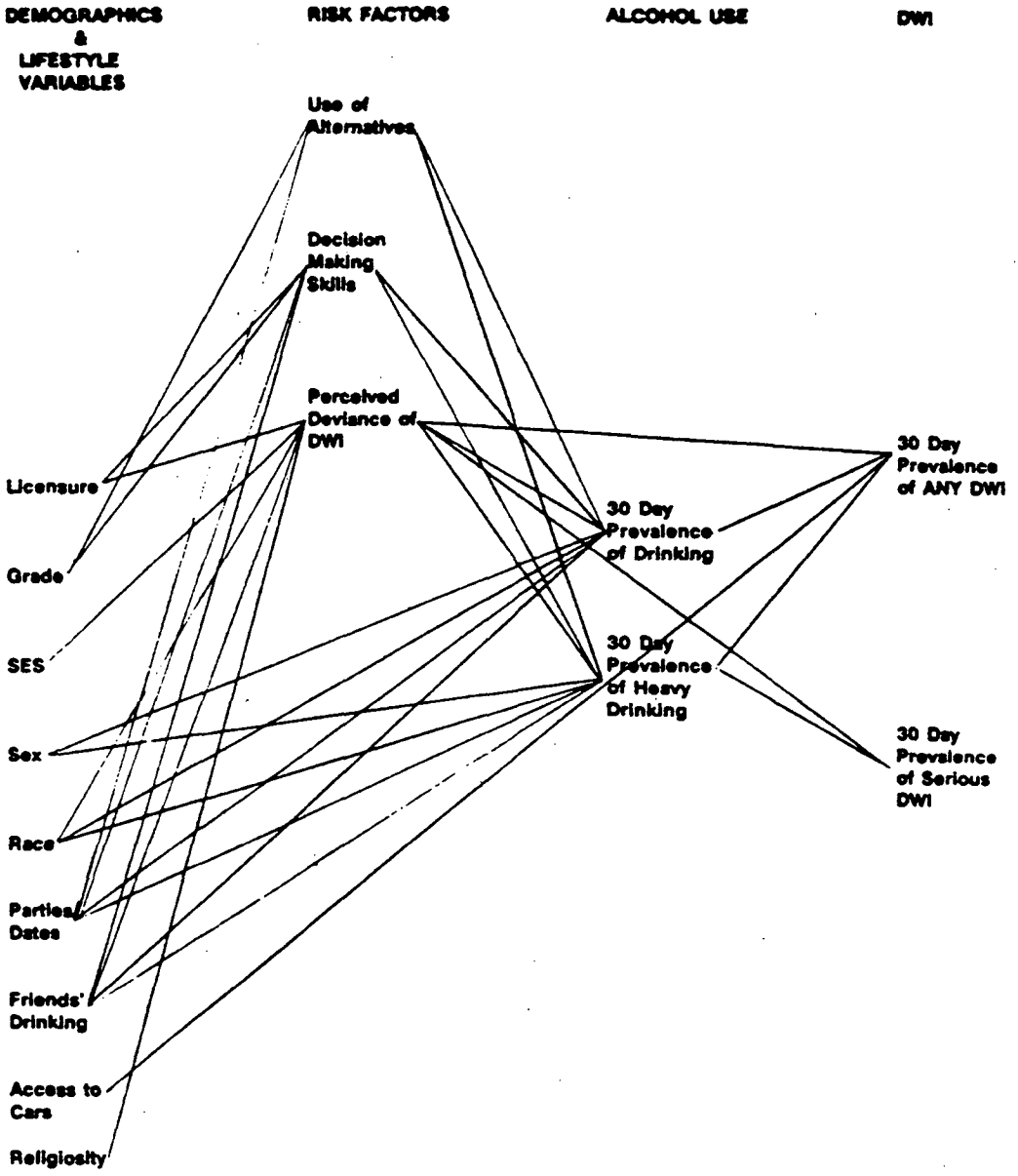
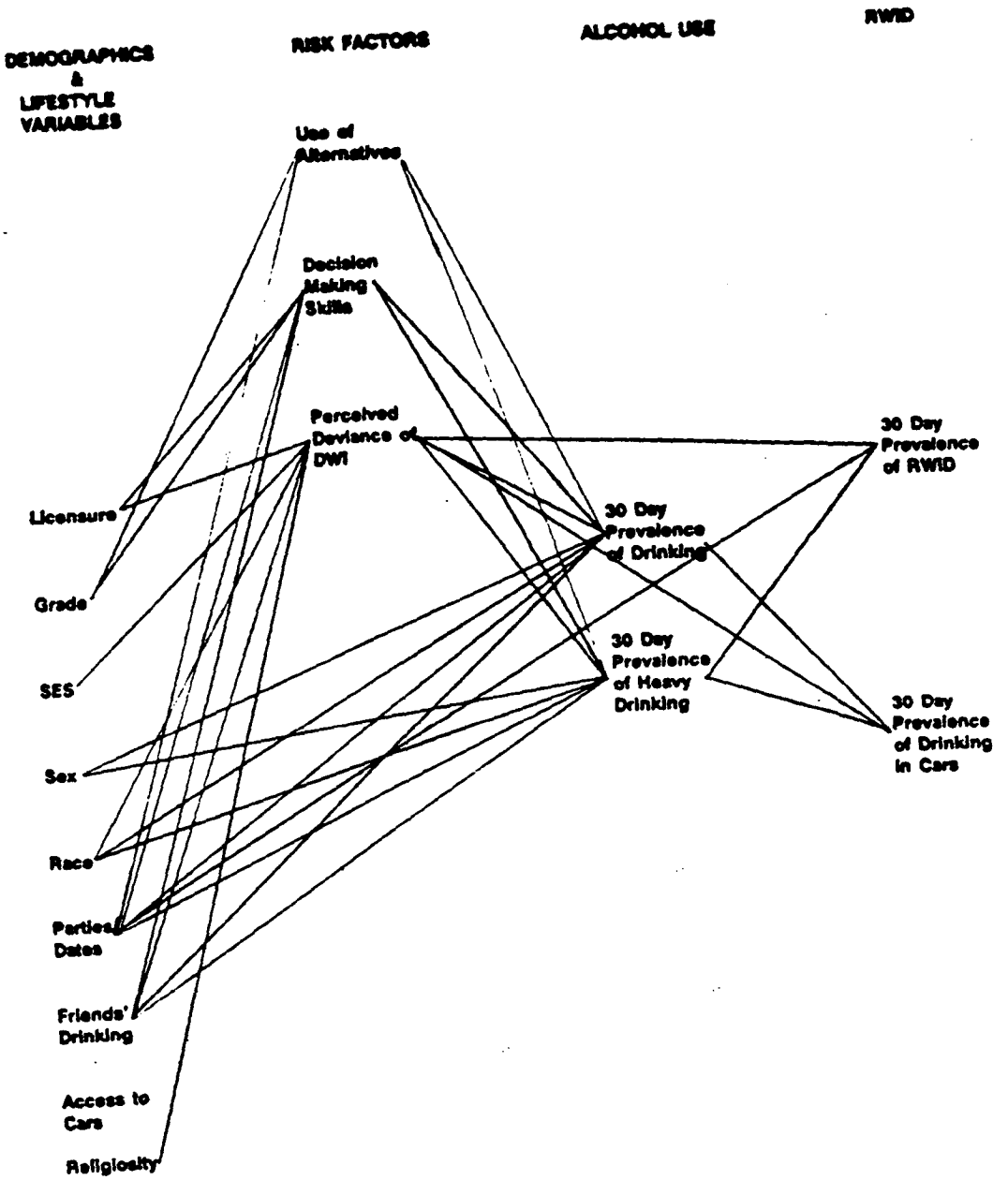


FIGURE 3

OVERALL RWID MODEL



The overall model of DWI (Figure 2) suggests that DWI is largely a function of drinking practices and normative beliefs about DWI. All other risk factors fail to directly predict DWI. Rather, to the extent that the risk factors determine DWI behavior, they do so by mediating drinking practices. The same may be said of demographic differences. For example, the oft-cited higher incidence of DWI among males appears to be a function of male drinking practices rather than of a higher DWI risk, per se. Interestingly, Access to Cars predicts DWI but licensure status does not. Thus, the key driving variable appears to be simply whether or not youth drive, rather than whether or not they are licensed to do so.

Similar conclusions may be drawn from the overall model of RWID (Figure 3). Again, drinking practices and normative beliefs about DWI are clear predictors, with other risk factors contributing to RWID only through drinking practices. One lifestyle variable (Parties/Dates) directly predicts RWID, an important finding in light of the current popularity of alternative parties as a RWID prevention strategy.

Finally, it is of interest to assess the association between the DWI and RWID variables in order to explore whether youth who engage in one of these behaviors are likely to engage in others. As can be seen in Table IX, youth who drink and drive also drink in cars and ride with impaired drivers. Given the similarity between the DWI and RWID models, it is not surprising that these behaviors are strongly inter-correlated.

TABLE IX

INTER-CORRELATIONS AMONG DWI AND RWID BEHAVIORS

	RWID	Drinking in Cars	DWI	Serious DWI
RWID	----	.46	.382	.339
Drinking in Cars		----	.533	.356
DWI			----	.531

All correlations significant ($p<.001$)

Conclusions from the Component I Analyses

Research Component I had as its overall goal an assessment of the validity of assumptions that underlie current approaches to DWI prevention. In general, the results of Component I suggest that few of these assumptions are valid. Of the nine stable risk factors addressed by current prevention efforts, only one (Perceived Deviance of DWI) predicts either DWI or RWID behavior. Two additional risk factors (Decision-Making and Use of Alternatives) are related to DWI and RWID, but only insofar as they predict drinking practices.

The remaining seven risk factors -- Knowledge of Alternatives, Self-Concept, Communications Skills, Alcohol Knowledge, DWI Laws Knowledge, and Susceptibility to Peer Influence -- predicted neither drinking practices nor DWI/RWID. Thus, the efficacy of addressing these risk factors in either DWI/RWID or alcohol abuse prevention efforts is questionable.

Overall, the data from Research Component I suggest that effective DWI/RWID prevention strategies will be those that alter youth perceptions of the deviance of DWI and those that address drinking, per se. Some conceptual support is also provided for strategies that include decision-making, and for strategies that provide alcohol-free alternative activities for youth. A more detailed discussion of the policy implications of these findings is presented in SECTION V (SUMMARY AND RECOMMENDATIONS).

As discussed, the non-random samples for the survey study somewhat limit the generalizability of these results. However, the pattern of results is consistent across several different analyses, and is also consistent with the results of Component II. Thus, we believe that these results provide a good foundation for improving the effectiveness of future DWI/RWID prevention strategies.

COMPONENT II - CONTRIBUTION OF SITUATIONAL RISK FACTORS

Overview of the Analysis Strategy

As discussed on page 15, Research Component II was designed to address three research questions:

IIA. Are there consistent situational factors that are associated with DWI and/or RWID? Do these situational factors vary as a function of demographic variables?

IIB. Do the situational risk factors interact with stable risk factors or lifestyle variables?

IIC. What is the relative importance of these situational factors when compared to the risk factors assessed by the questionnaire from Component I?

These questions were addressed through face-to-face interviews with 120 youth who reported DWI and 121 youth who reported having ridden with an impaired driver in five geographic locations (Los Angeles, Sacramento, Espanola, Omaha, Washington, D.C.). Interview respondents also completed the questionnaire from Research Component I.

The answer to Research Question IIA was provided by a descriptive analysis of the interview data that focused on the frequency with which the various situational factors were present/absent (e.g., presence or absence of social pressure to drink), and/or the specific form these situational factors take (e.g., type of destination, nature of perceived immediate risks). In addition, contingency table models were applied to assess the association between the situational risk factors and demographic variables, and among the various situational risk factors themselves.

Research Question IIB was explored through Logit and ranked regression analyses that related the demographic variables, stable risk factors, and lifestyle variables from the questionnaires completed by interview respondents to the situational variables. Because of the large number of individual analyses required, study-wise error rates were controlled using the Bonforoni adjustment of p-values.

Description of the Component II Study Sample

A target sample of 25 DWIs and 25 RWIDs was sought in each of the five geographic locations. TABLES Xa and Xb present the obtained DWI and RWID sample sizes for each location, and the demographic distributions for the two samples for each site.

TABLE Xa

DEMOGRAPHIC DISTRIBUTIONS OF COMPONENT II DWI SAMPLE BY SITE EXPRESSED AS PERCENTS--RAW NUMBERS IN BRACKETS

	LA	SACTO	ESPANOLA	OMAHA	DC	ALL SITES
SAMPLE SIZE	24	25	25	25	21	120
SEX						
Male	66.7 [16]	84.0 [21]	72.0 [18]	68.0 [17]	61.9 [13]	70.8 [85]
Female	33.3 [8]	16.0 [4]	28.0 [7]	32.0 [8]	38.1 [8]	29.0 [35]
RACE						
Hispanic	62.5 [15]	32.0 [8]	88.0 [22]	----	----	37.8 [45]
American Indian	----	4.0 [1]	4.0 [1]	----	----	1.7 [2]
Asian	16.7 [4]	4.0 [1]	----	----	----	4.2 [5]
Black	4.2 [1]	4.0 [1]	4.0 [1]	12.0 [3]	100.0 [21]	21.9 [26]
White	16.7 [4]	56.0 [14]	4.0 [1]	88.0 [22]	----	34.4 [41]
GRADE						
9th	8.3 [2]	----	12.0 [3]	----	4.8 [1]	5.0 [6]
10th	12.5 [3]	12.0 [3]	36.0 [9]	8.0 [2]	----	14.2 [17]
11th	25.0 [6]	12.0 [3]	40.0 [10]	20.0 [5]	----	20.0 [24]

TABLE Xa (continued)

	LA	SACTO	ESPANOLA	OMAHA	DC	ALL SITES
SAMPLE SIZE	24	25	25	25	21	120
GRADE (continued)						
12th	25.0 [6]	28.0 [7]	12.0 [3]	8.0 [2]	4.8 [1]	15.9 [19]
College	29.2 [7]	48.0 [12]	----	64.0 [16]	90.5 [19]	45.0 [54]
DRIVERS LICENSURE STATUS						
License	54.2 [13]	88.0 [22]	44.0 [11]	92.0 [23]	100.0 [21]	75.0 [90]
Learners Permit	4.2 [1]	----	20.0 [5]	8.0 [2]	----	6.7 [8]
Neither	41.7 [10]	12.0 [3]	36.0 [9]	----	----	18.3 [22]

TABLE Xb

DEMOGRAPHIC DISTRIBUTIONS OF COMPONENT II RWID SAMPLE BY SITE EXPRESSED AS PERCENTS--RAW NUMBERS IN BRACKETS

	LA	SACTO	ESPANOLA	OMAHA	DC	ALL SITES
SAMPLE SIZE	25	24	23	25	24	121
SEX						
Male	48.0 [12]	50.0 [12]	47.9 [11]	60.0 [15]	41.7 [10]	49.6 [60]
Female	52.0 [13]	50.0 [12]	52.1 [12]	40.0 [10]	58.3 [14]	50.4 [61]
RACE						
Hispanic	41.7 [10]	20.8 [5]	91.3 [21]	----	4.4 [1]	31.1 [38]
American Indian	----	----	----	----	8.7 [2]	1.7 [2]
Asian	12.5 [3]	4.2 [1]	----	----	----	3.4 [4]
Black	16.7 [4]	----	----	12.0 [3]	73.9 [18]	20.2 [24]
White	29.2 [8]	75.0 [18]	8.7 [2]	88.0 [22]	13.0 [3]	43.7 [53]
GRADE						
8th	----	4.2 [1]	----	----	22.7 [5]	5.0 [6]
9th	40.0 [10]	33.3 [8]	12.5 [3]	33.3 [8]	9.1 [2]	26.0 [32]
10th	----	16.7 [4]	29.2 [7]	4.2 [1]	13.6 [3]	12.6 [15]
11th	32.0 [8]	20.8 [5]	54.2 [12]	20.8 [5]	22.7 [5]	30.3 [35]

TABLE Xb (continued)

	LA	SACTO	ESPANOLA	OMAHA	DC	ALL SITES
SAMPLE SIZE	25	24	23	25	24	121
GRADE (continued)						
12th	4.0 [1]	8.3 [2]	4.2 [1]	12.5 [3]	31.8 [8]	11.8 [14]
College	24.0 [6]	16.7 [4]	----	29.2 [7]	----	14.3 [17]
DRIVERS LICENSURE STATUS						
License	32.0 [8]	25.0 [6]	45.5 [11]	48.0 [12]	29.2 [7]	35.8 [43]
Learners Permit	12.0 [3]	12.5 [3]	13.6 [3]	24.0 [6]	16.7 [4]	15.8 [19]
Neither	56.0 [14]	62.5 [15]	40.9 [10]	28.0 [7]	54.2 [13]	48.3 [59]

As can be seen in TABLES Xa and Xb, males are highly over-represented in the DWI sample (71% male vs. 29% female), but males and females are equally represented in the RWID sample. As discussed shortly, males are also more likely to be the driver in the RWID incident described by the RWID respondents. As might be expected, high school juniors and seniors and college students are over-represented in the DWI sample. By contrast, the RWID sample is composed largely of younger students.

Consistent with racial differences in Perceived Deviance of DWI discovered in Component I, Black youth are under-represented in both the DWI and RWID samples. In fact, in the predominantly Black D.C. sample, DWIs were drawn almost exclusively from the community college -- younger youth simply did not report engaging in DWI. As was the case in Component I, too few Asians were recruited to allow separate analyses, and again, Asians were combined with Hispanics.

