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U.S. Department of Transportation
National Highway Traffic
Safety Administration

Annual Report

ON
THE PUBLIC
INFORMATION AND
EDUCATION
COUNTERMEASURE OF

Alcohol Safety Action Projects

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Office of Driver and Pedestrian
Traffic Safety Programs

National Highway Traffic Safety
Administration

U.S. Department of Transportation
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EXECUTIVE SUMMARY

The Public Information and Education countermeasure of 35 Alcohol Safety Action Projects established in 1971 by the U.S. Department of Transportation in as many states operates as a critical element in the systematic attempt to reduce alcohol-related crashes on the nation's highways. Significant reduction of the alcohol crash problem depends in large part upon an informed public acting responsibly to control the abuse of alcohol by those who intend to drive, and to prevent from driving anyone who becomes intoxicated.

With the support of staff from the National Highway Traffic Safety Administration (NHTSA) the locally based ASAPs manage and implement a multi-faceted communications program aimed at drinking drivers and the people surrounding them. Each ASAP conducts surveys of its specific populations to determine the extent of the drunk driving problem, to identify the persons who drink to excess and then drive and to determine what communications are most likely to instill in them responsible alcohol/driving behavior. From the interpretations of their surveys individual sites design, develop, implement and evaluate relevant creative strategies and program activities aimed at their specific drinking driving audience.

Since the first site began operation in 1971 the ASAPs have attempted to provide potential and actual drinking drivers with the accurate information that will enable them to formulate responsible attitudes and behavior related to drinking and driving.

The PI&E objectives have been progressive over the past three years. The first goal was to create an awareness of and concern for the drunk driving problem among the general public and to generate the support of official groups for programs designed to diminish it. Much of the effort was devoted to providing knowledge. The second year concentrated on personalizing the problem by identifying the drunk driver as someone everyone knows: a friend, relative or acquaintance, not necessarily the behaviorally deviant outcast. Attempts were made to create responsible attitudes toward driving after drinking and to alter irresponsible ones where they existed. During the past year PI&E campaigns and materials have aimed to persuade persons to take action to intervene in potential DWI situations to prevent the occurrence of drunk driving.

The campaigns from ASAP sites around the country are diverse in their use of creative strategies, appeals and messages. They have variously employed mass media including television, radio, and print and non-mass media including speakers' bureaus and one-to-one personal encounters.

An evaluation of Public Information and Education countermeasure impact in 24 ASAPs reporting in mid-1974 showed that significantly more sites which have specific PI&E program activities showed results in a positive direction over the life of the project than sites without such activities.* The following chart presents the results for each of the three primary areas of PI&E concentration: knowledge, attitudes, and behavior.

*Application of a Chi Square (χ^2) test of significance to responses from required core questions in ASAP household surveys revealed that overall, the ASAP Public Information and Education efforts are significant at the .01 level where $\chi^2 = 9.27$ $df = 1$.

Percentage of Sites Showing Change in Positive Direction, by Category

Area of Concentration	All Sites		Sites With PI&E Effort		Sites Without PI&E Effort	
	N	%	N	%	N	%
Knowledge	297 of 401	74.1	197 of 255	77.2	100 of 146	68.5
Attitudes	12 of 23	52.2	6 of 9	66.7	6 of 14	42.8
Behavior	37 of 78	47.4	24 of 43	55.8	13 of 35	37.1

On the national level, research into the drinking/driving attitudes and behavior of adults, 18 to 55, and young people, 14 to 18, showed that half of those interviewed were involved in situations where alcohol was served one or more times a month. The same persons revealed considerable misconceptions about the effect of alcohol consumption upon the body and driving skills, and an alarming number who drive drunk or ride in a car driven by a drunk without being cognizant of or concerned about the potential consequences.

The national research combined with the analysis of ASAP PI&E impact indicates that while progress has been made in getting the drunk driving problem on the agenda of the American public's conscience, more work needs to be done in providing information about alternatives to DWI and in persuading people to intervene to prevent its occurrence.

PREFACE

Drunk driving is a serious problem in the United States. Each year half of all fatal traffic accidents are alcohol-related. For 1974 the toll amounted to more than 20,000 persons losing their lives in crashes where alcohol was involved.

In 1970, the National Highway Traffic Safety Administration of the U.S. Department of Transportation proposed to Congress a comprehensive program of alcohol countermeasures aimed at reducing the number of alcohol-related traffic crashes and resultant death or injury. Since January, 1971, thirty-five community-based Alcohol Safety Action Projects in different states have been testing a range of countermeasures. This report reviews the progress of one of the most critical and promising, Public Information and Education.

Ours is both an alcohol culture and an information culture. Much alcohol/driving abuse results from a lack of information or misinformation about alcohol and its effects upon the mind and driving skills. The Public Information and Education countermeasure aims, among other objectives, to create an awareness of drunk driving as a serious problem, and to impact specific target audiences with the information and motivation they need to prevent the combination of excessive drinking and driving from occurring. This report documents the need for effective public information and education programs, evaluates the overall effect of the Public Information and Education countermeasure in the sites and describes the implications for future directions and activity.

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I. THE DRINKING CULTURE AND DRINKING/DRIVING PROBLEM

The majority of the American adult population consumes beverages containing alcohol at least occasionally. Most of them also drive automobiles. Both activities are widely accepted forms of social behavior.

Many people combine the two activities. They may occasionally or regularly drink to excess and then drive an automobile. To many, this behavior also is socially acceptable, even though it is involved in the deaths of more than 20,000 persons each year. By their implicit acceptance of excessive drinking and driving or their inaction to prevent the combination from occurring, the American public unconsciously and unknowingly endorses the killing, maiming or injuring of thousands of people annually in traffic accidents.

Alcohol consumption is intricately woven into the social fabric of the country. People drink to relax, to be social, to escape from problems, to maintain an image. In a national sample of adults surveyed by the National Highway Traffic Safety Administration (NHTSA)¹ in the summer of 1974, 54% of the respondents said they were involved in a social drinking situation once a month or more. Of those people, 59% drank alcohol on two or more days during the week prior to their interview. These drinkers are not behaviorally deviant; they are the regular people with whom most persons have day-to-day contact. They are both males and females, of all ages, of all education, occupation and income levels, from all areas of the country.

Most of the American adult population, both drinkers and non-drinkers, verbally acknowledge that drunk driving is a serious problem. Seventy-six percent of those surveyed rated drunk driving as an "extremely" or "very" important social concern, ranking fifth after corruption in government, drug abuse, crime in the streets, and inflation and ahead of environmental pollution, the energy crisis and unemployment. Still, a tremendous gap exists between verbal acknowledgment of drunk driving as a problem and personal action to prevent its occurrence.

The consumption of alcohol in both moderate and excessive amounts is not a uniquely adult phenomenon. NHTSA also conducted a survey among high school students in different parts of the country.² It revealed substantial alcohol use and abuse among young people. Fully 50% of those surveyed had been involved in a drinking situation without adult supervision once a month or more in the three months prior to their interview.

Of the teenagers present in a situation where alcohol was consumed, only six percent said they did not drink. Forty-five percent drank once a week or more and another 24% drank at least once every two weeks.

The frequently described image of the drinking teenager as a rowdy, undisciplined, dropout, alienated person did not hold up in the survey research. Instead, the young people, ages 14 to 18, who drink are both males and females of all grades and ages, all levels of scholastic achievement and aspiration, who engage in all types and levels of extracurricular activity. They are not socially deviant, but "everyone's kids."

The alcohol culture is clearly apparent in the drinking behavior of youth. Drinking, and drunkenness, are widely sanctioned and often expected activities among youth peer groups. At the same time the dangers of driving while intoxicated are not a concern and taking personal action to prevent drunk driving is not normally considered the "accepted thing to do."

Yet, significant reduction of alcohol-related automobile crashes will not occur until certain cultural norms in the United States are revised. The social acceptance of excessive drinking before driving must be reversed, and personal intervention to prevent drunk driving must become the desired norm.

COUNTERMEASURE APPROACH

Between January, 1971, and October, 1972, 35 community-based Alcohol Safety Action Projects (ASAPs) were established in as many states. Each site is charged with responsibility for the assessment of its own local alcohol/driving problems and for the design and implementation of appropriate countermeasure strategies.

The ASAPs seek to control drinking drivers through five major countermeasures: law enforcement, adjudication and presentence investigation, rehabilitation, public information and education, and evaluation. The simultaneous use of countermeasures provides an integrated system that is both preventive and counteractive. The Enforcement countermeasures have significantly increased the numbers of intoxicated drivers arrested. Persons arrested for DWI receive a presentence investigation of their drinking and driving behavior to identify the problem drinkers (the relatively few regularly abusive drinkers responsible for two-thirds of all alcohol-involved crashes). Courts refer them to a rehabilitation program or impose on them a fine, license suspension or revocation, or other penalty. Rehabilitation programs for court-referred drinking drivers are conducted in schools or treatment centers using a variety of techniques.

The Public Information and Education countermeasure reaches both the drunk driver and the public around him through mass and non-mass media programs geared to influence knowledge, attitudes and behaviors of selected target audiences. Finally, the Evaluation countermeasure applies rigorous methods including household and roadside surveys to measure the project's effects.

II. PUBLIC INFORMATION COUNTERMEASURE

Significant reduction of the alcohol crash problem depends in large part upon an informed public acting responsibly to control the abuse of alcohol by those who intend to drive, and to prevent from driving anyone who becomes intoxicated.

The role of Public Information and Education is both preventive and combative. It can reach potential drinkers and drivers, school age through senior citizen, with accurate information that will enable them to formulate responsible attitudes about drinking and driving. It can communicate with persons who already drink and drive and provide them with information to prevent irresponsible behavior. And it can reach those who interact with drinking drivers to help them prevent intoxication or drunk driving.

The PI&E countermeasure also serves several internal functions. It fosters public awareness of and support for the purposes of the Alcohol Safety Action Project and lends additional credence and strength to the activities of other countermeasures. For example, the use of mass media to inform the public about increased arrests of intoxicated drivers enhances the deterrent effect of police efforts. The success of the process depends upon reaching a variety of target audiences with communications to meet their individual needs.

The following section describes the development of ASAP Public Information and Education countermeasure objectives.

COUNTERMEASURE OBJECTIVES

The earliest goals called for PI&E programs to create public awareness of the drunk driving problem and gain the interest and support of key official and professional groups in working to control it. Research data reported in 1970 showed that 53% of the population surveyed were misinformed or ignorant about the source of most alcohol-related crashes.³ Nearly two-thirds of all fatal traffic accidents in which alcohol is a factor are caused by problem drinkers who comprise less than 10% of the population. The remaining one-third are caused by social drinkers.* Few of the people surveyed in 1970 knew their state's legal Blood Alcohol Concentration (BAC) limit. A need existed to inform the public about the increased risk of a crash brought on by the excessive consumption of alcohol and to indicate and encourage action to prevent its abuse.

In addition to providing information there was a need to reverse the apathy about drunk driving among the public, professionals and responsible government officials and stimulate their concern and constructive action. The following specific objectives were defined:

1. Establish the problem of alcohol-related crashes as a higher priority among community concerns.
2. Make key officials and professional groups (police, judiciary, doctors, etc.) aware that two-thirds of the drunk driving fatalities involve problem drinkers, rather than social drinkers.
3. Develop support for the hypothesis that this relatively small segment of the driving population which abuses alcohol can be effectively controlled.
4. Inform key officials, professionals and the public about modern countermeasure methods.