Finally, although the majority of DWIs are licensed to drive, a significant minority (18%) are not. This finding is consistent with the finding from Component I that licensure status is not a predictor of DWI. In L.A. and Espanola, approximately two-fifths of the DWI sample do not have licenses, suggesting that un-licensed DWI may be particularly common among Hispanics. To further explore this issue, licensure status was examined by race for those Component I youth who report any lifetime incidence of DWI. In this analysis, twenty-eight percent of the Hispanic youth, as compared to fifteen percent of the Black youth and seven percent of the White youth were unlicensed.

Descriptive Analysis of the Situational Risk Factors for DWI

The DWI interview assessed the contribution to the DWI incident of nine classes of situational variables: 1) vehicle variables, 2) social context, 3) drinking and drug use variables, 4) social pressure to drink/not drink, 5) social pressure to drive/not drive after drinking, 6) mood variables, 7) perception of immediate risk, 8) destination variables, and 9) alternative transportation variables. This section describes the contribution of each of these classes of variables to DWI and discusses the associations among these variables and variations in these variables as a function of respondent demographics.

TABLE XI presents the most frequent responses for each of the nine situational variables. The remainder of this section explicates and discusses these responses.

TABLE XI
SITUATIONAL RISK FACTORS FOR DWI

VARIABLE	MOST FREQUENT RESPONSE	SECOND MOST FREQUENT RESPONSE	THIRD MOST FREQUENT RESPONSE
VEHICLE			
Type of Vehicle	Car (81.8%)	Truck (15.7%%)	Van (1.6%)
Vehicle Owner	Respondent (43.8%)	Respondent's parent's (25.6%)	Friend's (16.5%)
SOCIAL CONTEXT			
Number of Riders	One (30.6%)	None (19.0%)	Three (16.5%)
Rider(s)'s Relationship to Respondent	Friend (65.8%)	Close friend (34.8%)	Date (14.3%)
DRINKING AND DRUG USE			
Number of Drinks Before Driving (Respondent)	Six or more (26.4%)	None (19.0%)	Three (15.7%)
Respondent's Intoxication Level Before Driving	A little (50.0%)	Pretty drunk (19.4%)	No effect (18.4%)
Where Respondent Began Drinking	Get together/party/date (51.3%)	Bar/Restaurant (13.2%)	Home (11.6%)
Number of Drinks All Day (Respondent)	Three (16.5%)	Four (9.0%)	Five (9.0%)
Most Intoxicated Respondent Felt While Driving	A little (43.0%)	No effect (28.1%)	High (17.4%)
Drug Used By Respondent	No (86.0%)	Yes (14.0%)	

TABLE XI (continued)

VARIABLE	MOST FREQUENT RESPONSE	SECOND MOST FREQUENT RESPONSE	THIRD MOST FREQUENT RESPONSE
DRINKING AND DRUG USE (continued)			
Type of Drug Used By Respondent	Marijuana (76.2%)	Cocaine (9.5%)	PCP, Valium, Speed (4.8%)
Number of Riders Drinking Before Riding	All (57.1%)	None (28.6%)	Some (13.3%)
Number of Riders Using Drugs Before Riding	None (84.7%)	All (11.2%)	Some (1.0%)
Drinking in the Car By Respondent or Riders	No (69.4%)	Yes (30.6%)	
SOCIAL PRESSURE			
Pressure Felt by Respondent to Drink	No (85.0%)	Yes (15.0%)	
Amount of Pressure Felt to Drink	A little (61.1%)	Some (22.2%)	None (11.1%)
Type of Pressure to Drink	Positive Encouragement (50.0%)	Drinking game (22.2%)	Social approbrium (16.0%)
Pressure Felt By Respondent Not to Drink	No (87.3%)	Yes (12.7%)	
Amount of Pressure Felt Not to Drink	A little (68.8%)	Some (12.5%)	A great deal (12.5%
Pressure Felt by Respondent to DWI	No (87.1%)	Yes (12.9%)	
Amount of Pressure Felt to DWI	A great deal (53.3%)	A little (26.7%)	None (13.3%)

TABLE XI (continued)

VARIABLE	MOST FREQUENT RESPONSE	SECOND MOST FREQUENT RESPONSE	THIRD MOST FREQUENT RESPONSE
SOCIAL PRESSURE (continued)			
Type of Pressure to DWI	Others need to get home (28.6%)	Other need to get somewhere (28.6%)	Others said respondent was most sober (28.6%)
Anyone Try to Stop DWI	No (83.0%)	Yes (17.0%)	
What Intervention Attempted	Support of the driver (30.8%)	Sleep over (23.0%)	Question driving ability (19.2%)
PERCEPTION OF RISK			
Respondent Felt it Was Risky to DWI	Yes (51.2%)	No (48.8%)	
Risks Perceived	Accident (36.5%)	Trouble with police (28.6%)	Hurt someone (17.5%)
Thoughts When Deciding to DWI	Nothing (30.1%)	Need to get somewhere (28.1%)	Concern of impairment (20.0%)
Action Taken to Make Driving Safer	Yes (72.0%)	No (28.0%)	
Strategies to Make Driving Safer	Slow down (68.0%)	Watch for road signs (44.0%)	Watch for police (34.0)
DESTINATION			
Respondent Needed to Get Somewhere	No (62.0%)	Yes (38.0%)	
Where	Own home (59.6%)	Rider home (29.8%)	
Consequences of Not Arriving	Nothing (46.0%)	Trouble with parents (32.6%)	Negative consequences (15.0%)

TABLE XI (continued)

VARIABLE	MOST FREQUENT RESPONSE	SECOND MOST FREQUENT RESPONSE	THIRD MOST FREQUENT RESPONSE
ALTERNATIVES TO DWI			
Respondent Considered Not Driving	No (60.3%)	Yes (39.7%)	
Reason Someone Else Didn't Drive	Others were drunker (37.0%)	Don't let others drive drive car (25.0%)	Felt able to drive (21.0%)
Other Alternatives Considered	Wait until sober (27.1%)	Just don't go (25.0%)	Call someone, not parent (12.5%)
Reason Alternatives Not Used	Alternatives infeasible (29.7%)	No real danger felt (24.3%)	Driver was most sober (18.9%)

Vehicle variables appear to contribute little to youthful DWI. Almost all respondents reported that the DWI incident occurred while driving a car (81.2%) or truck (15.7%). Only one respondent reported riding a motor cycle. In general, respondents report that the vehicle was either theirs (43.8%) or belonged to a parent (25.6%). For a limited number of youth the DWI occurred while driving a friend's car (16.5%). There is a trend towards racial differences in vehicle ownership (Pearson Chi-square = 13.55, 4 df, p = .009[17]), with Hispanics less likely to than Blacks or Whites to DWI in their own or parents' cars. By contrast, White youth who DWI are much more likely than either Blacks or Hispanics to own their own cars.

In a large majority of cases (81.9%), there were other individuals who rode with the driver. Thus, there were usually others present who might potentially encourage or discourage the driver to drink and/or drive after drinking. Most commonly, DWI occurred with one other rider (30.6%), although reports of four or more passengers were not rare (19.8%). Passengers were usually friends (80.6%), although less than half of these (34.8%) were described as "close" friends. DWI while transporting dates was less common (14.3%), perhaps suggesting that a being out on a "date" is protective of DWI. Not surprisingly, only two percent of the DWIs were transporting their parents, although about seven percent were transporting other adults. Thus, DWI appears to occur within a social context, and this context is likely to be a group of friends though not necessarily close friends.

In the large majority of cases (81%), drinking proceeded the decision to drive. Of those youth who drank before they ever started driving, the mean number of drinks consumed was approximately 5.5. The modal number of drinks was lower (mode = 3), but approximately one-third of the sample had six drinks or more and approximately one-fifth had nine drinks or more. Not surprisingly given this level of consumption, one-third of the sample reported being "pretty drunk" or "high." On the other hand, the remaining two-thirds of the sample felt no effects or felt capable of driving, a probable misperception given the high levels of consumption reported.

The DWIs were most likely to begin drinking at a get-together, party, or at a youth hangout (51.3%). By contrast, only about twelve percent began drinking at home and only about thirteen percent began drinking in a bar or restaurant. Thus, unlike adult DWI which is associated with bar or home drinking, youth DWI is associated with drinking at social get-togethers.

Over half the sample (56.2%) reported additional drinking <u>after</u> they had started driving. Overall, respondents consumed an

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[17]Bonferoni protected p-value = .05/22 comparisons = .0022

average of 8.1 drinks, or about 2.5 additional drinks after they began driving. Interestingly, the modal number of drinks stayed at 3, suggesting that those youth who started with more drinks drank more after they began driving. When asked to assess the drunkest they felt while driving, the percentages reporting being "pretty drunk" or "high" decrease somewhat and the percentages reporting "no effects" or "capable of driving" increase somewhat when compared to the pre-driving assessments. This decrease in perceived alcohol effects is somewhat puzzling given the overall increases in consumption. However, the assessments of alcohol effects while driving include those individuals who had not had any alcohol before they began driving, and thus generally drank less alcohol overall.

Fourteen percent of the DWIs also used drugs at some point before or while driving. Of these, the great majority (94.1%) used marijuana. The remaining youth used cocaine, PCP, valium, or amphetamines.

A large proportion of passengers had also been drinking and/or using drugs. Sixty percent of respondents reported that some or all of the people who rode with them had been drinking before they got in the car and sixteen percent reported that their passengers had been using drugs. Females were somewhat more likely than males to transport drinking passengers, although male drivers were more likely to report that <u>all</u> their passengers had been drinking. These sex differences approach significance (Pearson Chi-square = 9.4, df = 2, p = .009), but must be considered suspect when the p-value is corrected for study-wise error rate.

Finally, thirty-one percent of respondents reported that drinking took place in the car. Respondents were somewhat less likely than passengers to drink in the car, but almost one-fifth of the respondents (18.2%) reported drinking <u>while</u> driving or while in the car. Clear racial differences appear in the amount of drinking in cars that took place. Forty-eight percent of Hispanics, thirty-nine percent of Blacks, and six percent of Whites reported that someone (passenger and/or driver) was drinking in the car (Pearson Chi-square = 20.8, df = 2, p<.0005).

Consistent with the findings of Component I, only fifteen percent of the DWIs were pressured to drink, and only thirteen percent were pressured to drive after drinking. Respondents who were pressured were asked to report the amount of pressure they actually felt. Seventy-two percent of those pressured to drink reported feeling "a little pressure" or "no real pressure." By contrast, sixty percent of those pressured to drive felt "some" or "a great deal" of pressure.

Pressure to drink generally took the form of either positive encouragement (50%) or engaging the respondent in a drinking game

(22.2%) -- i.e., the respondent had to drink in order to play. In an additional sixteen percent of the cases, social opprobrium was employed to encourage drinking. The most common means of pressuring respondents to drive was to argue that the pressurer (presumably a passenger) had to get home (28.6%) or to some other destination (28.6%). Also common (28.6%) was the argument that the respondent was the most sober driver available.

Approximately twelve percent of the sample were pressured not to drink, but three-quarters of those pressured not to drink felt little or no real pressure. Approximately seventeen percent reported that someone attempted to intervene to prevent them from driving. Of these, thirty percent reported that someone tried to convince them to let someone else drive, twenty-three percent reported that they were urged to sleep over, and fifteen percent reported that someone took direct action (e.g., tried to take away the keys). Only four youth (17.4%) reported that the attempted intervention worked. These youth either let someone else drive or slept over. By contrast, sixty-eight percent either ignored the attempted intervention or argued that they were sober enough to drive.

It is interesting to consider the relationship between the four social pressure variables assessed: 1) pressure to drink, 2) pressure to drive, 3) pressure not to drink, and 4) pressure not to drive. Youth who were pressured to drink were significantly more likely to be pressured to drive (35.%) than youth who were not pressured to drink (9.1%) (Pearson Chi-square = 8.8, df = 1, p=.003). However, youth who were pressured not to drink were also more likely to be pressured to drive (30.8%) than youth who were not pressured not to drink (9.8%) (Pearson Chi-square = 4.7, df = 1, p = .029). In this latter case, it would appear that the passengers were making an attempt to keep someone sober enough to drive.

Finally, there were no sex or race differences in any of the pressure variables.

Almost all the DWI's were in a good mood when they started drinking (85.1%), although few could give any particular reason for feeling good. Those in a bad mood were either angry or depressed, or had "something on their mind." About half reported that their mood improved after they began drinking, and only about seven percent reported that their mood got worse. In general, mood did not appear to figure prominently in the youths' report of the DWI incident.

Over half the respondents (51.2%) reported believing it was risky to drink and drive. Of these, twenty-nine percent were concerned that they would get in trouble with the police, seventeen percent were concerned that someone might get hurt, and thirty-seven percent were concerned that there might be an "accident."

Interestingly, there was no effect of amount of alcohol consumed on perception of risk. This finding may be interpreted in one of two ways. Either the drunkest youth were too impaired to realize that they were at the highest risk, or alternately, youth are sufficiently aware of the risks of DWI that they still perceive these risks at high levels of intoxication.

When asked what they were thinking about when they decided to DWI, the most common response (30.1%) was "nothing." Of those who were thinking of something, twenty-eight percent were concerned that they needed to get somewhere, twenty percent were concerned about their impairment, and sixteen percent were just thinking of having a good time. Seventy-two percent of the sample reported doing something to make driving "safer." Of these, sixty-eight percent slowed down, forty-four percent watched road signs more carefully, thirty-four percent watched for police, and twenty-four percent took back roads. By contrast, only eight percent used seat belts. These data may suggest that the respondents definition of "safer" driving is driving that is less likely to lead to detection rather than driving that is less likely to lead to crash or injury.

Thirty-eight percent of the DWIs reported that there was somewhere they really had to get to. Most commonly, the respondents had to get home (59.6%) or had to get a passenger home (29.8%). Interestingly, when asked what would have happened if they had not arrived at their destination, forty-six percent admitted that "nothing really" would have happened. On the other hand, one-third reported that they would have gotten into trouble with parents, and an additional fifteen percent expected some other negative consequence.

There is a clear sex difference in perceived urgency to get somewhere. Two-thirds of the female DWIs, but less than one-third (28.2%) of the male DWIs reported needing to get somewhere (Pearson Chi-square = 14.6, df = 1, $p<.0005$). This finding may reflect a greater insistence on the part of parents that daughters be home on time, although the data do not address this question directly.

Finally, respondents were asked whether they ever seriously considered not driving or refusing to go further. Forty percent said yes, although only twenty percent of these youth actually found an alternative means of transportation.

Given the number of DWIs who had passengers, finding another driver seems an obvious alternative. Indeed, fifty-seven respondents reported that there was someone else who could have driven. However, thirty-seven percent of these respondents felt that the other potential drivers were more impaired than the respondent. An additional twenty-one percent felt they were able

to drive and twenty-five percent reported that they do not allow others to drive their cars.

Other alternatives the respondents reported considering were just not going (25%), taking a bus or cab (6.3%), calling a parent (6.3%), calling someone other than a parent (12.5%), and waiting to sober up (27.1%). Reasons given for not using an alternative included the belief that the alternative was infeasible (29.7%), that there was no real danger (24.3%), or that the respondent was the most sober possible driver (18.9%). An additional eleven percent (presumably those who considered waiting or not going) cited the fact that they had to get somewhere. In general, then, although youth are aware of alternatives to DWI, they are very unlikely to use them in actual risk situations. This finding is consistent with the Component I finding that, although youth are aware of alternatives, this awareness has no effect on DWI behavior.

Overall, there are few striking findings concerning the contribution of situational variables to DWI. Consistent with the results of Component I, the key situational variable in youth DWI appears to be youth drinking. Not only were drivers drinking, but passengers were very likely to have been drinking as well. Indeed, respondents repeatedly told us that they drove because they were the most sober in the group.

Next to drinking itself, the most important situational variable appears to be a need to get somewhere or to get someone else somewhere (usually home). This effect was relevant to about two-fifths of the total cases studied, although it applied in two-thirds of the cases in which the driver was female.

Again consistent with the findings of Component I, social pressure does not figure prominently in the DWIs reported by respondents. In a limited number of cases, strong social pressure to drive was experienced by drivers whose passenger(s) had to get somewhere. Beyond this, social pressure was generally weak or non-existent.

Descriptive Analysis of the Situational Risk Factors for RWID

The RWID interview assessed the contribution to the RWID incident of nine classes of situational variables: 1) driver variables, 2) vehicle variables, 3) social context, 4) drinking and drug use variables, 5) social pressure to ride/not ride, 6) perception of immediate risk, 7) destination variables, 8) alternative transportation variables, and 9) intervention attempts on part of respondent. This section describes the contribution of each of these classes of variables to RWID and discusses the associations among these variables and variations in these variables as a function of respondent demographics.

TABLE XII presents the most frequent responses for each of the nine situational variables. The remainder of this section explicates and discusses these responses.

Not surprisingly, the drivers with whom the RWIDs rode were predominantly male (83.1%). Interestingly, female RWIDs were much more likely to ride with a female driver (80%) than were male RWIDs (20%), but male and female RWIDs were about equally likely to ride with a male driver (56% and 45% respectively) (Pearson Chi-square = 8.39, df = 1, p=.003). Most commonly, the driver was a friend (52.4%), but respondents also reported riding with impaired parents (12.1%), other adult relatives (13.7%), and siblings (13.71). In only a small percentage of the cases was the driver a date (5.7%), again suggesting that dating may not be a common setting for DWI. Most of the drivers were 16 to 25, although slightly over a quarter (26%) were over twenty-five.

As was the case with DWI, vehicle variables revealed little of interest. The vehicle was usually a car (78.2%) belonging to the driver (59.6%). No RWID's reported riding on a motorcycle, motor scooter, or moped.

In the majority of cases (73.4%), the respondent was not the only passenger. One (23.4%), two (21%), or three (16.9%) other passengers were common. In only twelve percent of the cases were there four or more passengers. Most commonly, the other riders were friends (53%) or siblings and cousins (18.5%). In a minority of cases, at least one of the other riders was a parent (9.6%).

The respondent was asked to estimate the number of drinks the driver had before he/she started driving. Approximately one-fifth of the drivers had not yet been drinking. Of those who had been drinking, the mean number of drinks was 4.5 and the mode was 2. Respondents were also asked to estimate how drunk the driver was when he/she started driving. Sixty-one percent felt the driver was very drunk or high, fourteen percent felt he/she was a little drunk but capable of driving safely, and twenty-four percent felt he/she was feeling no effects. Finally, respondents were asked to estimate the drunkest the driver ever seemed while they were riding. Here, the number of drivers who were very drunk or high increases to seventy-four percent, although many respondents reported estimating drunkenness at this point on the basis of driving behavior ("I didn't know how drunk he was until he started weaving").

Fifty-two percent of the respondents had, themselves, been drinking on the day the RWID occurred. The mean number of drinks consumed by respondents was 4.2 with a mode of 2 drinks. As a result, seventy-four percent of the RWIDs reported that they felt pretty drunk or high. Although it might be assumed that being intoxicated contributed to the decision to ride, only about one-

TABLE XII
SITUATIONAL RISK FACTORS FOR RWID

VARIABLE	MOST FREQUENT RESPONSE	SECOND MOST FREQUENT RESPONSE	THIRD MOST FREQUENT RESPONSE
DRIVER			
Driver's Sex	Male (83.0%)	Female (17.0%)	
Driver's Relation to Respondent	Friend (52.4%)	Non-parent adult relative (13.7%)	Parent (12.1%)
Driver's Age	Under 25 (74.0%)	25+ (26.0%)	
VEHICLE			
Type of Vehicle	Car (78.2%)	Truck (19.4%)	Van (2.4%)
Vehicle Owner	Driver (59.7%)	Respondent's parents (13.7%)	Friend (12.1%)
SOCIAL CONTEXT			
Other Passengers Present	Yes (73.4%)	No (26.6%)	
Number of Other Passengers	One (23.4%)	Two (21.0%)	Three (16.9%)
Passengers' Relationship to Respondent	Friends (53.0%)	Sibling/cousins (18.5%)	Parent (12.1%)
DRINKING AND DRUG USE			
Number of Drinks Driver Had Before Driving	None (19.0%)	Two (17.2%)	Three (12.9%)
Apparent Intoxication Level of Driver Before Driving	High/pretty drunk (61.0%)	No effects (24.0%)	A little (14.0%)

TABLE XII (continued)

VARIABLE	MOST FREQUENT RESPONSE	SECOND MOST FREQUENT RESPONSE	THIRD MOST FREQUENT RESPONSE
DRINKING AND DRUG USE (continued)			
Most Intoxicated Driver Ever Seemed	High/pretty drunk (74.0%)	A little (11.3%)	No effects (10.5%)
Respondent Was Drinking	Yes (52.4%)	No (47.6%)	
Number of Drinks	Two (27.8%)	Three (13.9%)	Four (13.9%)
Respondent's Intoxication Level	High (56.9%)	No effects (26.2%)	Pretty drunk (16.9%)
Drinking Affected Decision to Ride	No (75.4%)	Yes (21.5%)	Not sure (3.1%)
Number of Riders Drinking	All (39.1%)	None (37.0%)	Some (23.9%)
Drinking in Car by Respondent	No (59.0%)	Yes (46.0%)	
Drug Use by Respondent	No (96.0%)	Yes (4.0%)	
Drug Used by Driver	No (84.0%)	Yes (16.0%)	
Drug Used by Rider(s)	No (89.0%)	Yes (11.0%)	
SOCIAL PRESSURE			
Pressure Felt by Respondent to RWID	No (93.5%)	Yes (6.5%)	
Amount of Pressure Felt to RWID	A great deal (50.0%)	Some (25.0%)	A little (25.0%)
Pressure Felt by Respondent Not to RWID	No (91.2%)	Yes (9.8%)	
Amount of Pressure Felt Not to RWID	A little (50.0%)	Some (25.0%)	None (16.7%)

TABLE XII (continued)

VARIABLE	MOST FREQUENT RESPONSE	SECOND MOST FREQUENT RESPONSE	THIRD MOST FREQUENT RESPONSE
PERCEPTION OF RISK			
Respondent Felt it was Risky to RWID	Yes (72.2%)	No (27.8%)	
Risks Perceived	Accident (83.4%)	Someone getting hurt (11.0%)	Trouble with police (3.6%)
Thoughts when Deciding to RWID	Nothing (39.5%)	Fear/concern (15.0%)	Ways to deter driver from driving (15.0%)
Thoughts During RWID	Nervous (45.6%)	Nothing (40.9%)	Desire to get out of situation (16.9%)
DESTINATION			
Respondent Needed to Get Somewhere	No (72.6%)	Yes (27.4%)	
Where	Home (54.6%)	Sports event (15.2%)	Errand (9.0%)
Consequences of Not Arriving	Nothing (46.0%)	Trouble with parents (26.0%)	Other negative consequences (21.0%)
ALTERNATIVES			
Respondent Considered Not Riding	No (69.4%)	Yes (30.6%)	
Other Alternatives Considered	Find another driver (26.0%)	Just not go (21.0%)	Call a parent (18.0%)
Alternative Implemented	No (92.7%)	Yes (7.3%)	
Reason Alternative Not Used	Needed ride (25.0%)	Thought driver could drive (20.8%)	Underestimated driver's drunkeness (8.3%)

TABLE XII (continued)

VARIABLE	MOST FREQUENT RESPONSE	SECOND MOST FREQUENT RESPONSE	THIRD MOST FREQUENT RESPONSE
RESPONDENT INTERVENTION ATTEMPTS			
Intervention with Driver Attempted	No (60.5%)	Yes (39.5%)	
What Intervention	Try persuade driver (53.0%)	Stall driver (16.3%)	Try to get keys (10.2%)
Did Intervention End RWID Incident	No (92.7%)	Yes (7.3%)	

fifth of the RWIDs reported that they would not have ridden if they had not been drinking.

In the majority of cases, some (23.9%) or all (39.1%) of the other passengers had been drinking, and in forty-six percent of the cases, additional drinking took place in the car. Approximately fifteen percent of the drivers and eleven percent of the other passengers had been using drugs, predominantly marijuana. Only four percent of the RWIDs themselves reported using drugs, a result that is somewhat suspect given the use levels reported for drivers and passengers.

Only about six percent of the RWIDs were pressured to ride with the impaired driver. Of these, half were pressured by a parent, and the remaining respondents were pressured by a friend or by the driver. Not surprisingly, the youth who were pressured by parents felt a great deal of pressure to comply. The remaining youth felt little or no real pressure.

Slightly more RWIDs (9.8%) were pressured not to ride with the impaired driver. Again, the actual pressure felt was generally small. Only about a third of those who were pressured felt some or a lot of pressure. In general, this pressure took the form of verbal persuasion. In only two cases were the RWIDs actually offered a ride by another individual.

A large majority of respondents (72.1%) thought it was risky to ride with the impaired driver, and this perception of risk was unrelated to the amount the respondent had been drinking. Apparently even the most impaired respondents realized that they should not ride with the driver. Unlike the DWIs, RWIDs were not concerned about the police. Rather, they thought the greatest risk was an "accident" (83.4%). Finally, there was a trend towards a sex difference in perceived risk -- more females (84.2%) than males (60.7%) thought it was risky to ride with the impaired driver (Pearson Chi-square = 7.8, df = 1, p=.005).

Respondents were asked what they were thinking at the time they decided to ride with the impaired driver. As was the case with the DWIs, the most common response (39.5%) was "nothing." Of the remaining respondents, fourteen percent remembered that they needed to get home, fifteen percent were afraid or concerned, fifteen percent considered trying to persuade the driver not to drive, and ten percent tried to think of an alternative means of transportation. An additional twelve percent were simply thinking of having a good time. While they were riding with the driver, forty-six percent felt nervous, seventeen percent considered ways that they might get out of the situation, and thirteen percent ruminated on the fact that they had made a poor choice.

Somewhat fewer RWIDs (27.4%) than DWIs had to get someplace, but of these, approximately the same percentage (54.6%) had to get home. Unlike DWIs who only needed to get home, RWIDs also felt an urgency to get to sporting events (15%), and errands (9%). Like DWIs, however, forty-four percent admitted that nothing would have really happened had they not arrived. Of those who did fear trouble, twenty-six percent expected it from parents and twenty-one percent expected some other negative consequence.

At one time or other during the RWID incident, thirty-one percent of the respondents considered finding an alternative mode of transportation. Again, a possible sex difference is apparent--more females (42.6%) than males (18.3%) considered finding an alternative (Pearson Chi-square = 8.4, df = 1, p = .004).

Of those who considered an alternative, twenty-six percent considered finding another driver, twenty-one percent considered just not going, eighteen percent considered calling a parent, sixteen percent considered calling someone else, thirteen percent considered waiting a while, and thirteen percent considered walking. It is interesting to note that no DWIs considered calling a parent, presumably because the parental sanctions for being impaired while driving are more severe than the parental sanctions for being with an impaired driver.

Nine of the respondents (7.3%) actually implemented an alternative, ending the RWID incident. Of those who considered an alternative and rejected it, the most common reasons given were that they really needed the ride (25%) or that they concluded that the driver could probably drive safely (20.8%).

Finally, respondents were asked whether they did anything to attempt to keep the impaired driver from driving. Approximately forty percent said yes, although a clear sex difference is evident. Over half the female RWIDs (54.1%), but only eighteen percent of the male RWIDs report that an intervention attempt was made (Pearson Chi-square = 12.1, df = 1, p<.0005).

The most common intervention was verbal persuasion (53.1%), followed by stalling for time (16.3%). A small number (10%) reported a direct attempt at intervention such as taking away the keys or disabling the car. Twenty-nine percent of the respondents who intervened reported that the intervention worked. All of the interventions reported worked in at least one case, although the numbers reporting an intervention are so small as to limit the meaning of these findings.

As was the case with the DWI interviews, most of the situational factors studied do not appear to make a large contribution to RWID. A significant minority of the RWIDs rode because they had to get somewhere, although this effect is smaller than for DWI.

One interesting finding concerns youth who ride with impaired parents. This is perhaps the only instance where were social pressure appears strong, although it is not clear that youth can be taught to resist it.

Finally, the data suggest that youth clearly know RWID is risky, and realize it is risky even when they themselves are impaired. However, this perception of risk does not appear to have much of an impact on avoidance behavior.

Interaction of Stable Risk Factors and Lifestyle Variables with Situational Risk Factors

Logit and ranked regression analyses were performed that related the stable risk factors and lifestyle variables from the questionnaire with the situational risk factor variables measured in the DWI and RWID interviews. These analyses addressed the question of whether or not the stable risk factors and lifestyle variables could be used to predict the situational risk factors (e.g., do youth who view DWI as deviant view a reported incident of actual DWI as more risky than do youth who do not view DWI as deviant?).

Few significant associations that are interpretable were discovered in any analysis. However, owing to the small sample sizes for the DWI and RWID interviews, the power of these analyses to detect significant associations was limited. Accordingly, it is possible that a larger scale study would reveal that there are, in fact, relationships between the stable and situational risk factors.

Relative Importance of the Stable and Situational Risk Factors

Neither the stable nor situational risk factors proved to be strong predictors of DWI or RWID. The only situational risk factor that appears to contribute to DWI or RWID is a need to get somewhere (usually home) and the only stable risk factor that predicts DWI and RWID is perceived deviance of DWI. Thus, the question of relative importance is rather limited in scope.

Conclusions from the Component II Analyses

In general, the DWI and RWID interviews confirm conclusions drawn from the Component I analyses. DWI and RWID seem to be largely a function of the role alcohol plays in the youth culture. In fact, many of our youth respondents suggested that DWI and RWID are "inevitable" because drinking is an "inevitable" part of the youth culture.

In general, when DWI or RWID were situationally determined, they were controlled by a perceived need to get home or to get a passenger home. Of those youth who felt that negative conse-

quences would occur if they did not get to their destinations, most were concerned about the reaction of parents.

Once again, peer pressure failed to play an important role in either drinking or DWI/RWID. The only significant social pressure appears to be from parents who pressure youth to ride with them when they (the parents) have been drinking. Interestingly, some youth (especially females) do appear willing to intervene with an impaired driver. Unfortunately, these intervention attempts were largely unsuccessful.

As was the case with Component I, the reliance on a non-random sample somewhat limits the generalizability of these findings. Again, however, the pattern of results is consistent across the two components, suggesting the overall validity of the findings. It would have been desirable to interview a larger number of youth, thus increasing the probability of finding significant associations between the stable and situational risk factors. Since larger sample sizes were beyond the scope of the current study, a more powerful analysis of these associations awaits additional data collection in future research.

COMPONENT III - ACCEPTABILITY OF PREVENTION STRATEGIES

Research Component III was designed to address three research questions:

IIIA. What is the general acceptability of various prevention strategies and activities to a general population of teens?

IIIB. What demographic factors determine differential acceptability of prevention strategies and activities?

IIIC. What factors underlie the attractiveness or lack of attractiveness of various options and activities?

These questions were addressed in ten focus groups conducted in five geographic locations (Los Angeles, Sacramento, Espanola, Omaha, Washington, D.C.).

Qualitative analysis strategies were employed to answer the three research questions addressed by the focus groups. First, focus group leaders developed summaries of each group highlighting the major issues raised in order to develop coding categories. Responses were sorted in order to establish general patterns and to assess the relative frequency of responses within categories. Finally, the responses were examined according to the age, sex,

race, and drivers licensure status of the various groups in order to explore demographic differences in response distributions.

As a check on the validity of the qualitative analyses, the results were reviewed independently by each of the senior researchers who had conducted the focus group. The agreement among the three researchers was uniformly high for all the major findings.

Description of the Component III Study Sample

A total of 63 respondents, 33 males and 30 females, took part in the ten group interviews. Respondents were all students enrolled in either junior high school, high school, or community college and ranged in age from 14 to over 20. Fifty-three respondents were aged 18 or younger. The ethnic make-up of the respondent population was as follows: white, 29; black, 15; hispanic, 15; Asian, 4. At the time of the interviews 30 respondents had driver's licenses and 33 did not. Thus the sample represents a range of youth with respect to age, ethnicity and driving experience.

General Reaction to Prevention Strategies

Eleven prevention strategies were discussed in the focus groups:

1) SADD-type clubs, 2) Contracts, 3) Alternative parties, 4) Safe-Rides, 5) School Curricula, 6) Parent interventions, 7) Just not drinking, 8) Fear Arousal, 9) Just Say No-type clubs, 10) Designated driver, and 11) Immersion programs. Following are the general reactions of youth to these strategies as well as discussions of differential reactions as a function of demographics.

<u>SADD-Type Clubs</u> - The majority of respondents felt that SADD-type clubs could be effective in reducing drinking and driving, particularly for those youth who become involved as members. Among the factors cited in favor of this strategy was the belief that friends listen to friends. On the other hand, almost no interviewees indicated an interest in becoming actively involved in SADD-type clubs nor did they believe most youth would be interested in becoming involved. Among the reasons cited for not wanting to become involved were:

- SADD-type clubs are not perceived as a fun organization
- Not wanting to spend the time it would take to get involved
- Not being interested in persuading others

- The perception by one group that an already existing SADD-type chapter in their school is not very effective.

In addition, one group of Hispanic students cited pressure from friends not to join SADD-type clubs and another group mentioned lack of support from faculty as a reason for not being interested in SADD-type clubs involvement. This last reason is consistent with findings from Pacific Institute's study of SADD which suggests that without faculty support, SADD chapters cannot survive.

Contract for Life - The majority of respondents felt that the contract for life could reduce drinking and driving if the terms of the contract were actually carried out, and the majority of teenagers also indicated that they would be willing to sign a contract for life. However, the unanimous opinion is that the terms of the contract are not followed.

Respondents felt it would be an extremely rare teenager who would actually call his or her parents for a ride and an extremely rare parent who would provide the ride without later imposing heavy sanctions on the teen. However, it was felt that if the relationship between the parents and youth are good, the contract for life could work.

Respondents overwhelmingly said they would much prefer calling a friend to calling a parent. In one group it was suggested that a contract for life with a friend might be a better alternative than the contract with parents because youth are more likely to actually call a friend if the need arises.

Interviewees believed that the contract would probably decrease drinking somewhat because a teenager who really planned to call a parent would not want to be extremely drunk when the parent came to provide the ride.

Alternative parties - Some respondents were very much in favor of alcohol-free parties and say they and others would attend. However, it was unanimously felt that the success of a party would depend upon the quality of the party (music, activities, etc.) and whether or not one's friends decide to attend.

Virtually no one claimed to be totally unwilling to consider attending an alcohol-free party. Drinkers claimed that they would probably go to the party to see what it was like and who was in attendance. Depending upon their judgement of the quality of the party they would then decide whether to stay or leave. Drinkers also said that if they were determined to drink, they could always drink after the party.

Safe-Rides - Respondents felt that Safe-Rides type programs can work to reduce drinking and driving, but the great majority expressed hesitancy about calling a stranger for a ride. Many respondents (especially females) expressed concern over whether or not a stranger could be trusted to take them home safely.

Blacks and Hispanics expressed the greatest willingness to call a safe ride number and the greatest confidence that others would be willing to call for a safe ride. In Sacramento, a community which has an active safe rides efforts, the group was more positive about the effects of safe rides and said that people are likely to make use of such a service. There was agreement that a safe rides effort needs extensive publicity and a track record that will engender trust among those who might have occasion to call to use the service.

The general feeling was that the availability of safe rides might make the amount of drinking increase a bit, although there was no particular reason offered as to why this may be the case.

School classes about drinking and driving - School classes received the greatest endorsement from younger respondents. They indicated that because they were looking forward to receiving their driver's licenses, they had a great interest in all things related to driving. They also pointed out that youth are interested in getting accurate information.