*Problem drinkers are persons who regularly drink heavily and to varying degrees have lost control of their drinking. Social drinkers are the more numerous group who can be deterred from drinking and driving if they are convinced of the likelihood of arrest and conviction or accident probability.

NHTSA's national advertising campaign launched against drunk driving is utilized by ASAPs and serves as a guide in designing their own efforts. In its first year the national campaign concentrated on introducing the problem of drunk driving and identifying the major group, problem drinkers, who cause it. The second year of advertising encouraged groups and their members to identify the drinking/driving problem within the context of their individual behavior and among their peers and associates. The aim was to make excessive drinking and driving an explicit social concern for people where they live. Media materials and personal presentations were designed to raise the issue, to bring it out in the open where previously it had been deliberately or innocently ignored. The campaign pointed out to Americans that drunk driving is sick and each citizen has a responsibility and an opportunity to prevent it.

The specific objectives during the second year were to:

1. Make excessive drinking and driving a social issue by stimulating discussions, between individuals within peer groups, which call attention to and define excessive drinking and driving as antisocial behavior.
2. Describe specific steps or actions which people can take to prevent intoxicated individuals from driving.
3. Continue to seek support for all countermeasure programs and encourage groups and individuals to obtain implementation of those programs in their own communities.
4. Educate young drivers about the issues involved with alcohol and highway safety.

Recognition by the ASAPs of the importance of tailoring campaigns to the special needs and media of different target audiences grew considerably during the second year. The projects increased their use of survey data about the knowledge, attitudes, and behavior of drinkers and drivers in their community to design and implement carefully targeted projects.

By the third year of operation the ASAPs had brought their audiences a long way. In addition to the objectives established by NHTSA, individual sites developed and implemented their own goals. The following is a list of Public Information and Education objectives noted by ASAP PI&E specialists at a work seminar. Listed in the category which best describes their general area of concentration, they illustrate the wide variety of objectives for community education on alcohol safety.

Knowledge

- Tell the community what ASAP is doing.
- Explain the alcohol crash problem.
- Teach how alcohol affects individuals.
- Dispel myths about alcohol and methods for reducing its influence on the body.
- Raise the perception of risk of crash/arrest among drinker/drivers.
- Increase knowledge of penalties and costs related to drunk driving.
- Teach relationship of body weight to BAC.
- Portray and illustrate examples of excessive drinking and indicate behavioral signs of hazardous levels.
- Alert the public about the problem drinker — why he may be a hazard, why he needs help.
- Educate high school students and help them develop sound standards for avoiding alcohol abuse and drunk driving.
- Improve driver preparation programs on alcohol and safety.
- Inform problem drinkers, families and friends of sources of help in the community.

Attitudes

- Change public attitudes which condone driving after excessive drinking.
- Influence attitudes of drinker/drivers to help them avoid excessive drinking levels before driving.
- Provide models of behavior for avoiding drunk driving and promote acceptance of such behavior.
- Create opportunities in schools for young people to state their concerns on alcohol and to arrive at decisions regarding its use.
- Create awareness of responsibilities for "other drinkers."

Behavior

- Tell the public what they can do to help prevent drunk driving.
- To stimulate citizen action on two levels:
to make known their support, and
to use personal influence directly on drinker/drivers.
- To help create a deterrent to drunk driving by publicizing enforcement activities.
- Influence hosting behavior to prevent abusive drinking and driving by guests who become intoxicated.
- Impact drinking/driving situations — in homes, bars, liquor stores — to increase responsible action.

Internal Countermeasure Operations

- Modify the approaches and content of certain programs with new knowledge and improved techniques.
- Determine best allocation of PI&E resources between mass media and other activities.
- Describe appropriate use of various media in reaching different objectives.
- Determine how much air time is essential to warrant production of broadcast announcements.
- Describe the appropriate role of evaluation in designing and assessing PI&E efforts.
- Compare the effectiveness of themes in achieving goals.
- Integrate or "piggy back" ASAP messages in educational efforts of other agencies.

ASAP Support (personal recognition and personal or community action)

- Identify and inform "high activators" in the community to increase public support.
- Recruit volunteers to work in countermeasure programs as counselors, speakers, etc.
- Relate ASAP goals and activities to the interests of other groups and agencies.
- Neutralize opposition of various interest groups.
- Catalyze educational efforts by agencies where none exist, and consolidate gains made.
- Make the alcohol crash problem a higher priority for mass communicators and news media.
- Create credibility for public education programs on alcohol and highway safety.
- Stimulate community activities to provide early intervention with problem drinkers to combat alcoholism.

PROGRAM PLANNING

National media materials are supplied to the local ASAPs for use either in original form or as adapted to the particular environment, but most programs geared to specific community needs are designed by the local Public Information and Education staff.

NHTSA prepared and distributed guidelines for the operation of individual ASAPs to help assure thorough planning and careful design, while allowing the projects maximum flexibility and creativity. Before beginning production on a campaign, the PI&E staff submits for approval by NHTSA a communications plan.* This process assures systematic planning and consistency of effort both internally in the ASAP and with overall NHTSA goals and policy, and reduces duplication of effort among the sites.

The communications plans illustrate the level of research and professional expertise required for effective information campaigns. The plans contain seven sections: objectives, strategy, program development, media placement, research and evaluation, consultation and coordination, and budget. Figure 1 displays the design and evaluation process.

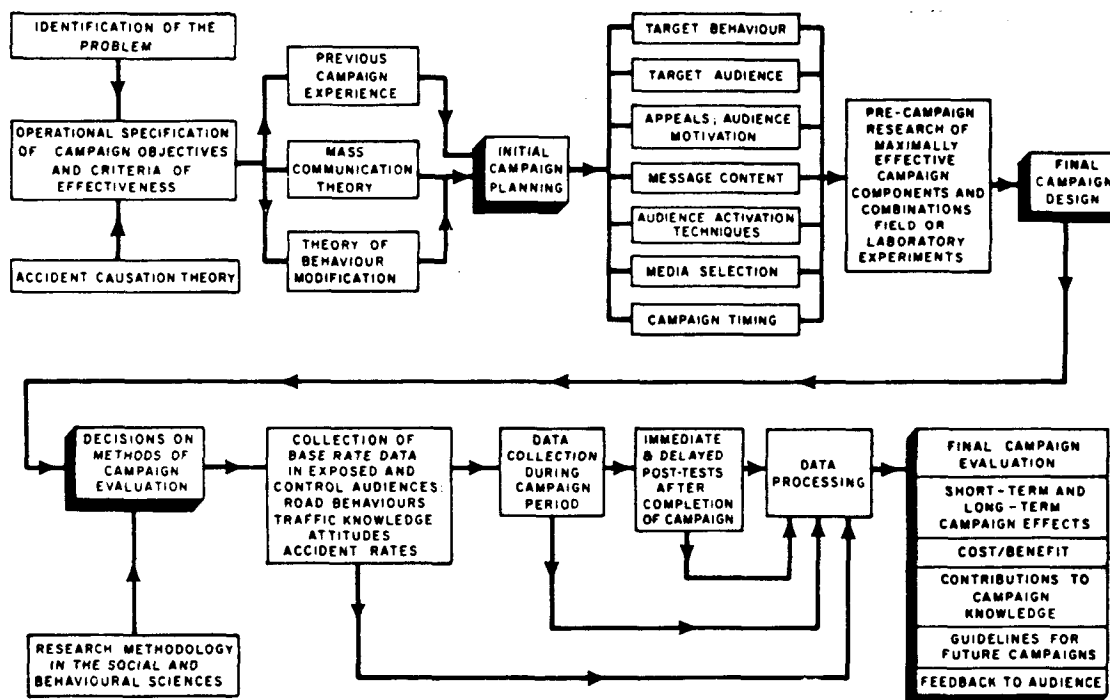


Figure 1. Diagram of Safety Campaign Design and Evaluation

RESEARCH AND DESIGN

The conceptualization and subsequent development of public information programs and campaigns ideally derives from considerable research into theories of accident causation, behavior modification, and mass communications and from empirically sound measurement of drinking and driving knowledge, attitudes and behavior. These

*See Appendix B for one of the first communications plans, submitted by the Washtenaw County ASAP, which was distributed to other projects as a model plan.

are the three key areas Public Information and Education programs are trying to affect. Of the three, the communication of facts or knowledge is the easiest to achieve. Creating responsible attitudes and behavior or changing improper ones are far more complex tasks.

Mass communications theory and experience garnered in past public information campaigns about traffic safety indicate certain elements which must be present for a campaign to affect the audience's behavior.⁴ As described below, these include instructiveness, immediacy, personal relevance and facilitation of modelling and social imitation.

- Instructiveness. Campaign messages must clearly and precisely inform the audience what specific behavior is advocated. The appeal "don't drink too much" is vague and unlikely to be heeded; the suggestion "if your guest is too drunk to drive, call a taxi or give him a ride home" is much more likely to be understood and acted upon.
- Immediacy. The message should reach the drinker/driver at the time and place where it may be translated into behavior. For example, Wednesday night advertisements may be less influential than the Saturday night party host's serving behavior.
- Personal Relevance. The message should be perceived by the recipient to be personally relevant and the behavior clearly in his own self-interest.
- Facilitation and Modelling and Social Imitation. Because both drinking and driving are primarily activities involving social interaction the behavior advocated should be conspicuous in order to encourage and enhance its imitation. Such openness also implies that the endorsed behavior results from the model's overt and serious commitment.

TARGET AUDIENCES AND CREATIVE STRATEGIES

Early in the ASAP experience NHTSA began to emphasize the importance of designing specific public information and education campaigns for carefully selected target audiences. Most national media materials provided to the sites communicate with general audiences. Within each ASAP the PI&E Specialist and the Evaluator identified subgroups which have different informational needs, rely on different media, and respond to different kinds of appeals.

Creative strategies employed by individual ASAPs vary considerably. Past research and personal experience in the field of alcohol and traffic safety communications does not reveal any one clearly preferable appeal or message to be conveyed. Among many communicators the pros and cons of using fear vs. humor have been researched and debated with no definitive results. Many psychologists believe audiences will block out or reject a communications piece in any medium if it is too fear-arousing, morbid or grotesque. Others feel emotional appeals with some shocking power are essential for getting attention and changing attitudes. The severity of drunk driving in terms of potential death and injury does not readily lend itself to persuasion by humorous appeals. Fear and humor are only two of the appeals employed in various PI&E communications. Others include masculinity (drunk driving does not confirm or create masculinity), impairment, factual, emotional involvement, slice of life and endorsements by recognized personalities.

The ASAP PI&E countermeasures have experimented widely with the use of mass media and non-mass media, both singly and in combination. Most mass media efforts using television and radio are directed at general audiences, youth, and ethnic groups. Other target audiences, such as industry employees, civic groups, bar patrons, package store patrons, lawyers, police, judges and physicians are best reached by non-mass media. Among the broad and diverse array of communications outlets and materials used by ASAPs are the following:

- Mass Media: television, radio, newspaper, direct mail, magazines, brochures, transit posters, posters, billboards, films;
- Collateral Materials: alcohol calculators, cards, newsletters, buses/vans, bags: bottle, litter and shopping; bottle caps, breath testers, bumper stickers, coasters, calendars, decals, displays: poster holders and standing exhibits; key chains, matchbooks, placemats, table tents, taxi signs;
- Public Relations: releases, press kits, press conferences, interviews, feature stories, media presentations, media placement, and
- Non-mass Media: speakers' bureau, one-to-one persuasive encounters, advisory boards, citizen participation.

The following examples of PI&E campaigns and activities indicate the comprehensive and varied scope of target audiences, creative strategies and media used in countermeasure communications, and the community support generated for the efforts.