Older respondents were less enthusiastic about classes and many of them said they would not attend such classes if they had the choice. Those who did not like the idea of classes saw them as too "preachy." A number of groups mentioned the idea that if classes are offered, they should be required. Respondents acknowledged that they while they might not choose to attend classes, they believed that the classes would be good for them. They also noted that if classes were not required they might only attract those students who need them least rather than those who need them most.

Minority students were more positive about classes than were Whites. Hispanic groups indicated they would choose to attend classes and the group of younger blacks was very much in favor of classes. Black respondents felt that alcohol education was particularly important so that students who have an alcohol-related problem in their families can learn more about the problem and possible things they can do about it.

Parent intervention - This strategy evoked the most diverse responses. Some youth, particularly younger respondents, thought that the strategy could work and noted that the presence of adults would make a party safe and reduce drinking.

However, many youth felt that parent intervention such as taking keys might result in a backlash, and that under such circumstances youth might become more unruly and drink more. Black, White, and Hispanic groups all spontaneously mentioned the possibility of backlash, but minority males were particularly vocal in their dislike of this approach. In one Hispanic group the idea of "putting an extra six in the car" was mentioned as a response to this parent intervention. The potential for major conflict was graphically expressed by a 17 year old Black male who said, "when you drink you sometimes have an attitude problem."

Not drinking as a lifestyle - All respondents believed that very few people would be willing to adopt a lifestyle that excluded drinking and having friends who drink. Consistent with the findings of Components I and II, youth suggested that "everyone drinks". Thus, the idea of an alcohol-free lifestyle was viewed as unrealistic. Moreover, respondents felt that drinking was not a primary criterion in selecting friends.

White students of all ages had particularly strong feelings that this option was unrealistic. The strongest endorsement for this option came from the group of younger Blacks who were generally less enthusiastic than the other groups about drinking and maintained that it was possible to have fun without drinking.

Fear arousal - Respondents felt that fear arousal strategies such as assemblies are generally effective in making youth think about the consequences of drinking and driving. However, they also felt that the effects of such efforts are short-term.

Among the ethnic groups, Whites were least enthusiastic about fear arousal. By contrast, Hispanic and Black youth were very positive regarding fear arousing presentations. They believed that these can be good sources of information and can impress youth with the consequences of drinking and driving.

Just Say No - Most groups were ambivalent about Just Say No strategies. As was the case for SADD-type efforts, some respondents believed that Just Say No initiatives would decrease drinking and driving among those who are involved. Others did not believe they were effective and cited instances where teenagers would wear Just Say No shirts or buttons and "still drink and use." In addition, some youth complained that there is too much emphasis on NO from parents and teachers -- they don't want to hear it from their peers.

Most respondents were not interested in getting involved with Just Say No, nor did they did think most of their peers would be interested in getting involved. There was more interest in involvement in Just Say No than there was for SADD-type clubs

because respondents perceive that Just Say No involves less time and commitment. Reasons for not wanting to become involved mirrored those given for SADD-type clubs--not wanting to give up time and feeling that the expenditure of time and energy just wasn't worth it.

Designated driver - This strategy was, by far, the most favored by respondents and was overwhelmingly endorsed as effective for reducing drinking and driving. It was not uncommon to hear the comment "it works" from youth who had used this strategy or who knew someone who else who had used it. Among the enthusiastic endorsements for this strategy were comments like "it's responsible and effective," "it shows awareness and group responsibility," and "it's safe."

Respondents liked the idea that this strategy relies on friends rather than parents or other adults. It was also mentioned that the designated driver strategy provides a role for the non-drinker who may wish to go along with others when they drink. According to respondents, the designated driver role takes pressure to drink off of this person and gives him/her a useful and important function in the group.

One group was not enthusiastic about the designated driver. This group was composed of affluent white youth from a high school where drinking and drinking/driving is extremely common. They were concerned about whether or not the designated driver really would restrain himself and not drink or only drink a very little bit.

Respondents generally did not feel that the use of the designated driver strategy would result in increased drinking. The majority in only two groups said drinking would increase. The rest of the groups either believed that use of the strategy would not influence consumption or that there would be less drinking when the strategy is used.

Immersion programs - Respondents felt that immersion programs would be effective for the few who attended. However, they believed that youth would not choose to attend because of the time commitment involved. The most negative remarks regarding this strategy were made in a group of affluent White high school students who said that coming back from an immersion program and trying lead an anti-drinking/driving campaign would be too much like being a parent and that "people would think you're a freak."

By contrast, Black junior high school respondents were very positive about this strategy and said they would be interested in attending an immersion program. They said an immersion program

would be an opportunity to learn and would provide something to do in the summer.

Conclusions from the Component III Research

The focus group data suggest that teenagers respond similarly to DWI prevention strategies which they perceive to have similar characteristics. Based on the focus group interviews, four categories of strategies are suggested:

- Peer-helping-peer strategies requiring a time commitment (Just Say No, SADD-type clubs, Immersion) - These are provided largely by teens for teens and are perceived as requiring a significant time commitment.

- Strategies involving adults other than parents (School classes, Fear arousal presentations, Immersion) - These involve teenagers receiving information and/or persuasive messages from adults.

- Strategies involving parents (Contract for Life, Parent Intervention) - These strategies require active participation by parents as well as cooperation between parents and youth.

- Situational/Choice Strategies (Designated Driver, Alternative Parties, Safe-Rides). Strategies in this category require no long-term commitment from youth and may be used or rejected based on a personal decision at any given time.

Interestingly, all the prevention strategies were acceptable to at least some categories of youth. Thus, no strategies may be eliminated on the basis of acceptability. On the other hand, the data clearly suggest <u>differential</u> acceptability of strategies as a function of age, sex, and race. Thus, the data clearly argue for the need to tailor prevention strategies based on the characteristics of the target population.

Teenagers show the strongest preference for Situational/Choice strategies. Designated driver appeared to be an acceptable anti-DWI strategy. Youth also consistently expressed a willingness to consider alternative parties. Safe-Rides was the least popular Situational/Choice strategy in this category, largely because it involves dealing with strangers rather than friends.

There were no sex or race differences in the acceptability of designated driver and alternative parties. However, there were differences in the responses to safe rides -- minority youth ex-

pressed more willingness to use safe rides than did White youth, especially White females.

Youth believe that peer-helping-peer strategies can have value for those youth who participate. However, very few youth are interested in becoming actively involved in these kinds of efforts. They perceive the time of involvement as being too great. This response was consistent for both males and females for the three strategies in this category. Younger black respondents expressed some interest in attending an immersion program and younger respondents generally expressed more interest in this category. Some youth felt that peer-helping-peer strategies can be a good source of factual information and can help keep them aware of drinking/driving issues.

Strategies in which adults impart information fit into the category of teenage experience which they describe as "I know it's good for me but I probably wouldn't attend unless it's required." There were consistent differences in responses to this category based on demographics. Minority youth expressed more enthusiasm for all of these strategies. There was also an age difference, with younger students expressing more enthusiasm. Females reported a greater distaste for fear arousing presentations, a finding that replicates findings from the DWI Program Review component of this project (Klitzner, et al., 1985).

Strategies involving parents seem to be the least acceptable to youth of those studied. For example, many youth say they would be willing to sign a contract for life with their parents. However, they also believe it would be an extremely rare event for a teenager to actually carry out the terms of the contract and call a parent for a ride. This finding is consistent with the results of the Component II interviews, although it appears that some RWIDs at least consider this option. Parent interventions (e.g., taking keys) were greatly disliked by some respondents, particularly the males. They clearly resent such an approach and suggested that they might create a scene if a parent refused to give them their car keys.

In summary, it is possible to identify three characteristics that increase the appeal of DWI prevention strategies to youth:

- No long-term commitment is required
- Friends are involved rather than strangers, parents, or other adults
- Youth feel a sense of instrumentality -- i.e., they can choose to implement or reject the strategy on a situational basis

Teenagers also say that they value prevention efforts which present accurate information and which help to keep them aware of drinking/driving issues.

Given the nature of the focus group methodology, it would be desirable to replicate these findings in a larger scale survey-study based which uses the focus group data as a point of departure. Such a study would allow a more finely grained analysis of the relationship between youth characteristics and program acceptability. For example, acceptability of Safe-Rides was much higher in Sacramento, where a Safe-Ride effort has been in existence for some time. Unfortunately, the focus group methodology employed did not allow for construction of samples based on actual experience with the strategies studied. However, experience with the strategies as well as a number of other potentially important variables (e.g., alcohol use patterns, educational aspirations, and so on) could easily be included in a survey study.

V. SUMMARY AND RECOMMENDATIONS

This section presents recommendations for improving youth DWI prevention efforts based on the Phase Two data presented in this report, as well as the data from Phase One presented in Klitzner, et al. (1985). Before proceeding to the recommendations, the findings from both phases of the project are summarized.

SUMMARY OF FINDINGS

The Phase One Program Analysis suggested four general areas that need to be addressed in order to improve the general quality of youth DWI prevention programs:

1. The need for a stronger theoretical basis for program development

2. The need to consider risk factors other than those associated with individual-level psychological variables

3. The need to increase attention to quality of program implementation

4. The need for more sophisticated and widespread program evaluations

The Phase Two research strongly addresses the first two need areas. Specifically, Phase Two sought to develop a more comprehensive theory of the etiology of youth DWI and RWID. Moreover, the Phase Two research was guided by an emphasis on risk factors both within and beyond the psychological makeup of individual DWIs and RWIDs. In addition, the Phase Two focus groups contribute to our knowledge of effective implementation by suggesting ways in which programs can be made more acceptable to youth.

The key findings of the Phase Two research are:

1. The major stable determinants of DWI behavior in youth are youth drinking practices, perceived deviance of DWI, and access to cars.

2. The major stable determinants of RWID behavior in youth are youth drinking practices, perceived deviance of DWI, and participation in parties and dates.

3. The major stable determinants of youth drinking practices are sex, race, participation in parties and dates, friends' drinking practices, decision-making skills, use of DWI alternatives, and perceived deviance of DWI.

4. The only general situational determinant of DWI and RWID is a perceived need to get somewhere -- usually home.

5. A special case of RWID occurs when youth ride with impaired parents or other adults, a situational factor that effectively precludes any protective action on the part of affected youth.

6. The factors that determine acceptability to youth of DWI prevention programs and strategies are those that require no long term commitment, that involve friends rather than strangers, parents, or other adults, and that provide youth with a sense of instrumentality.

7. There are age and race differences in the acceptability of program options, particularly those that are educational in nature.

RECOMMENDATIONS

The study recommendations may be best described with reference to the diagrams of the natural history of the youth DWI problem presented in FIGURE 4 and the natural history of the youth RWID problem presented in FIGURE 5.

FIGURE 4

NATURAL PROBLEM HISTORY OF YOUTH DWI (ASSUMES YOUTH WILL DRIVE)

YOUTH WHO--1-->YOUTH WHO--2-->YOUTH WHO----3--->MORTALITY &
DON'T DRINK DRINK DRINK & DRIVE MORBIDITY

FIGURE 5

NATURAL PROBLEM HISTORY OF YOUTH RWID

YOUTH WHO---1--->YOUTH WHO--2-->YOUTH WHO----3--->MORTALITY & MORBIDITY

DON'T ASSOCIATE WITH DRINKERS

DO ASSOCIATE WITH DRINKERS

RIDE WITH DRINKERS

The models presented in Figure 4 and 5 suggests three points which may be the targets of DWI and/or RWID prevention or intervention strategies.[18] Point 1 represents strategies that have as their primary objective the prevention of youth drinking and the establishment of non-drinking lifestyles among youth. Such programs include any of those that either attempt to alter the factors that predispose, reinforce, or enable drinking among individual youth (e.g., life skills training, peer pressure resistance training) and those that attempt to reduce alcohol availability (e.g., alcohol-free alternative parties, minimum purchase age increases, server training, limiting outlets, education of retail clerks). Strategies at Point 1 would not, of course, address the problem of youth who RWID when parents or other adults are the drivers.

Point 2 represents strategies that attempt to disassociate drinking and driving. Here, although youth alcohol use may still be of concern, the major objective is to address risk factors that lead drinking youth to drive, or that lead youth who associate with drinkers to be passengers. Examples of strategies at Point 2 include Safe-Rides, designated driver, alternative transportation, direct intervention (e.g., taking keys), and parent/student contracts.

Finally, Point 3 represents strategies that attempt to limit morbidity and mortality among drinking drivers and their passengers. Examples of these strategies, which are beyond the scope of this project, include passive restraints, other vehicle-related technologies, highway design elements such as breakaway sign posts, and so on.

In general, the results of the study suggest that significant emphasis should be placed on programs that are targeted at Point 1 (i.e., youth drinking). The data from both the Component I surveys and Component II interviews suggest that youth drinking in-and-of itself is a key risk factor for both DWI and RWID. For

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[18]Some prevention planners have found it useful to distinguish between prevention strategies (Point 1) and intervention strategies (Point 2)

example, the data call into question the traditional notion of a higher DWI risk among males, and rather suggest that this observed relationship is more a factor of a higher level of consumption by males than it is a factor of a greater generalized DWI risk. Overall, it seems likely that strategies at Point 1 will be a necessary component of an effective overall response to the youth DWI/RWID problem.

The data also suggest the need for strategies targeted at point 2. This is especially clear from the Component I finding that participation in parties and dates is predictive of reported RWID and from the Component II finding that youth social activities appear to regularly include alcohol. Until such time as widely effective strategies are available at Point 1 (prevention of drinking), prevention efforts should also be focused at Point 2.

In terms of specific program strategies, the results of the study suggest recommendations concerning the ways in which current strategies might be improved or reconceptualized and also suggest ideas for the development of new strategies.

Little support is evident for the potential efficacy of traditional alcohol education (a Point 1 strategy) or traffic safety education (a Point 2 strategy). Although the sample varied on both alcohol knowledge and DWI laws knowledge, these variables failed to predict either drinking practices or DWI/RWID. Moreover, interviewees were largely aware that their DWI/RWID behavior was risky, and this perception remained even when respondents reported significant levels of intoxication. On the other hand, the focus group data suggest that such programs are appealing to younger and minority youth. Accordingly, an alcohol and traffic safety education component might be considered as an adjunct to other prevention strategies, especially when the target population is young or non-white.

The data also provide little support for programs based on peer pressure resistance (applicable to both Points 1 and 2). Susceptibility to peer influence was not predictive of either drinking practices or DWI/RWID, and <u>direct</u> peer influence played a very minor role in actual drinking, DWI, or RWID as reported by interview respondents. Moreover, many focus group respondents felt that Just Say No-type programs would probably be ineffective and would attract few members. On the other hand, friends' drinking practices was a significant predictor of youth drinking, thus suggesting that strategies that focus on <u>indirect</u> peer influence (e.g., peer norms) should be further explored.

Despite the popularity of life skills approaches (also applicable to Points 1 and 2), there would appear to be little support for the efficacy in preventing DWI or RWID of two of the three life skills that are commonly addressed in prevention efforts. Specifically, neither self-concept nor communication skills

predicted drinking practices, DWI, or RWID. Decision-making skills are related to DWI/RWID, but only insofar as they mediate drinking practices. Thus, there is some empirical basis for addressing decision-making, particularly given the importance of drinking practices as predictors of DWI/RWID. Additional developmental work might be considered in the area of decision-making, although such programs have not been proven effective in altering youth substance use patterns to date (See for example, Moskowitz, 1987). Accordingly, if an emphasis is to be placed on decision-making, new approaches to developing this skill should be sought.

The data provide mixed evidence concerning alternative-based strategies (a Point 2 strategy) -- a limited number of RWID interviewees successfully employed alternatives to terminate the RWID incident. On the other hand, knowledge of alternative modes of transportation failed to predict either drinking practices or DWI/RWID. Moreover, use of alternative modes of transportation was associated with higher levels of alcohol consumption, although as repeatedly noted, the direction of causality in this relationship is unknown. Overall, it seems evident that more work is needed to determine the factors that increase or decrease the probability that an alternative will be used, to determine the factors that lead to successful use of alternatives, and to further explore the relationship between use of alternatives and drinking practices.

Some support is provided for alternative parties and activities (a Point 1 strategy). As noted, participation in parties and dates predict both drinking practices and RWID, presumably because of the current connection between teenage socializing and drinking. Accordingly, promotion of alcohol-free activities may serve to sever this connection. Focus group respondents were all willing to consider attending such activities, although the quality of the activities was clear determinant of attendance.

Strong support is provided for programs that attempt to alter youth beliefs concerning the deviance of DWI. This variable predicted drinking practices, DWI and RWID, and was the <u>only</u> stable risk factor to predict all three behaviors. Thus, strategies to alter youth beliefs concerning the deviance of DWI may serve as both a Point 1 and a Point 2 strategy. To date, however, there have been few prevention efforts that directly address this risk factor. The rhetoric of SADD suggests a focus on changing youth norms, although the relationship of this rhetoric to typical SADD implementation is questionable. Many public information campaigns (e.g., the NIAAA youth and media campaign of the early 1980's) have attempted to characterize DWI as "dumb," and enforcement efforts carry the message that DWI is not acceptable to the community.

The data also suggest the potential efficacy of increased enforcement efforts, which may address either Points 1 or 2 depending on the nature of the enforcement. Enforcement efforts may directly sanction youth drinking and DWI and can also communicate a clear message concerning the deviance of DWI. It is worth noting in this regard that trouble with the police was the second most frequently cited risk of DWI in the Component II interviews. Thus, programs that increase this risk may have a deterrent effect for at least some youth.

Finally, the Component II data suggest that youth are concerned about accidents and injury. However, use of seat belts was not one of the measures used to improve safety. Therefore, the current trend towards encouragement of seat belt use, both through legislation and through education is well supported by the current data.

Based on the study findings, three additional prevention strategies are suggested which, to our knowledge, have not been widely attempted. These ideas derive largely from the Component II interviews which addressed predisposing, reinforcing, and enabling factors (i.e., situational risk factors) that have previously received little attention.