Target Audiences

BAR PATRONS

New Orleans, Louisiana. Operates a breathalyzer van which provides alcohol information and tests the level of intoxication of thousands of drinkers, primarily tourists, on Bourbon Street.

Richland County, South Carolina. Produced bar napkins and table tents which provide BAC information and enable readers to calculate number of drinks it will take to become intoxicated at the .05 level.

PACKAGE STORE PATRONS

Fairfax County, Virginia. Succeeded in persuading state liquor stores to display a poster which urges drinkers to know their limits. The campaign was supported by other collateral materials including bumper stickers and two types of decals.

Charlotte, Mecklenburg County, North Carolina. Designed liquor bottle bags imprinted with BAC information for distribution by liquor stores at the point of purchase.

LEGISLATURES

Hennepin County, Minnesota. Disseminated, in conjunction with Metropolitan Area Safety Council, a brochure which supported a no-nonsense drunk driving law to firmly establish the BAC limit at .10, and authorize the police to administer a breath test to drivers suspected of drunk driving.

POLICE

Nassau County, New York. Produced in conjunction with the Correctional Association of New York and the International Chiefs of Police, a booklet of detailed information on alcohol, alcoholism and police action.

PHYSICIANS

Washtenaw County, Michigan. Prepared table tents for use in a physician's kit that includes BAC information.

EXHIBITS

Lincoln, Nebraska. Designed and produced an Alcohol Quotient Machine which allows a person to electrically estimate his BAC based on four hypothetical givens: 1) quantity of alcohol, 2) weight of subject, 3) absorption time, and 4) subject has an empty stomach. The electric panel encased in a fiberglass module

is used repeatedly in exhibits at such public locations as shopping centers, bank lobbies, student unions, etc.

YOUTH

Tampa, Florida. Employs a high school student to coordinate and oversee a panel of students, selected by their school peers, in the design and maintenance of alcohol/driving education programs in each of their schools.

Phoenix, Arizona. Sponsors a youth-designed and produced rock musical that travels to high schools and colleges communicating the message about alcohol and driving to youth audiences.

Richland County, South Carolina. Ran a contest among teens to create a slogan for comprehensive youth campaign. The winner, "DUI is a Bummer" became the subject of bumper stickers, radio spots, fabric patches and other collateral materials.

New Orleans, Louisiana. Produced a 15-minute youth-oriented film depicting the deterioration of driving skills with the excessive consumption of alcohol.

Creative Strategies

FEAR

Phoenix, Arizona. Obtained public service space in local newspaper for ad about problem drinker/drivers entitled, "Today the Guy in the Next Car May Kill You."

Lincoln, Nebraska. Produced poster entitled, "Hey Fella, Want to Get Your Name in the Papers" that combined humorous title with fear through visual of obituary notices from newspaper.

HUMOR

Kansas City, Missouri. Sponsored appearance of Joe Higgins, the sheriff seen in past automobile commercials, to make humorous spots for youth audiences.

SLICE OF LIFE

Baltimore, Maryland. Depicted an embarrassing situation of damaged car in credible TV spots slanted to education of drinker/driver's family.

HOSTING BEHAVIOR

Columbus, Georgia. Designed party pack including protein-rich recipes, coasters, napkins, swizzle sticks, and matches which provided alcohol/driving information.

ENDORSEMENTS

Kansas City, Missouri. Produced several ads in which well-known Kansas City Chief football players such as Len Dawson and Kansas City Royal baseball players such as Cookie Rojas, presented the problem of drunk driving and endorsed alcohol driving safety.

Community Support

BUSINESSES

Indianapolis, Indiana. Obtained sponsorship by the Indianapolis Power and Light Company of an ad in the local evening newspaper. They also prepared, with the Midwestern Area AT&T Long Lines, a cassette talk coordinated with slides that has been shown to AT&T employees in many parts of the country.

CHURCHES

Richland County, South Carolina. Obtained sponsorship of Christian Action Council and Ministerial Association in presenting information about the dangers of drinking and driving and suggesting alternative use of taxis for transportation. Material was included with Christmas issues of the church bulletins.

VOLUNTEERS

Los Angeles, California. Uses alcoholism volunteers to distribute PI&E materials to radio and television stations.

CIVIC GROUPS

Tampa, Florida. Gained paid sponsorship of ASAP billboard from local women's service bureau.

III. EVALUATION

Traditionally, efforts to evaluate public information and education programs meet with considerable resistance. Creative people often operate on the basis of past experiences and present assumptions, designing campaigns according to what they perceive to be the most appropriate audiences, messages, and media. In the ASAPs, coordination between PI&E Specialists and Evaluators was slow to develop. Some projects spurned evaluative efforts on the basis of added costs and perceived unimportance. The little understood tools of the evaluator were viewed with suspicion as an infringement upon creative activity, so that campaigns built around survey research data were the exception, not the rule and few PI&E Specialists sought feedback about their program's impact.

NHTSA's increased emphasis on evaluation of Public Information and Education programs has fostered an appreciation of the need to measure effects if the ASAP programs are to be soundly based. Feedback about successful and unsuccessful campaigns enables communicators to build on strong campaigns and adjust ineffective efforts. Now, PI&E and Evaluation staffs work together to design evaluation mechanisms for the overall public information effort and for specific small studies where a low cost evaluation can provide an accurate assessment of a campaign's particular effect. Audience survey data now provide the foundation for developing public information campaigns.

The ultimate measure of project impact is the reduction in the number and severity of traffic crashes caused by drinking drivers. In the ASAP system all countermeasures aim to effect crash reduction. Consequently, the crash reducing effects of a single countermeasure, such as Public Information and Education, are virtually impossible to isolate and measure. Even if the PI&E countermeasure operated alone, it would be extremely difficult to evaluate in reliable, objective statistical terms. The several variables that continually interact with traffic conditions and driving skill cannot be controlled, thus allowing only the most tenuous of judgments about the significance of a deterrent program.

Nonetheless, the Public Information and Education countermeasures have concentrated on certain ingredients essential to crash reduction that can be measured, at least to some degree. For both general and specific audiences these include:

- Knowledge — the provision of accurate information which:
 1. Defines why drunk driving is a major social problem;
 2. Discusses the effects of alcohol consumption on levels of intoxication, perceptual and motor skills, driving behavior;
 3. Indicates alternatives to prevent the occurrence of drunk driving; and
 4. Describes the purpose of the ASAP.
- Attitudes — campaigns to:
 1. Describe current attitudes toward alcohol and driving and their relationship to the drunk driving problem;
 2. Create responsible drinking/driving attitudes and change poor ones;
 3. Foster increased concern and support for the ASAP system; and
 4. Encourage personal responsibility for other people's behavior,
- Behavior — the provision of information which:
 1. Describes the types of behavior that lead to drunk driving crashes;
 2. Identifies preventive actions that will keep people from getting drunk, or if intoxicated, keep them from driving a motor vehicle; and
 3. Provides models of responsible behavior.

COMMUNITY SURVEYS

The household surveys conducted on an annual basis by most ASAPs serve as the primary data base for evaluating the overall PI&E efforts. The surveys consist of in-home interviews of a randomly selected representative sample of each site's population. Prior to beginning full operation, each ASAP conducted a baseline survey of their community. This survey provides the foundation against which subsequent survey data can be compared.

The household survey consists of the same 43 core questions, asked every year, and additional questions each site asks individually to measure the effect of its particular activities. The core questions are required of all sites in order to accumulate a data base for evaluation of ASAPs PI&E efforts, both individually and collectively over time.

The ASAPs also conduct annual roadside surveys in which police randomly stop automobiles passing predetermined locations. Trained project staff interview drivers and administer a breathalyzer test which determines if and how much they have been drinking.

The roadside surveys employ a smaller core of 23 questions that cover the same areas as the household survey. Both surveys provide verbal, self-reported responses to questions. Inclusion of a breathalyzer test in the roadside survey adds a measure of observed behavior.

Both the household and roadside survey responses indicate reported changes in information levels, attitudes and drinking/driving behavior between the baseline and operational years. They provide a year-to-year comparison of individual site effects as well as a cumulative measurement of the PI&E impact over the life of the project.

Some sites also conduct telephone surveys. Respondents may be drawn randomly from the telephone book or from a computer programmed random selection of telephone exchanges and following four digit series. Pre-/post-tests and control/experimental groups also have been used to pinpoint specific campaign effects when the appropriate conditions exist.

EVALUATION OF OVERALL PI&E IMPACT

For this report 24 ASAP sites in operation during the summer of 1974 verified and submitted to NHTSA information from their household surveys for the baseline through latest operational year. The site reports indicated the percentage of correct responses to each of 24 core questions that provide the best indications of changes in knowledge, attitudes and behavior.

Each PI&E Specialist then indicated which of the core questions were the subject of specific campaigns or materials and provided additional information about the exposure period, medium used, target audience, method of evaluation and evaluation conclusions. This package of information from the sites supplied NHTSA with the best available data from which judgments about overall Public Information and Education countermeasure effectiveness are drawn. Analysis of the data shows that changes in a positive direction are more likely to occur if a particular subject is addressed by a Public Information and Education effort.

Appendix A shows the responses from all sites to each question as recorded on separate tabulation forms. Responses to each question were broken down in three categories: number from all sites, number from sites which conducted a PI&E effort, and number from sites which did *not* conduct a PI&E effort. The number of sites which indicated positive changes from the baseline year to the last operational year was recorded for each category. Then, the number of sites reported in each category for each year of data was noted and the median and range of the correct responses were calculated.

THE ISSUES

A collection of key issues form the basis for evaluating Public Information and Education countermeasure impact. As noted earlier, responses to household survey questions serve as indicators of change in three areas: alcohol and driving knowledge, attitudes and behavior.

The following paragraphs explain the significance of each area and list its questions and desired responses.

KNOWLEDGE. These questions explore the respondents' awareness of the drunk driving problem and the relationship between levels of blood alcohol and the risk of a crash. Individuals must understand this information if they are to develop concern about the drunk driving problem and determine their own safe levels of alcohol consumption.

Question	Desired Response
1. Which one of these do you feel causes the greatest number of automobile accidents?	Driving Under the Influence of Alcohol.
2. Would you guess that more fatal accidents are caused by the many social drinkers (people that occasionally drink too much) or by the smaller number of problem drinkers (people who frequently drink a great deal)?	Problem Drinkers.
3. Out of every ten traffic deaths, how many would you say are caused by drinking drivers?	Five.
4. Have you ever heard the term "Blood Alcohol Level" or "Blood Alcohol Concentration?"	Yes.
5. What do you think the term "Blood Alcohol Concentration" or "Blood Alcohol Level" means?	Completely correct and partially/essentially correct interpretation combined.
6. The Blood Alcohol Concentration is based on a chemical test, such as a breath test, and is used to determine if a person is legally drunk or intoxicated. Which of these do you understand is the legal definition of being drunk in this state?	Correct limit in relevant state.

Other questions measure public interpretations of alcohol myths that often misguide drinkers into believing certain steps will ward off intoxication for a longer period of time, or sober them up enough to drive if they are already drunk.

Question	Desired Response
7. A younger person just starting to drink will get drunk faster than an older person on the same amount of liquor.	False.
8. A person drinking on an empty stomach will get drunk faster on the same number of drinks than a person who has just eaten something.	True.