The Component II interviews suggested that a major situational variable that contributes to DWI and RWID is a perceived need to get home. Although some youth report that nothing will really happen if they are late or don't arrive, other youth believe that significant parental sanctions will result. Moreover, youth are reluctant to call on parents for help in DWI or RWID situations because of a fear of reprisal. In most cases, it is likely that parental expectations concerning drinking, curfews, etc. are ambiguous or perceived as ambiguous by youth. Accordingly, guided discussion of parental expectations could help youth to make better decisions concerning the urgency of getting home and/or the probable consequences of calling parents for help. A continuing problem with parent programs is securing the cooperation of parents, especially those of high risk youth. Communities might thus consider making participation in groups such as those proposed above as a requirement of youth drivers' licensure.

Many of the RWID interviewees noted that they were unaware of how impaired their driver was until severe decrements in driving performance (e.g., weaving) were evident. By this time, most respondents found it difficult to extricate themselves from the obviously risky situation. Accordingly, youth, especially younger teens, could be educated concerning more subtle behavioral indications of impairment. Although such a strategy has been contemplated for servers and hosts, little attention has apparently been given to identification of impairment by youth.

As is clear from the Component II interviews many youth are in need of alternative transportation, but are reluctant to seek such transportation from parents or strangers (e.g., Safe-Ride volunteers). However, rides from friends appear to be an acceptable alternative. Thus, youth could be encouraged to call friends for help when they or their driver is impaired. Because this strategy requires little time commitment, involves only friends, and provides youth a high level of instrumentality (both users and helpers), this strategy meets all three criteria derived from the focus groups for programs acceptable to youth.

Overall, the study has provided information from a variety of data sources concerning the relative importance of specific stable and situational risk factors in determining youth DWI and RWID behavior. Thus, the data a provide an empirical basis for the refinement of existing DWI/RWID prevention strategies, one of the major goals of the project. Moreover, these data suggest new directions for prevention efforts. It is hoped that prevention programmers will use these data in their prevention planning efforts, and will be stimulated to develop new and innovative prevention initiatives that go beyond those discussed in this report.

VI. LITERATURE CITED

Anastasi, A. Psychological Testing. (5th ed.) New York: Macmillian Publishing, 1982.

Biddle, B., Biddle, B., Bank, J., and Martin, M. Social determinants of adolescent drinking. Journal of Studies on Alcohol, 41(3), 1980.

Blane, H. Problem drinking in delinquent and nondelinquent adolescent males. The American Journal of Drugs and Alcohol, 9(2), 1983.

Burkett, S. and Carritners, W. Adolescent's drinking and perception of legal and informal sanctions: a test of four hypotheses. Journal of Studies on Alcohol, 14(9), 1980.

Cameron, T. Drinking and driving among American youth: beliefs and behaviors. Drug and Alcohol Dependence, 10, 1982.

Carmines, E.G. and Zeller, R.A., Reliability and Validity Assessment, Beverly Hills: Sage, 1979

Douglass, R. Youth, alcohol, and traffic accidents: current status. Recent Developments in Alcoholism, Volume I. New York, NY: Plenum Press, 1983.

Drug Abuse Prevention Handbook, National Institute on Drug Abuse. U.S. Government Printing Office, Washington, D.C., 1980.

Finley, B. Drinking and driving behaviors in grades 1-10 in one rural high school. Current Issues in Alcohol and Drug Nursing: Research, Education, and Clinical Practice. Washington, D.C., May, 1983.

Firth, D., and Goffey, L. What do teenagers think about road safety? Traffic Education, 6(4), 1981.

Forney, M., and P., Davis, H., Van Hoose, J., Gafferty, T., and Allen, H. Factors affecting knowledge, attitude, and behavior toward the use of alcohol among middle school students. Paper presented to the American Educational Research Association Annual Conference, April, 1984.

Grey Advertising. Communications Strategies on Alcohol and Highway Safety, Volume II. Report #DOT HS-803-714, U.S. Department of Transportation, 1975.

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

Hetherington, R., Dickinson, J., Cipywnyk, K., and Hay, D. Attitudes and knowledge about alcohol among Saskatchewasn adolescents. Canadian Journal of Public Health, 70(4), 1979.

Jessor, R. and Jessor, S. Problem Behavior and Psychosocial Development: A Longitudinal Study of Youth. New York: Academic Press, 1977.

Klien, D. The teenage driver: a research paradigm. Traffic Quarterly, 22(1), 1968.

Klitzner, M., Schwartz, R., Gruenewald, P., and Blasinsky, M. Screening for risk factors for adolescent alcohol and drug use. American Journal of Diseases of Children, 141, 1987.

Klitzner, M., Kumpher, K., Moskowitz, J., and Whiteside, H. Future issues and promising directions in the prevention of substance abuse among youth. Journal of Children in Contemporary Society, 18(1/2), 1985.

Koningsberg, D., Weinhouse, B., and Wechsler, J. Teenagers and alcohol: Holiday hazard, year-round tragedy. Ladies Home Journal, 100(12), 1983.

Kraus, A., Steele, R., Ghent, W., and Thompson, M. Pre-driving identification of young drivers with high risk of accidents. Journal of Safety Research, 2, 1970.

Krohn, M., Akers, R., Radosevich, M., and Lanze-Kaduce, L. Norm qualities and adolescent driving and drug behavior. Journal of Drug Issues, Fall, 1982.

Lord, F. Applications of Item Response Theory to Practical Testing Problems, Hillsdale, NJ: Lawrence Erlbaum Assoc., 1980

Lowman, C. Facts for planning, no. 3: U.S. teenage alcohol use in unsupervised social settings. Alcohol Health Resource World, 6(2), 1981.

Lowman, C., Hartford, T.C., and Kaebler, C.T. Facts for planning no. 8: Alcohol use among black senior high school students. Alcohol Health and Research World, 7(3), Spring, 1983.

Macklin and Rossiter, C. Interpersonal communication and self-actualization, Communication Quarterly, 24(4), Fall, 1976.

Marshall, K.M., Smith-Donals, L., Cooke, P., DeLucas, P., Blasinsky, M., and Klitzner, M. Determinants of Youth Attitudes and Skills Towards Which Drinking/Driving Prevention Programs Should Be Directed. Volume II: An In-Depth Review of Ywelve Youth DWI Prevention Programs, Contract No. DTNH-22-84-C-07284, National Highway Traffic Safety Administration, 1985.

Milgram, G. Societal attitudes toward youthful drinking. Journal of Drug Education, 12(4), 1982.

Moskowitz, J. The Primary Prevention of Alcohol Problems: A Critical Review of the Research Literature. Berkeley, CA: Pacific Insitute for Research and Evaluation/Prevention Research Center, 1987.

Norem-Hebeisen, A. A. A multidimensional construct of self-esteem. Journal of Educational Psychology, 68(5), 1976.

Nusbaumer, M. and Zusman, M. Autos, alcohol, and adolescents: forgotten concerns and overlooked linkages. Journal of Drug Education, 11(2), 1981.

O'Malley, P., Bachman, J., and Johnston, L. Reliability and consistency in self-report of drug use. International Journal of the Addictions, 18, 1983.

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

Rachel, J.V., Maisto, S.A., Guess, L.L., and Hubbard, R.L. Alcohol use among youth. Alcohol and Health Monograph No. 1: Alcohol Consumption and Related Problems, ADAMHA, Rockville, MD, 1982.

Robinson, J.P. and Shaver, P.R. Measures of Social Psychological Attitudes. Ann Arbor, Michigan: Institute for Social Research, The University of Michigan, 1973.

Scoles, P., and Fine, E. Substance abuse patterns among youthful drinking drivers. Alcoholism: Clinical and Experimental Research, 5(1), January, 1981.

Smith-Donals, L. and Klitzner, M. Self-reports of youthful drinking and driving: sensitivity analyses of sensitive data. Journal of Psychoactive Drugs, 17(3), 1985.

Stewart, K., Epstein, L., Gruenewald, P., Laurence, S., Roth, T., and Klitzner, M. The California First DUI Offender Evaluation Project: Final Report. Walnut Creek, CA: Pacific Institute for Research and Evaluation, 1987.

U.S. Department of Transportation. How Much Do You Know About Drinking and Driving? A Self Evaluation for Teenagers. Report #DOT HS 806 429, July, 1983.

Vegega, M. and Blasinsky, M. Youth Anti-Drinking-Driving Programs: An Examination of Program Assumptions. National Highway Traffic Safety Administration, 1985.

Vegega, M. and Klitzner, M. Youth anti-drinking-driving programs: An examination of program assumptions. Proceedings of the Association for Automotive Medicine, Washington, D.C., October, 1985.

Vejnoska, I. Putting the brakes on teenage drunk driving. Police Chief, 49(12), 1982

Wagenaar, A. Youth drinking and driving: one effective counter-measure. Paper presented at the Drinking and Driving Symposium, American Association for Advancement of Science Meetings, Detroit, ME, May 31, 1983.

APPENDIX A

- **Traffic Safety Survey**
- **Driving while Drinking Interview**
- **Riding with Drinking Drivers Interview**
- **Focus Group Protocol**

These research instruments are not copyrighted. Researchers are encouraged to use them in whole or part to gather data for similar studies. Citation of source is appreciated.

TRAFFIC SAFETY SURVEY

Dear Student:

Concern for students' health and well-being is increasing because more teenagers today are drinking and driving. To work towards preventing problems that may occur as a result of driving under the influence of alcohol, we are asking young people in a number of cities around the country to tell us about their experiences and opinions in these areas.

Although some of the questions that we ask you here are personal, we guarantee that only the researchers from the Pacific Institute for Research and Evaluation will ever see any of your answers. This means that no information about any individual will ever be given to anybody else. Please do not sign your name on this booklet!

Participation in this study is entirely up to you. Although we would like you to answer all of the questions, you may ignore any question that you don't want to answer or indicate that you don't know an answer whenever this is the case. Also, if you decide at any time that you don't want to answer our questions, you may stop. Nothing will happen to anybody who does not want to answer any or all of the questions. Remember, there are no right or wrong answers to any of the questions--only answers that are true for you.

Thank you for your help.

GENERAL INSTRUCTIONS FOR FILLING OUT THE QUESTIONNAIRE:

Please circle the number next to the answer that fits you best or write your answer in the blank spaces provided. Unless other instructions are given, circle only <u>one</u> answer for each question (or part of a question). Please read the directions carefully because sometimes you will be asked to skip questions. Remember, we are interested in YOUR response, so please answer as frankly and honestly as possible. If you don't understand a word, you may raise your hand, and the test administrator will come and explain it to you.

YOU MAY BEGIN.

1. What is your sex?

   1 MALE
   2 FEMALE

2. Which of the following do you consider yourself?

   1 MEXICAN-AMERICAN, LATINO, OR HISPANIC
   2 AMERICAN INDIAN OR ALASKAN NATIVE
   3 ASIAN OR PACIFIC ISLANDER
   4 BLACK
   5 WHITE

3. What year were you born? 19____

   A. That means you were ____ YEARS OLD on your last birthday.

4. How often do you attend religious services?

   1 EVERY WEEK
   2 A FEW TIMES A MONTH
   3 ABOUT ONCE A MONTH
   4 A FEW TIMES A YEAR
   5 RARELY
   6 NEVER

5. Do you have a driver's license or learner's permit?

   1 DRIVER'S LICENSE
   2 LEARNER'S PERMIT
   3 NEITHER

6. About how many friends do you hang around with?

1 NONE
2 1 TO 2
3 3 TO 5
4 MORE THAN 5

7. About how many times during a typical month do you go to parties or go out on dates or out with friends?

1 NONE
2 1 OR 2 TIMES
3 3 TO 5 TIMES
4 6 TO 10 TIMES
5 11 TO 15 TIMES
6 16 OR MORE TIMES

8. How much money do you have to spend each month on items of your own choosing?

1 NONE
2 BETWEEN $1.00 AND $9.00
3 BETWEEN $10.00 AND $19.00
4 BETWEEN $20.00 AND $49.00
5 BETWEEN $50.00 AND $99.00
6 MORE THAN $100.00

9. With whom do you currently live?

1 BOTH PARENTS (OR STEP-PARENTS)
2 MOTHER (OR STEP-MOTHER) ONLY
3 FATHER (OR STEP-FATHER) ONLY
4 OTHER ADULT RELATIVE(S)
5 YOUR HUSBAND OR WIFE
6 OTHERS YOUR OWN AGE
8 OTHER (PLEASE SPECIFY: _____)

10. What is your mother/step-mother's main occupation?

PLEASE BE AS SPECIFIC AS POSSIBLE: _____

11. How much formal schooling did your mother/step-mother complete?

1 SOME HIGH SCHOOL
2 HIGH SCHOOL GRADUATION
3 SOME COLLEGE OR TRADE SCHOOL
4 GRADUATION FROM COLLEGE
5 MORE THAN 4 YEARS OF COLLEGE (GRADUATE OR PROFESSIONAL SCHOOL)
9 DON'T KNOW

12. What is your father/step-father's main occupation?

PLEASE BE AS SPECIFIC AS POSSIBLE: _____

13. How much formal schooling did your father/step-father complete?

1 SOME HIGH SCHOOL
2 HIGH SCHOOL GRADUATION
3 SOME COLLEGE OR TRADE SCHOOL
4 GRADUATION FROM COLLEGE
5 MORE THAN 4 YEARS OF COLLEGE (GRADUATE OR PROFESSIONAL SCHOOL)
9 DON'T KNOW

14. What grade or year of school are you currently enrolled in?

1 7TH GRADE
2 8TH GRADE
3 9TH GRADE (FRESHMAN)
4 10TH GRADE (SOPHOMORE)
5 11TH GRADE (JUNIOR)
6 12TH GRADE (SENIOR)
7 COLLEGE

15. How interested are you in your schoolwork?

1 VERY UNINTERESTED
2 SOMEWHAT UNINTERESTED
3 SOMEWHAT INTERESTED
4 VERY INTERESTED

16. What kinds of grades do you generally get?

1 MOSTLY A'S
2 MOSTLY B'S
3 MOSTLY C'S
4 MOSTLY BELOW C'S

17. What is the highest grade or year of school that you would like to complete?

1 SOME HIGH SCHOOL
2 HIGH SCHOOL GRADUATION
3 SOME COLLEGE OR TRADE SCHOOL
4 GRADUATION FROM COLLEGE
5 MORE THAN 4 YEARS OF COLLEGE (GRADUATE OR PROFESSIONAL SCHOOL)

18. Do any of the classes in your school teach students about alcohol use and driving?

1 NO 2 YES 9 DON'T KNOW

IF YES: Have you attended any of these classes?

1 NO
2 YES

19. Are the following statements MOSTLY TRUE or MOSTLY FALSE about you?

		MOSTLY TRUE	MOSTLY FALSE
A.	I usually do things that everybody else is doing	1	2
B.	I have many thoughts and ideas I've never told anyone	1	2
C.	I usually don't gather a lot of information in order to make my decisions	1	2
D.	I don't respect people who follow others without questioning	1	2
E.	My parents think I make good decisions	1	2
F.	In conversation, I often don't express what I actually believe	1	2
G.	I prefer to make my own decisions	1	2
H.	I would like a person like me for a friend	1	2
I.	I often worry about what other people think about things I do	1	2
J.	I often regret the decisions I make	1	2
K.	I solve my problems rather easily	1	2
L.	When I look in the mirror I like what I see	1	2
M.	When I have to speak to a group, I get self-conscious and have difficulty saying things well	1	2
N.	I often feel I can't do anything right	1	2

19. (CONTINUED) Are the following statements MOSTLY TRUE or MOSTLY FALSE about you?

		MOSTLY TRUE	MOSTLY FALSE
O.	If I know I'm right, my friends can't get me to change my mind	1	2
P.	I usually do what is right	1	2
Q.	I often act on the spur of the moment	1	2
R.	I'm satisfied to be just what I am	1	2
S.	Often I do things just so I won't feel left out of the group I'm with	1	2
T.	I'm happier than most other people my age	1	2
U.	I usually say what's on my mind	1	2
V.	Almost nothing I do seems to make a difference	1	2
W.	What my friends think of me is the most important thing in my life	1	2
X.	I often feel life is too much to cope with	1	2
Y.	Going along with what other people want is the best way to make friends with them	1	2
Z.	People often tell me how clearly I express myself	1	2
AA.	I do what I want to do, not what other people want me to do	1	2

19. (CONTINUED) Are the following statements MOSTLY TRUE or MOSTLY FALSE about you?