Question	Desired Response
9. If a person uses a "mixer," like soda water, with liquor, he can drink more without getting drunk than if he drank the liquor straight.	False.
10. A small person will get drunk faster than a large person on the same number of drinks.	True.
11. A person who has had one drink should not be allowed to drive an automobile.	False.
12. If a person sticks to the same kind of drink, he is less likely to get drunk than if he mixes different kinds of drinks, like beer and whiskey or gin and scotch.	False.
13. A person who is used to drinking can drink more and not become drunk than a person who drinks only once in a while.	False.
14. Alcohol is considered a drug.	True.
15. Alcohol will affect a person faster if he's under medication like a tranquilizer or antidepressant.	True.
16. Strong black coffee is helpful in sobering a person up before he drives.	False.
17. Beer is pretty much like a soft drink as far as making a person drunk is concerned.	False.

Two questions, about the existence of an alcohol/driving program and specifically about ASAP, measure the visibility and recognition achieved by the overall counter-measure system.

Question	Desired Response
18. Have you read or heard of a campaign or program in the area that would reduce alcohol-related traffic deaths?	Yes.
19. Do you recall what agency or organization is sponsoring the program?	ASAP.

ATTITUDES. Public attitudes are revealed in the respondents' reported perception of personal responsibility for drinking/driving behavior. The development of informed and responsible attitudes about alcohol and driving are a critical focus of PI&E.

Question	Desired Response
20. When you've driven after drinking have you ever thought you really shouldn't be on the road?	Yes.

BEHAVIOR. The ultimate measure of ASAP impact is the reduction of alcohol/related crashes and resultant death or injury. Responses to the following questions

indicate how well the public is responding to the appeal to prevent drunk driving by others or modify their own drinking and driving behavior.

Question	Desired Response
21. Has anyone ever tried to persuade you not to drive because you had been drinking?	Yes.
22. Have you ever refused to drive because you thought you had had too much to drink?	Yes.
23. How often do you drive after having anything to drink? Would you say often, occasionally, hardly ever or never?	Hardly ever and never interpretation combined.
24. If you drive after drinking too much, what are chances of being stopped by the police?	Very high and high interpretation combined.

THE IMPACT

For the analysis of PI&E effect questions in the preceding section were divided into two categories: those addressed by PI&E efforts and those not treated by PI&E efforts.* Then the direction of change over the life of the project from the baseline to the last reported operational year was noted. The numbers of positive changes out of the total number of attempts in each category were aggregated and subjected to statistical measurement. The analysis shows that the application of a public information and education campaign to an issue will more likely result in changes in a positive direction than the lack of a campaign.**

PI&E efforts were most successful in providing knowledge and somewhat less successful in affecting attitudes and behavior. Still, in each area of concentration, substantially more sites with public information activities achieved positive results than sites without an effort, as indicated in Table 1.

Table 1
Percentage of Sites Showing Change in Positive Direction, by Category

Area of Concentration	All Sites		Sites With PI&E Effort		Sites Without PI&E Effort	
	N***	%	N	%	N	%
Knowledge	297 of 401	74.1	197 of 255	77.2	100 of 146	68.5
Attitudes	12 of 23	52.2	6 of 9	66.7	6 of 14	42.8
Behavior	37 of 78	47.4	24 of 43	55.8	13 of 35	37.1

*Each question was addressed by some sites, but not all sites addressed all questions.

**Application of a Chi Square χ^2 test of significance revealed that overall the ASAP Public Information and Education efforts are significant at the .01 level where $\chi^2 = 9.27$ df = 1.

***N equals the cumulative total of site positive changes for all questions in each category out of the number of attempts for the total number of questions and site attempts in each category.

In the area of knowledge, respondents tended to learn more about alcohol myths than about the severity of the drunk driving problem. Because the myths respond to an individual's need for practical knowledge about the relationship between types and quantities of alcohol consumption and intoxication and about mechanisms for sobering up, the high incidence of recall is expected. Of 117 sites that conducted some campaign against a myth, 95 (81.2%) showed changes in a positive direction over the life of the projects, compared with 89 of 122 (72.9%) positive changes among sites that did not wage a campaign.

The survey questions and percentage of positive results in the following list indicate the measured effect for all sites, for sites with PI&E campaigns and for sites without PI&E campaigns.* Figure 2 displays the results for each category, by question.

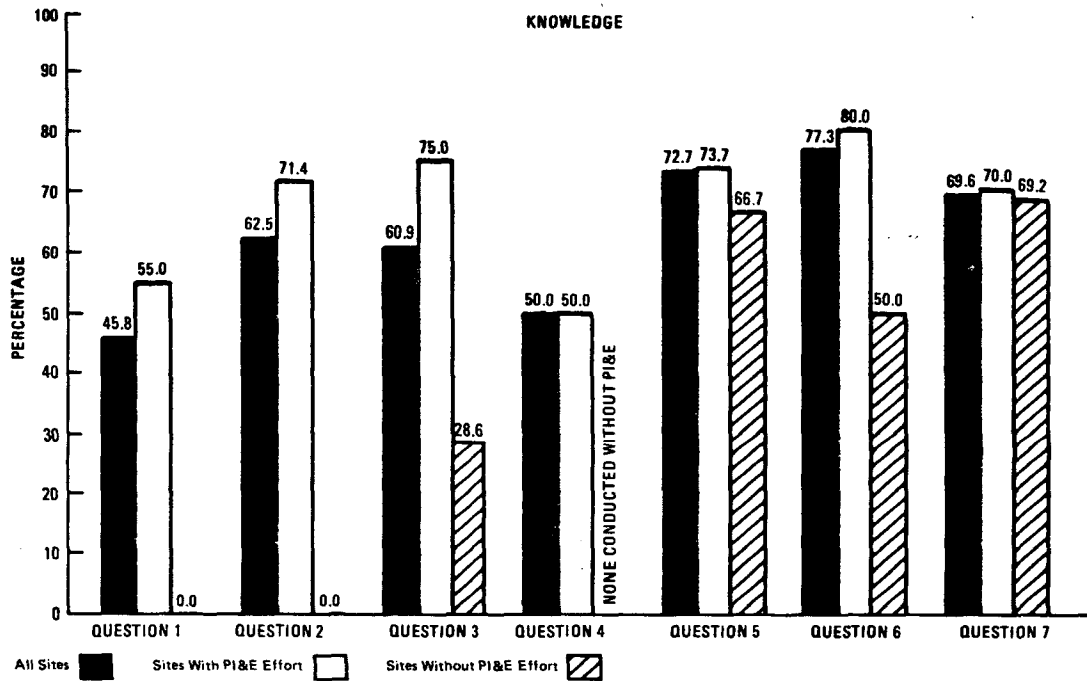


Figure 2. Number of Sites Showing Positive Changes on Survey Questions Over Life of Project, by Question and Category