		MOSTLY TRUE	MOSTLY FALSE
BB.	I hesitate to talk at social affairs because I'm afraid that people will criticize me if I say the wrong things	1	2
CC.	I usually take a person up on a dare	1	2
DD.	I hate to make decisions	1	2
EE.	If I think others in a group will disagree with me I prefer to remain silent	1	2
FF.	I often feel blue or depressed	1	2
GG.	If I have a choice, I'd rather not stand out in a crowd	1	2
HH.	I have a tendency to keep my thoughts and feelings to myself	1	2
II.	I prefer to consider the pros and cons before I make choices	1	2
JJ.	I will speak up even if other people don't agree with me	1	2
KK.	From time to time, I do things that are really reckless	1	2
LL.	I'm a leader	1	2
MM.	Often I don't consider the consequences before I do things	1	2
NN.	I am able to express myself clearly	1	2

20. Are these statements about ALCOHOL true or false?

		FALSE	TRUE	DON'T KNOW
A.	A can of beer is less intoxicating than an average drink of hard liquor	1	2	9
B.	A cold shower can help sober up a person	1	2	9
C.	A person can be drunk and not stagger or slur his speech	1	2	9
D.	It is easy to tell if people are drunk even if you don't know them well	1	2	9
E.	A person drinking on an empty stomach will get drunk faster	1	2	9
F.	A person who weighs less can get drunk faster than a heavier person	1	2	9
G.	Drinking black coffee can help sober up a person	1	2	9
H.	Alcohol in your system makes it harder to distinguish colors so it becomes harder to tell red from green traffic lights	1	2	9

21. Are these statements about the LAWS IN YOUR STATE true or false?

		FALSE	TRUE	DON'T KNOW
A.	Anyone arrested for drunk driving automatically loses his/her driver's license	1	2	9
B.	Passengers may drink in a car as long as the driver does not drink	1	2	9
C.	If you can handle a car okay and do not appear drunk, its legally all right to drive no matter how much alcohol is in your system	1	2	9
D.	If you are stopped by the police, you are legally required to allow them to test you for alcohol	1	2	9
E.	A person is considered legally drunk if his or her blood alcohol concentration (BAC) is .10 or higher	1	2	9
F.	You may be convicted of drunk driving even if your blood alcohol concentration (BAC) is below the legal limit	1	2	9
G.	An insurance company cannot cancel your policy just because you've been convicted once for drinking and driving	1	2	9
H.	If you are drinking and driving, the police can't stop you unless you are breaking some other law	1	2	9

22. Here are some ways people have thought of avoiding driving after drinking or riding with someone who has been drinking. For each option, please indicate whether you have ever thought of it BEFORE READING THIS QUESTIONNAIRE.

		NEVER THOUGHT ABOUT IT	THOUGHT ABOUT IT BEFORE NOW
A.	Sleep over	1	2
B.	Find a sober person to drive when its time to leave	1	2
C.	Before drinking pick a driver who won't drink	1	2
D.	Call a cab	1	2
E.	Take a bus	1	2
F.	Call parent	1	2
G.	Call another adult	1	2
H.	Walk	1	2
I.	Wait until you or the driver sobers up before driving	1	2
J.	Only go places where no alcohol is served	1	2
K.	Simply don't drink or go out with people who do drink	1	2

23. Now, indicate whether you have ever used any of the options.

		NO	YES
A.	Sleep over	1	2
B.	Find a sober person to drive when its time to leave	1	2
C.	Before drinking pick a driver who won't drink	1	2
D.	Call a cab	1	2
E.	Take a bus	1	2
F.	Call parent	1	2
G.	Call another adult	1	2
H.	Walk	1	2
I.	Wait until you or the driver sobers up before driving	1	2
J.	Only go places where no alcohol is served	1	2
K.	Simply don't drink or go out with people who do drink	1	2

24. Some communities have a phone number people can call for a ride if they need safe transportation. Does your community have a phone number like this? (CIRCLE ONLY ONE.)

1 NO
2 YES
9 DON'T KNOW

25. What do you think of having a phone number like this in your community? (CIRCLE ONLY ONE.)

1 ITS A GOOD IDEA AND I WOULD USE IT
2 ITS A GOOD IDEA BUT I WOULDN'T USE IT
3 ITS A BAD IDEA

26. Do you MOSTLY AGREE or MOSTLY DISAGREE with the following statements about drinking and driving:

		MOSTLY AGREE	MOSTLY DISAGREE
A.	People who drink and drive should lose their driver's license	1	2
B.	People who drink and drive should go to jail	1	2
C.	It's okay to drink and drive so long as you don't get caught	1	2
D.	Everybody drinks and drives once in a while	1	2
E.	The dangers of drinking and driving are overrated	1	2
F.	The police spend too much time hassling drinking drivers	1	2
G.	It's okay to drive after drinking so long as you're not drunk	1	2
H.	Most of my friends think it's okay to drink and drive	1	2
I.	My friends would think I was really dumb if I drove after drinking	1	2
J.	My friends wouldn't go to a party where no alcohol was served	1	2
K.	My friends' parents don't care whether my friends drink or drive	1	2
L.	The police in my community aren't tough enough on drinking drivers	1	2
M.	Drinking and driving is common in my community	1	2
N.	People who won't drink and drive just can't "hold their liquor"	1	2
O.	My community needs stricter laws against drunk driving	1	2
P.	Most people in my community think it's wrong to drink and drive	1	2

27. What is your primary means of transportation? (CIRCLE ONLY ONE.)

1 I TAKE PUBLIC TRANSPORTATION (BUS, TAXI, ETC.)
2 I WALK, RIDE A SKATEBOARD OR ROLLERSKATE
3 I RIDE A BICYCLE OR MOPED
4 FRIENDS DRIVE ME
5 A FAMILY MEMBER DRIVES ME
6 I DRIVE MYSELF

28. Have you ever had an alcoholic drink (more than just a taste)?

1 NO (GO TO QUESTION 34)

2 YES

IF YES: In the last month, how often did you drink alcoholic beverages? (CIRCLE ONLY ONE.)

1 NEVER
2 ONCE OR TWICE ON SPECIAL OCCASIONS
3 SOMETIMES ON WEEKENDS
4 SOMETIMES DURING THE SCHOOL WEEK
5 REGULARLY ON WEEKENDS
6 REGULARLY DURING THE SCHOOL WEEK
7 SOMETIMES DURING THE SCHOOL WEEK AND REGULARLY ON WEEKENDS
8 REGULARLY DURING THE SCHOOL WEEK AND REGULARLY ON WEEKENDS

29. In the last month, how many cans or bottles of beer have you had?

_____CAN(S), BOTTLE(S) (WRITE A ZERO IF NONE)

30. In the last month, how many glasses of wine have you had?

_____GLASS(ES) (WRITE A ZERO IF NONE)

31. In the last month, how many drinks of liquor (gin, vodka, whiskey) have you had?

_____DRINK(S) (WRITE A ZERO IF NONE)

32. Thinking back over the last month, how many times have you had five or more drinks in a row?

1 NEVER
2 1 TIME
3 2 TIMES
4 3-5 TIMES
5 6-9 TIMES
6 10 OR MORE TIMES
9 DON'T KNOW HOW MANY TIMES

33. Was last month... (CIRCLE ONLY ONE.)

1 A MONTH IN WHICH YOU DRANK MORE THAN USUAL?
2 A MONTH IN WHICH YOU DRANK LESS THAN USUAL?
3 TYPICAL OF MOST MONTHS IN TERMS OF HOW MUCH YOU DRINK.

34. Among your close friends, how many of them would you say get drunk once a month or more?

1 NONE OF THEM
2 LESS THAN HALF OF THEM
3 ABOUT HALF OF THEM
4 MORE THAN HALF OF THEM
5 NEARLY ALL OF THEM
8 DOES NOT APPLY (NO CLOSE FRIENDS)

35. Have you ever been a PASSENGER in a car or on a motorcycle or scooter where the driver drank alcohol before or while driving?

1 NO 2 YES

IF YES: How often during the last month have you ridden with a driver who had been drinking?

1 NOT AT ALL DURING THE LAST MONTH
2 ONCE OR TWICE DURING THE LAST MONTH
3 ONCE A WEEK
4 SEVERAL TIMES A WEEK
5 NEARLY EVERY DAY

36. Have you ever drunk an alcoholic beverage while riding around in a car?

1 NO 2 YES

IF YES: How often during the last month have you drunk alcohol while riding around in a car?

1 NOT AT ALL DURING THE LAST MONTH
2 ONCE OR TWICE DURING THE LAST MONTH
3 ONCE A WEEK
4 SEVERAL TIMES A WEEK
5 NEARLY EVERY DAY

IF YOU DO NOT DRIVE, CHECK THIS BOX AND STOP HERE.
OTHERWISE, CONTINUE. ☐

37. Have you ever driven a car, motorcycle, or motor scooter after drinking alcohol?

1 NO 2 YES

IF YES: How often during the last month have you driven after drinking?

1 NOT AT ALL DURING THE LAST MONTH
2 ONCE OR TWICE DURING THE LAST MONTH
3 ONCE A WEEK
4 SEVERAL TIMES A WEEK
5 NEARLY EVERY DAY

38. Have you ever driven when you were drunk enough to get in trouble if you were stopped by the police?

1 NO 2 YES

IF YES: How often during the last month have you driven while drunk enough to get in trouble with the police if you'd been stopped?

1 NOT AT ALL DURING THE LAST MONTH
2 ONCE OR TWICE DURING THE LAST MONTH
3 ONCE A WEEK
4 SEVERAL TIMES A WEEK
5 NEARLY EVERY DAY

39. Have you ever received a ticket (or been stopped and warned) for a moving violation, such as speeding, running a stop sign, or improper passing?

1 NO 2 YES

IF YES: How many of these tickets or warnings occurred after you were drinking alcohol?

1 NONE
2 ONE
3 TWO
4 THREE OR MORE

40. Have you ever had a traffic crash while you were driving?

1 NO 2 YES

IF YES: How many crashes occurred after you were drinking alcohol?

1 NONE
2 ONE
3 TWO
4 THREE OR MORE

41. Has your license ever been suspended or revoked?

1 NO 2 YES

IF YES: Was drinking related to the suspension or revocation?

1 NO
2 YES

THANK YOU VERY MUCH FOR YOUR PARTICIPATION IN THIS SURVEY!

DRIVING WHILE DRINKING INTERVIEW

NHTSA STUDY

Interviewer:_____

Date:_____

City:_____

Location (name of school, recreation center):

_____

Start time of interview: _____

End time of interview: _____

Length of interview (in minutes): _____

1. **Can you tell me how many times you have driven a car or other vehicle after or while you were drinking alcoholic beverages?** (RECORD)

____ NUMBER OF TIMES

INTERVIEWER: IF "DON'T KNOW," PROBE TO GET ESTIMATE. IF NONE, TERMINATE INTERVIEW.

I'd like to learn more about the most recent time you drove after drinking. I'll stop for a moment to let you think about that time.

2. **First, how old were you when this occurred?** (RECORD)

____ **Age**

3. **What kind of vehicle were you driving?**
(CIRCLE ONE OR USE AS PROBE)

1 AUTOMOBILE
2 TRUCK
3 VAN
4 MOTORCYCLE
5 MOPED
8 OTHER (SPECIFY: _____)

4. **Whose vehicle was it?** (CIRCLE ONE)

1 MINE
2 MY PARENT(S)
3 FRIEND'S
4 FRIEND'S PARENTS
8 OTHER (SPECIFY: _____)

5. **Where were you that day or evening when you first started driving?** (CIRCLE ONE OR USE AS PROBE)

1 AT HOME
2 AT SCHOOL (DURING SCHOOL HOURS)
3 AT A SCHOOL PROM OR DANCE
4 AT A PARTY AT FRIEND'S HOUSE
5 AT A SPORTS/OTHER SPECIAL EVENT
6 AT A BAR
7 AT WORK
8 OTHER (SPECIFY:_____)
9 JUST "HANGING AROUND"

6. **How many other people rode with you that day/evening (all together)?** (RECORD)

____ NUMBER (IF "0," GO TO QUESTION 10)
9 CAN'T REMEMBER

7. **What was the rider(s) relationship to you?** (CIRCLE ALL THAT APPLY OR USE AS PROBE)

1 FRIEND OR SCHOOL MATE
2 DATE (BOY OR GIRL FRIEND)
3 CLOSE FRIEND(S)
4 PARENT
5 OTHER RELATIVE (SPECIFY: _____)
6 NEIGHBOR
7 SOMEONE DIDN'T KNOW VERY WELL
8 OTHER (SPECIFY: _____)

8. **Had the other rider(s) been drinking before they got in your car?** (CIRCLE ONE)

1 NO (NONE OF THEM)
2 YES (SOME OF THEM)
3 YES (ALL OF THEM)
9 DON'T KNOW

9. **Had the other rider(s) been using drugs before they got in your car?** (CIRCLE ONE)

1 NO (NONE OF THEM)
2 YES (SOME OF THEM)
3 YES (ALL OF THEM)
9 DON'T KNOW

10. **While you were driving, was anyone, including you, drinking alcohol in the vehicle?** (CIRCLE ONE)

1 NO (GO TO QUESTION 12)
2 YES
9 DON'T KNOW (GO TO QUESTION 12)

11. **Who was drinking?** (CIRCLE ALL THAT APPLY OR USE AS PROBE)

1 DRIVER
2 RESPONDENT
3 OTHERS

12. **How many drinks had you had before you first started driving that day?** (RECORD)

0 NONE (GO TO QUESTION 14)
____ NUMBER DRINKS

INTERVIEWER: IF "DON'T KNOW", PROBE FOR ESTIMATES

13. **At that point, do you think you were pretty drunk, just a little high, or not really feeling any effects of the alcohol?** (CIRCLE ONE)

1 NOT FEELING ANY EFFECTS OF THE ALCOHOL
2 NOT TOO MUCH (FELT CAPABLE OF DRIVING SAFELY)
3 A MODERATE AMOUNT (LITTLE "TIPSY" OR "HIGH")
4 A LOT (PRETTY DRUNK)
9 DON'T REMEMBER (PROBE FOR ANSWER)

14. **Did you drink any more that day?** (CIRCLE ONE)

1 NO
2 YES

15. **How long was it after you started driving before you started drinking?**

1 LESS THAN 1 HOUR
2 1 OR 2 HOURS
3 MORE THAN 3 HOURS
9 DON'T KNOW

16. **What was the total number of drinks you had all day?** (RECORD)

____ NUMBER

17. **What's the drunkest you felt at any time you were driving?** (CIRCLE ONE)

1 NOT FEELING ANY EFFECTS OF THE ALCOHOL
2 NOT TOO MUCH (FELT CAPABLE OF DRIVING SAFELY)
3 A MODERATE AMOUNT (LITTLE "TIPSY" OR "HIGH")
4 A LOT (PRETTY DRUNK)
9 DON'T REMEMBER (PROBE FOR ANSWER)

18. **Did you use drugs other than alcohol on that day?** (CIRCLE ONE)

1 NO (GO TO QUESTION 20)
2 YES
9 DON'T REMEMBER (GO TO QUESTION 20)

19. **Which drugs?** (CIRCLE ALL THAT APPLY OR USE AS PROBE)

1 MARIJUANA
2 COCAINE
8 OTHER (SPECIFY:_____)

20. **Where were you when you first started DRINKING?** (CIRCLE ONE OR USE AS PROBE)

1 AT HOME
2 AT SCHOOL (DURING SCHOOL HOURS)
3 AT A SCHOOL PROM OR DANCE
4 AT A PARTY AT FRIEND'S HOUSE
5 AT A SPORTS/OTHER SPECIAL EVENT
6 AT A BAR
7 AT WORK
8 OTHER (SPECIFY:_____)
9 JUST OUT "HANGING AROUND"

21. **When you first started drinking that day, were you in a good mood or a bad mood?** (CIRCLE ONE)

1 GOOD MOOD (GO TO QUESTION 22)
2 BAD MOOD (GO TO QUESTION 23)
3 NEITHER GOOD NOR BAD (GO TO QUESTION 24)
9 CAN'T REMEMBER (GO TO QUESTION 24)

22. **Why were you in a good mood?** (CIRCLE ALL THAT APPLY OR USE AS PROBE)

1 NO PARTICULAR REASON
2 SOMETHING GOOD HAD JUST HAPPENED
What? (RECORD:_____
_____)
3 IT WAS A SPECIAL DAY
Why? (CIRCLE OR USE AS PROBE)
1 SPECIAL DATE (BOY/GIRLFRIEND)
2 SPECIAL EVENT (E.G., PARTY)
8 OTHER (SPECIFY:_____
_____)

23. **Why were you in a bad mood?** (CIRCLE ALL THAT APPLY OR USE AS PROBE)

1 FELT BLUE OR DEPRESSED BECAUSE...
(RECORD:_____
_____)
2 HAD A PROBLEM ABOUT...
(RECORD:_____
_____)
3 WAS ANGRY BECAUSE...
(RECORD:_____
_____)
4 FELT ANXIOUS OR NERVOUS BECAUSE...
(RECORD:_____
_____)
8 OTHER (SPECIFY:_____
_____)

24. **Did your mood change after you started drinking?** (CIRCLE ONE)

1 NO, DIDN'T CHANGE
2 YES, GOT BETTER
3 YES, GOT WORSE
9 CAN'T REMEMBER

25. **Which of the following places did you drive to after you started drinking?**
(CIRCLE ALL THAT APPLY OR USE AS PROBE)

1 HOME
2 SCHOOL (DURING SCHOOL HOURS)
3 SCHOOL PROM OR DANCE
4 PARTY AT FRIEND'S HOUSE
5 SPORTS/OTHER SPECIAL EVENT
6 BAR
7 WORK
8 OTHER (SPECIFY:_____)
9 JUST OUT "HANGING AROUND"

26. **Can you tell me what you were thinking about when you decided to drive after you had been drinking?**
(CIRCLE ALL THAT APPLY OR USE AS PROBE)

1 HAVING A GOOD TIME
2 NOTHING IN PARTICULAR
3 NEEDING TO GET SOMEWHERE (WHERE?
SPECIFY:_____)
4 IMPRESSING FRIENDS
5 IMPRESSING DATE
6 WONDERING IF I SHOULDN'T DRIVE
8 OTHER (SPECIFY:_____)
9 CAN'T REMEMBER (GO TO QUESTION 10a)

27. **Was there someone else who could have driven?**

1 NO
2 YES (WHY DIDN'T THEY? _____
_____)

28. **Did you think it was risky for you to drive at any point after you started drinking?**

1 NO, DIDN'T THINK I WAS TOO DRUNK TO DRIVE SAFELY
2 NO, DIDN'T KNOW DRINKING IMPAIRS DRIVING
3 NO, OTHER (SPECIFY: _____)
4 YES

[IF "YES", ASK QUESTION 29; OTHERWISE GO TO QUESTION 30]

29. **What did you think the risks were?** (CIRCLE ALL THAT APPLY OR USE AS PROBE)

1 (YOU) MIGHT GET HURT
2 (YOU) MIGHT HURT SOMEONE ELSE
3 (YOU) MIGHT GET IN TROUBLE WITH THE POLICE
4 (YOU) MIGHT GET IN TROUBLE WITH PARENTS
5 (YOU) MIGHT DAMAGE THE CAR, MOTORCYCLE, ETC.
8 OTHER (SPECIFY: _____)

30. **Did you do anything special to make your driving safer once you started drinking?** (CIRCLE ONE)

1 NO (GO TO QUESTION 32)
2 YES

31. **What did you do?** (CIRCLE ALL THAT APPLY OR USE AS PROBE)

1 SLOWED DOWN
2 WATCHED TRAFFIC LIGHTS AND STOP SIGNS MORE CAREFULLY
3 WATCHED FOR THE POLICE
4 TOOK BACK ROADS
8 OTHER (SPECIFY: _____)

32. **Was there someplace you or a passenger really had to go?** (CIRCLE ONE)

1 NO (GO TO QUESTION 35)
2 YES

33. **Where?** (CIRCLE ONE)

1 HOME - SELF
2 HOME - PASSENGER
3 SCHOOL
4 PARTY
5 SPORTS EVENT, CONCERT, ETC.
6 WORK
8 OTHER (SPECIFY: _____)

34. **What would have happened to you if you were late or didn't get there?** (RECORD)

35. **After you started drinking, did you <u>ever</u> consider not driving?** (CIRCLE ONE)

1 NO (GO TO QUESTION 38)
2 YES

36. **What alternatives did you consider?**
(CIRCLE ALL THAT APPLY OR USE AS PROBE)

1 JUST NOT DRIVING/NOT GOING
2 TAKING A BUS OR A CAB
3 WALKING OR RIDING A BIKE
4 CALLING SOMEONE FOR A RIDE
WHO? (SPECIFY: _____
_____)
5 FINDING ANOTHER DRIVER
6 WAITING TILL YOU SOBERED UP
8 OTHER (SPECIFY: _____
_____)

37. **Did you actually do any of these?** (CIRCLE ONE)

1 NO, WHY? (SPECIFY: _____
_____
_____
_____
_____)
2 YES, WHY? (SPECIFY: _____
_____
_____
_____
_____)

NOW I'D LIKE TO ASK YOU ABOUT THE REACTIONS OF OTHERS TO WHAT WENT ON THAT DAY.

38. **Did anyone pressure you TO DRINK that day or evening?** (CIRCLE ONE)

1 NO (GO TO QUESTION 45)
2 YES

39. **Who?**

1 FRIEND OR SCHOOL MATE
2 DATE (BOY OR GIRL FRIEND)
3 CLOSE FRIEND(S)
4 PARENT
5 OTHER RELATIVE (SPECIFY: _____)
6 NEIGHBOR
7 PERSON(S) OWN AGE DIDN'T KNOW VERY WELL
8 OTHER (SPECIFY: _____)

40. **All together, how many people pressured you to drink?** (RECORD)

____ NUMBER

41. **How much pressure did you feel?** (CIRCLE ONE)

1 NONE
2 A LITTLE
3 SOME
4 A GREAT DEAL

42. **What did someone/others do to make you feel pressured to drink?** (RECORD)

43. **Did you do anything to resist the pressure?** (CIRCLE ONE)

1 NO (GO TO QUESTION 45)
2 YES
9 CAN'T REMEMBER (GO TO QUESTION 45)

44. **What did you do?** (RECORD)

45. **Did anyone pressure you NOT TO DRINK that day or evening?** (CIRCLE ONE)

1 NO (GO TO QUESTION 52)
2 YES

46. **Who?**

1 FRIEND OR SCHOOL MATE
2 DATE (BOY OR GIRL FRIEND)
3 CLOSE FRIEND(S)
4 PARENT
5 OTHER RELATIVE (SPECIFY: _____)
6 NEIGHBOR
7 PERSON(S) OWN AGE DIDN'T KNOW VERY WELL
8 OTHER (SPECIFY: _____)

47. **All together, how many people pressured you to drink?** (RECORD)

____ NUMBER

48. **How much pressure did you feel?** (CIRCLE ONE)

1 NONE
2 A LITTLE
3 SOME
4 A GREAT DEAL

49. **What did someone/others do to make you feel pressured to drink?** (RECORD)

50. **Did you do anything to resist the pressure?** (CIRCLE ONE)

1 NO (GO TO QUESTION 52)
2 YES
9 CAN'T REMEMBER (GO TO QUESTION 52)

51. **What did you do?** (RECORD)

52. **Did anyone pressure you TO DRIVE after you had been drinking?** (CIRCLE ONE)

1 NO (GO TO QUESTION 59)
2 YES

53. **Who?**

1 FRIEND OR SCHOOL MATE
2 DATE (BOY OR GIRL FRIEND)
3 PARENT
4 OTHER RELATIVE (SPECIFY: _____)
5 NEIGHBOR
6 SOMEONE DIDN'T KNOW VERY WELL
8 OTHER (SPECIFY: _____)

54. **All together, how many people pressured you to drive after you were drinking?** (RECORD)

____ NUMBER

55. **How much pressure did you REALLY feel?** (CIRCLE ONE)

1 NONE
2 A LITTLE
3 SOME
4 A GREAT DEAL

56. **What did someone/others do to make you feel pressured to drive after you were drinking?** (RECORD)

57. **Did you do anything to resist the pressure?** (CIRCLE ONE)

1 NO (GO TO QUESTION 59)
2 YES
9 CAN'T REMEMBER (GO TO QUESTION 59)

58. **What did you do?** (RECORD)

59. **What do you think other people would have thought of you if you refused to drive after you were drinking?**
(CIRCLE ALL THAT APPLY OR USE AS PROBE)

1 NOT APPLICABLE (NO ONE ELSE INVOLVED)
2 THAT YOU WERE "CHICKEN," "BABY," ETC.
3 THAT YOU WERE MAKING A BIG DEAL OUT OF NOTHING
4 THAT YOU WERE PRETTY SMART
5 (YOU) WERE SPOILING OTHERS' FUN
8 OTHER (SPECIFY: _____)

60. **Did anyone do or say anything to try to stop you from driving once you had started drinking?**
(CIRCLE ONE)

1 NO (GO TO QUESTION 65)
2 YES
9 CAN'T REMEMBER (GO TO QUESTION 65)

61. **What was said or done?** (CIRCLE ALL THAT APPLY OR USE AS PROBE)

1 TRIED TO GET (YOU) TO LET SOMEONE ELSE DRIVE
2 TRIED TO GET KEYS
3 TRIED TO GET (YOU) TO SLEEP OVER
4 TRIED TO STALL (YOU) UNTIL (YOU) SOBERED UP
5 CALLED SOMEONE. WHO? (RECORD: _____)
8 OTHER (SPECIFY: _____)

62. **Did any of these things work at any time?**

1 NO (GO TO QUESTION 64)
2 YES
9 CAN'T REMEMBER (GO TO QUESTION 64)

63. **What worked?** (CIRCLE ALL THAT APPLY)

1 TRIED TO GET (YOU) TO LET SOMEONE ELSE DRIVE
2 TRIED TO GET KEYS
3 TRIED TO GET (YOU) TO SLEEP OVER
4 TRIED TO STALL (YOU) UNTIL (YOU) SOBERED UP
5 CALLED SOMEONE. WHO? (RECORD: _____)
8 OTHER (SPECIFY: _____)

64. **What was your reaction to these things?** (CIRCLE ALL THAT APPLY)

1 (YOU) DENIED (YOU) WERE DRUNK
2 SAID (YOU) COULD DRIVE SAFELY
3 SHRUGGED IT OFF
4 GOT ANGRY
5 TOLD THEM TO MIND THEIR OWN BUSINESS
8 OTHER (SPECIFY: _____
_____)

NOW I'D LIKE TO ASK YOU ABOUT ANY CONSEQUENCES THERE MAY HAVE BEEN AS A RESULT OF YOUR DRINKING AND DRIVING.

65. **Did you have an accident while you were driving?** (CIRCLE ONE)

1 NO (GO TO QUESTION 67)
2 YES

66. **What happened as a result of the accident?** (CIRCLE ALL THAT APPLY OR USE AS PROBE)

1 YOUR VEHICLE WAS DAMAGED SLIGHTLY
2 OTHER PERSON'S VEHICLE WAS DAMAGED SLIGHTLY
3 YOUR VEHICLE WAS DAMAGED SEVERELY
4 OTHER PERSON'S VEHICLE WAS DAMAGED SEVERELY
5 SOMEONE WAS INJURED SLIGHTLY
6 SOMEONE WAS INJURED SERIOUSLY
7 SOMEONE WAS KILLED
8 OTHER (SPECIFY:_____
_____)

67. **Did you get stopped by the police while you were driving after drinking that day/evening?** (CIRCLE ONE)

1 NO (GO TO QUESTION 69)
2 YES

68. **What happened as a result of getting stopped by the police?** (CIRCLE ALL THAT APPLY OR USE AS PROBE)

1 WAS CHARGED WITH DRIVING WHILE INTOXICATED
2 CONVICTED, DRIVING WHILE INTOXICATED
3 HAD (YOUR) LICENSE SUSPENDED OR REVOKED
4 WAS FINED
5 WENT TO JAIL
6 SENT TO A PROGRAM
8 OTHER (SPECIFY: _____
_____)

69. **Did you get into any trouble with your parents, friends, or others?** (CIRCLE ONE)

1 NO (GO TO QUESTION 71)
2 YES
9 CAN'T REMEMBER (GO TO QUESTION 71)

70. **What kind of trouble?** (RECORD)

71. **Was there anything else that contributed to your driving after drinking that day which we haven't discussed?** (CIRCLE ONE)

1 NO (GO TO QUESTION 73)
2 YES

72. **What?** (RECORD)

73. **Did you ever think or say to yourself during that time you were driving while drinking that you would never drive again after drinking?**

1 NO
2 YES
9 CAN'T REMEMBER (PROBE FOR ANSWER)

NOW I'D LIKE YOU TO THINK BACK OVER ALL THE TIMES WHEN YOU MIGHT HAVE DRIVEN AFTER DRINKING.

74. **Did anyone ever at anytime successfully convince you not to drive after drinking?**

1 NO (GO TO QUESTION 77)
2 YES (GO TO QUESTION 75)

75. **What did they do?**

1 TRIED TO PERSUADE HIM/HER TO LET (YOU)/SOMEONE ELSE DRIVE
2 TRIED TO GET THE KEYS
3 TRIED TO GET HIM/HER TO SLEEP OVER
4 TRIED TO STALL HIM/HER UNTIL S/HE COULD SOBER UP
5 CALLED SOMEONE FOR HELP
WHO? (RECORD:_____)
6 NOTHING
8 OTHER (SPECIFY:_____)

76. **Did it work?**

1 NO
2 YES (WHY DID IT WORK?_____
_____
_____
_____)

77. **Do you think you will ever drive again after drinking?** (CIRCLE ONE)

1 NO
2 YES
9 DON'T KNOW/UNSURE

78. **Why do you think that?** (RECORD)

RIDING WITH DRINKING DRIVERS INTERVIEW

NHTSA STUDY

Interviewer:_____

Date:_____

City:_____

Location (name of school, recreation center):

_____

Start time of interview: _____

End time of interview: _____

Length of interview (in minutes): _____

1. Could you tell me how many times you have ridden with a driver who was drinking? (RECORD)

____ NUMBER OF TIMES

INTERVIEWER: IF "DON'T KNOW," PROBE TO GET ESTIMATE. IF NONE, TERMINATE INTERVIEW.

I'd like to learn more about the most recent time you rode with someone who was driving and drinking. I'll stop for a moment to let you think about that time.

2. First, how old were you when this occurred?

____ AGE

3. About how old was the driver? (RECORD)

____ AGE

4. Was the driver male or female? (CIRCLE ONE)

1 MALE
2 FEMALE

5. **What kind of vehicle was this person driving?**
(CIRCLE ONE OR USE AS PROBE)

1 AUTOMOBILE
2 TRUCK
3 VAN
4 MOTORCYCLE
5 MOPED
8 OTHER (SPECIFY:_____)

6. **Whose vehicle was it?** (CIRCLE ONE OR USE AS PROBE)

1 MINE
2 MY PARENTS
3 FRIEND'S OTHER THAN DRIVER
4 FRIEND'S PARENTS
5 DRIVER
6 DRIVER'S PARENTS
8 OTHER (SPECIFY: _____)

7. **What was the driver's relationship to you?**
(CIRCLE OR USE AS PROBE)

1 FRIEND OR SCHOOL MATE
2 DATE (BOY/GIRLFRIEND)
3 PARENT
4 OTHER RELATIVE (SPECIFY:_____)
5 NEIGHBOR
6 SOMEONE DIDN'T KNOW VERY WELL
8 OTHER (SPECIFY:_____)

8. **Where were you when you first started riding with this person?** (CIRCLE OR USE AS PROBE)

1 AT HOME
2 AT SCHOOL (DURING SCHOOL HOURS)
3 AT A SCHOOL PROM OR DANCE
4 AT A PARTY AT FRIEND'S HOUSE
5 AT A SPORTS/OTHER SPECIAL EVENT
6 AT A BAR
7 AT WORK
8 JUST OUT "HANGING AROUND"
9 OTHER (SPECIFY:_____)

9. **What time was it?** (RECORD: _____)

10. **How many other people besides yourself rode with the driver, too?** (CIRCLE ONE)

____	NUMBER (IF "0," GO TO QUESTION 14)
9	CAN'T REMEMBER (GO TO QUESTION 14)

11. **What was the rider(s) relationship to you?** (CIRCLE ALL THAT APPLY OR USE AS PROBE)

1	FRIEND OR SCHOOL MATE
2	DATE (BOY/GIRLFRIEND)
3	CLOSE FRIEND(S)
4	PARENT
5	OTHER RELATIVE (SPECIFY:_____)
6	NEIGHBOR
7	SOMEONE DIDN'T KNOW VERY WELL
8	OTHER (SPECIFY:_____)

12. **Had the other rider(s) been drinking that day?** (CIRCLE ONE)

1	NO (NONE OF THEM)
2	YES (SOME OF THEM)
3	YES (ALL OF THEM)
9	DON'T KNOW

13. **Had the other rider(s) been using drugs that day?** (CIRCLE ONE)

1	NO (NONE OF THEM)
2	YES (SOME OF THEM)
3	YES (ALL OF THEM)
9	DON'T KNOW

14. **While you were riding, was anyone drinking alcohol in the vehicle?** (CIRCLE ONE)

1 NO (GO TO QUESTION 16)
2 YES
9 DON'T KNOW (GO TO QUESTION 16)

15. **Who was drinking?**
(CIRCLE ALL THAT APPLY OR USE AS PROBE)

1 DRIVER
2 RESPONDENT (YOU)
3 OTHERS

16. **How many drinks had the driver had before he/she first started DRIVING that day?** (RECORD)

0 NONE (GO TO QUESTION 18)
____ NUMBER DRINKS

INTERVIEWER: IF "DON'T KNOW", PROBE FOR ESTIMATES

17. **At that point, do you think the driver was pretty drunk, just a little high, or not really feeling many or any effects of the alcohol?** (CIRCLE ONE)

1 NOT FEELING ANY EFFECTS OF THE ALCOHOL
2 NOT TOO MUCH (FELT CAPABLE OF DRIVING SAFELY)
3 A MODERATE AMOUNT (LITTLE "TIPSY" OR "HIGH")
4 A LOT (PRETTY DRUNK)
9 DON'T REMEMBER (PROBE FOR ANSWER)

18. **How long was it after you started riding with this driver before he/she started drinking?** (CIRCLE ONE)

1 LESS THAN 1 HOUR
2 1 HOUR OR 2 HOURS
3 MORE THAN 3 HOURS
9 DON'T KNOW

19. **Which of the following places did you go with the driver after he/she started drinking?**
(CIRCLE ALL THAT APPLY OR USE AS PROBE)

1 HOME
2 SCHOOL (DURING SCHOOL HOURS)
3 A SCHOOL PROM OR DANCE
4 A PARTY AT FRIEND'S HOUSE
5 A SPORTS/OTHER SPECIAL EVENT
6 A BAR
7 WORK
8 OTHER (SPECIFY:_____)
9 JUST OUT "HANGING AROUND"

20. **Considering the whole time you were with the driver, what's the drunkest you felt he/she was at any time you were riding with him/her?** (CIRCLE ONE)

1 DIDN'T FEEL ANY EFFECTS OF THE ALCOHOL
2 NOT TOO MUCH
3 A MODERATE AMOUNT (LITTLE "TIPSY" OR "HIGH")
4 A LOT (PRETTY DRUNK)
9 DON'T REMEMBER (PROBE FOR ESTIMATE)

21. **Did the driver use drugs other than alcohol on that day?**

1 NO (GO TO QUESTION 23)
2 YES
9 DON'T REMEMBER (GO TO QUESTION 23)

22. **Which drugs?** (CIRCLE ALL THAT APPLY OR USE AS PROBE)

1 MARIJUANA
2 COCAINE
3 OTHER (SPECIFY: _____)

23. **Did you drink alcohol on that day too?** (CIRCLE ONE)

1 NO (GO TO QUESTION 27)
2 YES

24. **What was the total number of drinks you had that day?**
(RECORD)

____ NUMBER

25. **Did you feel "high" or real drunk?** (CIRCLE ONE)

1 PRETTY DRUNK
2 JUST A LITTLE HIGH
3 DIDN'T FEEL ANY EFFECTS OF THE ALCOHOL

OTHER REMARKS: _____

26. **Do you think you would have ridden with this person if you hadn't been drinking?** (CIRCLE ONE)

1 NO
2 YES
3 UNSURE

27. **Had you been using drugs other than alcohol that day?**

1 NO (GO TO QUESTION 29)
2 YES

28. **Do you think you would have ridden with that person if you hadn't been using drugs?** (CIRCLE ONE)

1 NO
2 YES
9 UNSURE

29. **Once you knew the driver was drinking, what were you thinking about as you decided to ride with this driver?** (CIRCLE ALL THAT APPLY OR USE AS PROBE)

1 HAVING A GOOD TIME
2 NOTHING IN PARTICULAR
3 NEEDING TO GET HOME
4 WONDERING WHETHER (YOU) SHOULD TURN DOWN THE RIDE
5 WAYS TO GET OUT OF GOING
6 HOW TO PERSUADE THE PERSON NOT TO DRIVE
8 OTHER (SPECIFY:_____)
9 DON'T REMEMBER

30. **What were your thoughts and feelings while you were riding with this person during the time after they had been drinking?** (CIRCLE ALL THAT APPLY OR USE AS PROBE)

1 NOTHING IN PARTICULAR
2 JUST FOCUSED ON HAVING FUN
3 WAS NERVOUS/AFRAID
(WHY? RECORD: _____)
4 WAS ANGRY AT DRIVER
Why? (RECORD: _____)
5 FELT (YOU) HAD MADE A BAD DECISION BY GOING ALONG
6 JUST WISHED (YOU) COULD GET OUT/GET HOME
8 OTHER (SPECIFY: _____)
9 CAN'T REMEMBER

31. **Did you think it was risky to ride with the person after you knew he/she had been drinking?** (CIRCLE ONE)

1 NO, DIDN'T KNOW HE OR SHE WAS DRINKING UNTIL LATER
2 NO, DIDN'T KNOW HE OR SHE WAS THAT DRUNK
3 NO, DIDN'T KNOW DRINKING IMPAIRED DRIVING
4 YES (GO TO QUESTION 32)

[GO TO QUESTION 33 IF YOU CIRCLED "1", "2", OR "3"]

32. **What did you think the risks were?** (CIRCLE ALL THAT APPLY OR USE AS PROBE)

1 (YOU) MIGHT GET HURT
2 SOMEONE ELSE MIGHT GET HURT
3 COULD GET IN TROUBLE WITH POLICE
4 COULD GET IN TROUBLE WITH PARENTS
5 CAR/VEHICLE COULD BE DAMAGED
8 OTHER (SPECIFY: _____
_____)

33. **Was there someplace you really had to go?** (CIRCLE ONE)

1 NO (GO TO QUESTION 36)
2 YES

34. **Where?** (CIRCLE ONE)

1 HOME
2 DATE
3 SCHOOL
4 PARTY
5 SPORTING EVENT, CONCERT, ETC.
6 BAR
7 WORK
8 OTHER (SPECIFY: _____
_____)

35. **What would have happened to you if you were late or didn't arrive?** (RECORD)

36. **Did you ever consider <u>not</u> riding with this person after you knew they were drinking?** (CIRCLE ONE)

1 NO (GO TO QUESTION 39)
2 YES

37. **What alternatives did you consider?**
(CIRCLE ALL THAT APPLY OR USE AS PROBE)

1 JUST NOT GOING
2 TAKING A BUS
3 TAKING A CAB
4 WALKING OR RIDING A BIKE
5 CALL SOMEONE FOR A RIDE
(WHO? SPECIFY: _____
_____)
6 FINDING ANOTHER DRIVER
7 TRYING TO GET OUT OF THE CAR, MOTORCYCLE, ETC.
8 OTHER (SPECIFY: _____
_____)

38. **Did you actually try any of these?** (CIRCLE ONE)

1 NO (WHY? SPECIFY:_____
_____
_____)

2 YES (WHY? SPECIFY:_____
_____
_____)

NOW I'D LIKE TO ASK YOU ABOUT THE REACTIONS OF OTHERS TO YOUR RIDING WITH THAT DRIVER THAT DAY.

39. **Did anyone pressure you TO RIDE with this person?** (CIRCLE ONE)

1 NO (GO TO QUESTION 46)
2 YES

40. **Who?** (CIRCLE ALL THAT APPLY)

1 FRIEND OR SCHOOL MATE
2 DATE (BOY/GIRLFRIEND)
3 PARENT
4 OTHER RELATIVE (SPECIFY:_____)
5 NEIGHBOR
6 SOMEONE DIDN'T KNOW VERY WELL
7 DRIVER
8 OTHER (SPECIFY:_____)

41. **All together, how many people pressured you?** (RECORD)

____ NUMBER

42. **How much pressure did you <u>REALLY</u> feel?** (CIRCLE ONE OR USE AS PROBE)

1 NONE
2 A LITTLE
3 SOME
4 A GREAT DEAL

43. **What did someone/others do to make you feel pressured to ride with this person?** (RECORD)

44. **Did you do anything to resist the pressure?** (CIRCLE ONE)

1 NO (GO TO QUESTION 46)
2 YES
9 CAN'T REMEMBER (GO TO QUESTION 46)

45. **What did you do?** (RECORD)

46. **Did anyone pressure you NOT TO RIDE with this person?** (CIRCLE ONE)

1 NO (GO TO QUESTION 52)
2 YES

47. **Who?** (CIRCLE ALL THAT APPLY)

1 FRIEND OR SCHOOL MATE
2 DATE (BOY/GIRLFRIEND)
3 PARENT
4 OTHER RELATIVE (SPECIFY:_____)
5 NEIGHBOR
6 SOMEONE DIDN'T KNOW VERY WELL
7 DRIVER
8 OTHER (SPECIFY:_____)

48. **All together, how many people pressured you?** (RECORD)

____ NUMBER

48. **How much pressure did you REALLY feel?** (CIRCLE ONE OR USE AS PROBE)

1 NONE
2 A LITTLE
3 SOME
4 A GREAT DEAL

49. **What did someone/others do to make you feel pressured NOT to ride with this person?** (RECORD)

50. **Did you do anything to resist the pressure?** (CIRCLE ONE)

1 NO (GO TO QUESTION 52)
2 YES
9 CAN'T REMEMBER (GO TO QUESTION 52)

51. **What did you do to resist the pressure?** (RECORD)

52. **What do you think other people would have thought of you if you refused to ride with this driver after he/she had been drinking?** (CIRCLE ALL THAT APPLY OR USE AS PROBE)

1 NOT APPLICABLE (NO ONE ELSE INVOLVED)
2 THAT (YOU) WERE "CHICKEN," "BABY," ETC.
3 THAT (YOU) WERE MAKING A BIG DEAL OUT OF NOTHING
4 THAT (YOU) WERE PRETTY SMART
5 (YOU) WERE SPOILING OTHERS' FUN
8 OTHER (SPECIFY: _____
_____)

53. **Did you or anyone else do anything or say anything to try to keep the person from driving?** (CIRCLE ONE)

1 NO (GO TO QUESTION 59)
2 YES

54. **What, if anything, did <u>YOU</u> say or do?** (CIRCLE OR USE AS PROBE)

1 TRIED TO PERSUADE HIM/HER TO LET (YOU)/SOMEONE ELSE DRIVE
2 TRIED TO GET THE KEYS
3 TRIED TO GET HIM/HER TO SLEEP OVER
4 TRIED TO STALL HIM/HER UNTIL S/HE COULD SOBER UP
5 CALLED SOMEONE FOR HELP
Who? (RECORD:_____)
6 NOTHING
8 OTHER (SPECIFY:_____)

55. **What, if anything, did anyone else (besides you) say or do to try to keep the person from driving?** (CIRCLE OR USE AS PROBE)

1 TRIED TO PERSUADE HIM/HER TO LET (YOU)/SOMEONE ELSE DRIVE
2 TRIED TO GET THE KEYS
3 TRIED TO GET HIM/HER TO SLEEP OVER
4 TRIED TO STALL HIM/HER UNTIL S/HE COULD SOBER UP
5 CALLED SOMEONE FOR HELP
WHO? (RECORD:_____)
6 NOTHING
8 OTHER (SPECIFY:_____)

56. **Did any of these things work at any time?**

1 NO (GO TO QUESTION 59)
2 YES
9 CAN'T REMEMBER (GO TO QUESTION 59)

57. **What worked?** (RECORD)

1 TRIED TO PERSUADE HIM/HER TO LET (YOU)/SOMEONE ELSE DRIVE
2 TRIED TO GET THE KEYS
3 TRIED TO GET HIM/HER TO SLEEP OVER
4 TRIED TO STALL HIM/HER UNTIL S/HE COULD SOBER UP
5 CALLED SOMEONE FOR HELP
Who? (RECORD:_____)
6 NOTHING
8 OTHER (SPECIFY:_____)

58. **What was the driver's reaction to these attempts?** (CIRCLE ALL THAT APPLY)

1 DENIED HE/SHE WAS DRUNK
2 SAID HE/SHE COULD DRIVE SAFELY
3 SHRUGGED IT OFF
4 GOT ANGRY
5 TOLD YOU/OTHERS TO MIND YOUR OWN BUSINESS
8 OTHER (SPECIFY: _____)

NOW I'D LIKE TO ASK YOU ABOUT ANY CONSEQUENCES THERE MAY HAVE BEEN AS A RESULT OF THAT OCCASION.

59. **Did the driver have an accident -- a crash, for example?** (CIRCLE ONE)

1 NO (GO TO QUESTION 61)
2 YES

60. **What happened as a result of the accident?** (CIRCLE ALL THAT APPLY OR USE AS PROBE)

1 VEHICLE (YOU) WERE IN DAMAGED SLIGHTLY
2 VEHICLE (YOU) WERE IN DAMAGED SEVERELY
3 OTHER PERSON'S VEHICLE WAS DAMAGED SLIGHTLY
4 OTHER PERSON'S VEHICLE WAS DAMAGED SEVERELY
5 SOMEONE WAS INJURED SLIGHTLY
6 SOMEONE WAS INJURED SEVERELY
7 SOMEONE WAS KILLED
8 OTHER (SPECIFY: _____)

61. **Did the driver get stopped by the police?** (CIRCLE ONE)

1 NO (GO TO QUESTION 63)
2 YES

62. **What happened as a result of getting stopped by the police?** (CIRCLE ALL THAT APPLY OR USE AS PROBE)

1 DRIVER GOT CHARGED WITH DRIVING WHILE INTOXICATED
2 DRIVER GOT CONVICTED OF DRIVING WHILE INTOXICATED
3 DRIVER HAD LICENSE SUSPENDED OR REVOKED
4 DRIVER WAS FINED
5 DRIVER WENT TO JAIL
6 DRIVER WAS SENT TO A PROGRAM
8 OTHER (SPECIFY: _____)
9 DON'T KNOW

63. **Did getting stopped by the police get you personally into any trouble?** (CIRCLE ONE)

1 NO (GO TO QUESTION 65)
2 YES

64. **What kind of trouble?** (RECORD)

65. **Was there anything else that contributed to your riding with a drinking driver that day which we haven't discussed?** (CIRCLE ONE)

1 NO (GO TO QUESTION 67)
2 YES

66. **What?** (RECORD)

67. **Did you ever think or say to yourself, during that ride, that you would never ride again with a driver who had been drinking?**

1 NO
2 YES
9 CAN'T REMEMBER (PROBE FOR ANSWER)

NOW I'D LIKE YOU TO THINK BACK OVER ALL THE TIMES WHEN YOU MIGHT HAVE RIDDEN WITH A DRIVER WHO HAD HAD TOO MUCH TO DRINK TO DRIVE SAFELY.

68. **Did anyone ever at anytime successfully convince you not to ride with a driver who had been drinking?**

1 NO (GO TO QUESTION 71)
2 YES (GO TO QUESTION 69)

69. **What did they do?**

1 CONVINCED ME TO JUST NOT GO
2 CONVINCED ME TO TAKE A BUS
3 CONVINCED ME TO TAKE A CAB
4 CONVINCED ME TO WALK OR RIDE A BIKE
5 CONVINCED ME TO CALL SOMEONE FOR A RIDE
6 CONVINCED ME TO FIND ANOTHER DRIVER
7 CONVINCED ME TO TRY TO GET OUT OF THE CAR
8 OTHER (SPECIFY: _____
_____
_____
_____)

70. **Did it work?**

1 NO
2 YES (WHY DID IT WORK? _____
_____
_____
_____)

71. **Do you think you will ever ride again with a driver who has been drinking?** (CIRCLE ONE)

1 NO
2 YES
9 DON'T KNOW/UNSURE

72. **Why do you think that?** (RECORD)

FOCUS GROUP PROTOCOL

NHTSA STUDY

Interviewer:_____

Date:_____

City:_____

Location (name of school, recreation center):

_____

Start time of interview: _____

End time of interview: _____

Length of interview (in minutes): _____

NOTE TO INTERVIEWER: ASK AGE AND DRIVERS LICENSURE STATUS, NOTE SEX AND APPROXIMATE RACE OF EACH PARTICIPANT

	AGE	SEX	RACE	DRIVER'S LICENSE (Y OR N)
1				
2				
3				
4				
5				
6				
7				
8				
9				

FOCUS GROUP PROTOCOL

There are a variety of types of programs to try to reduce drinking and driving among young people. Today, I'd like to find out what you think about these programs. I'd also like to find out your reasons for feeling the way you do about them.

SADD-TYPE CLUBS

First, let's discuss school clubs that give young people an opportunity to get involved in preventing drinking and driving among their peers. These clubs have committees that plan activities in the school that encourage students not to drink and drive such as information campaigns, rallies, special exhibits on campus about drinking and driving, and sponsoring speakers and assemblies. SADD is an example of this type of program.

Do you think programs like this would be effective in preventing or reducing drinking and driving?

Why?

Do you think many people your age would join such a club?

Why?

Would you personally join such a club?

Why?

CONTRACTS

Some students and their parents sign a contract that says that if the student ever needs a ride because he or she or the people he or she are with have been drinking too much to drive, the student will call the parent for a ride and discuss the incident later.

Do you think such a contract would be effective in preventing or reducing drinking and driving?

Why?

Do you think many people your age would sign such a contract?

Why?

Would you personally sign such a contract?

Would your parents?

Why?

Do you think signing such a contract would have an effect on the amount youth drink?

Why?

ALTERNATIVE PARTIES

Some students or schools sponsor alcohol free parties or dances, particularly at prom or senior week time, or during holidays like Christmas or the 4th of July. If you come to these parties and have been drinking, you are not allowed in, and if you drink at or outside the party, you must leave. People who plan these parties try to have good bands and good food. Project Graduation is an example of a group that sponsors such parties.

Do you think such parties would be effective in preventing or reducing drinking and driving?

Why?

Do you think many people your age would attend such a party?

Why?

Would you attend such a party?

Why?

SAFE RIDE PROGRAMS

In some communities, there is a telephone number you can call if you or the person driving you has been drinking too much to drive safely. When you call this number, someone comes and gives you a free ride. Safe Rides is an example of such a program.

Do you think such a telephone number would be effective in preventing or reducing drinking and driving?

Why?

Do you think many people your age would call such a number?

Why?

Would you call such a number?

Why?

Do you think a Safe Rides program would have an effect on the amount youth drink?

Why?

SCHOOL CLASSES ABOUT DRINKING AND DRIVING

Some classes take some class time to teach about or discuss the effects of alcohol and drinking and driving. These classes use films, outside speakers, student discussions, and demonstrations.

Do you think such classes would be effective in preventing or reducing drinking and driving?

Why?

Do you think many people your age would attend such a class if they had a choice?

Why?

Would you attend such a class if you had a choice?

Why?

PARENT INTERVENTIONS

Some parents take young peoples' car keys when the young people arrive at a party at the parent's home. The parents won't give the keys back if they think the young person has been drinking too much to be able to drive safely. Parents may also refuse to serve alcohol, limit the amount teenagers drink or refuse to let kids who've been drinking into a party.

Do you think parents doing these things would be effective in preventing or reducing drinking and driving?

Why?

Do you think many people your age would attend a party where parents do these things?

Why?

Would you attend such a party?

Why?

Do you think parents taking keys would have an effect on how much youth drink?

Why?

JUST NOT DRINKING

Obviously, if you don't drink and don't hang around with young people who do drink, you will never have to drink and drive or ride with a young person who has been drinking. Therefore, some young people try never to drink and choose friends who don't drink.

Do you think such a lifestyle would be effective in preventing or reducing drinking and driving?

Why?

Do you think many people your age would choose such a lifestyle?

Why?

Would you choose such a lifestyle?

Why?

FEAR AROUSAL

Some programs show young people the results of drinking and driving. For example, youth might be shown pictures of people who have been injured, or might visit a hospital where people injured in drunk driving accidents are being treated. Also, youth might be taken to a jail where drunk drivers are serving sentences.

Do you think such a program would be effective in preventing or reducing drinking and driving?

Why?

Do you think many people your age would attend such a program if they had a choice?

Why?

Would you attend such a program if you had a choice?

Why?

JUST SAY NO PROGRAMS

Some programs try to get youth to just say no to drinking or drinking and driving? They give youth buttons and t-shirts, and some youth even form clubs to try to get other youth to say no to drinking or drinking and driving.

Do you think such a program would be effective in preventing or reducing drinking and driving?

Why?

Do you think many people your age would join a just say no club?

Why?

Would you join a just say no club?

Why?

DESIGNATED DRIVER

Some youth avoid driving after drinking by choosing a driver who agrees not to drink on that occasion.

Do you think such a strategy would be effective in preventing or reducing drinking and driving?

Why?

Do you think many people your age would use this strategy?

Why?

Would you use this strategy?

Why?

Do you think a strategy like choosing a driver who agrees not to drink would have an effect on the amount other youth drink?

Why?

IMMERSION PROGRAMS

Some programs train a few youth from a school or community at an intensive summer program that lasts a week or more. These youth then develop drinking driving programs for their schools or communities when they return.

Do you think such a program would be effective in preventing or reducing drinking and driving?

Why?

Do you think many people your age would attend such a summer program if they had a choice?

Why?

Would you attend such a summer program if you had a choice?

Why?