*Appendix A presents detailed information about the number of sites with positive results, and the median and range of the percent of correct responses for each question and each year within each category (all sites, sites with PI&E effort, sites without a PI&E effort).1

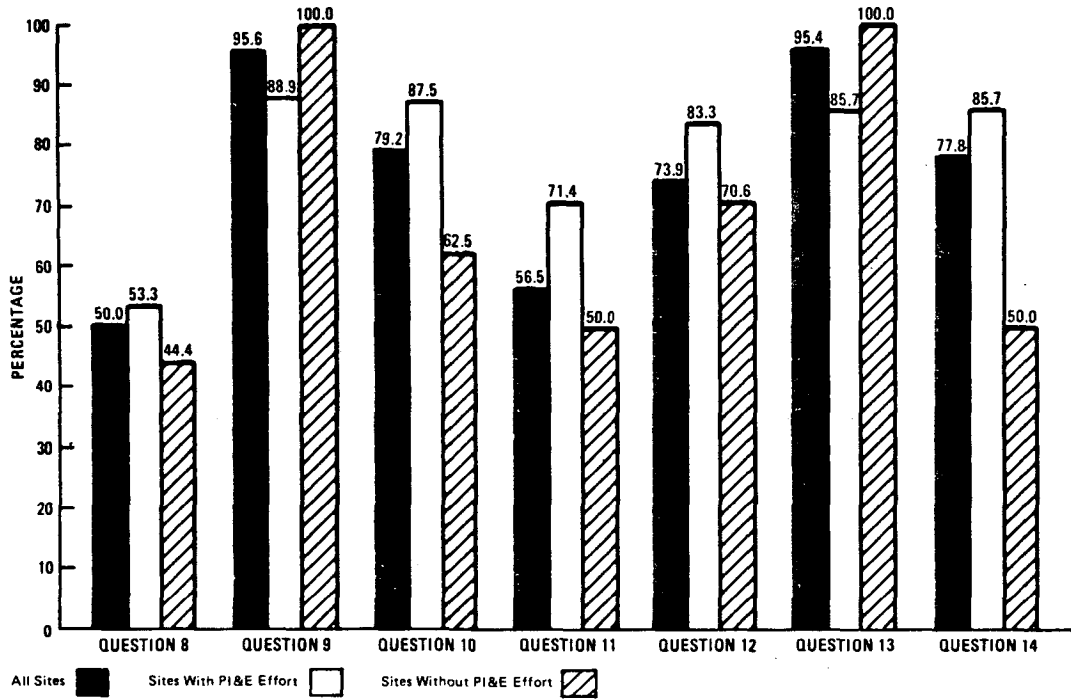


Figure 2 (Continued)

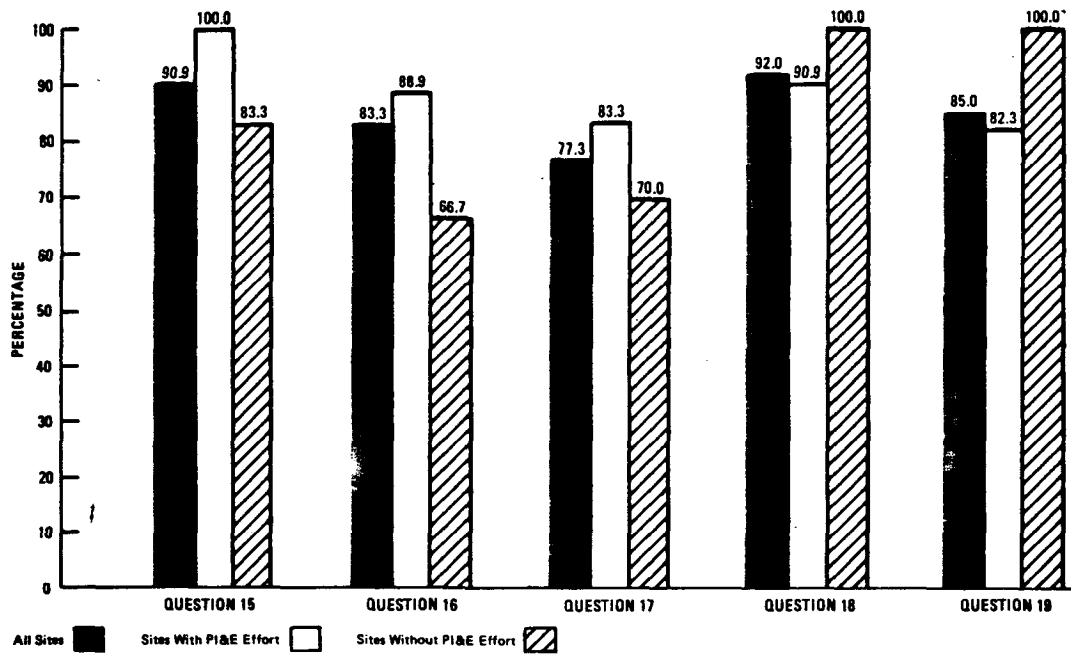


Figure 2 (Continued)

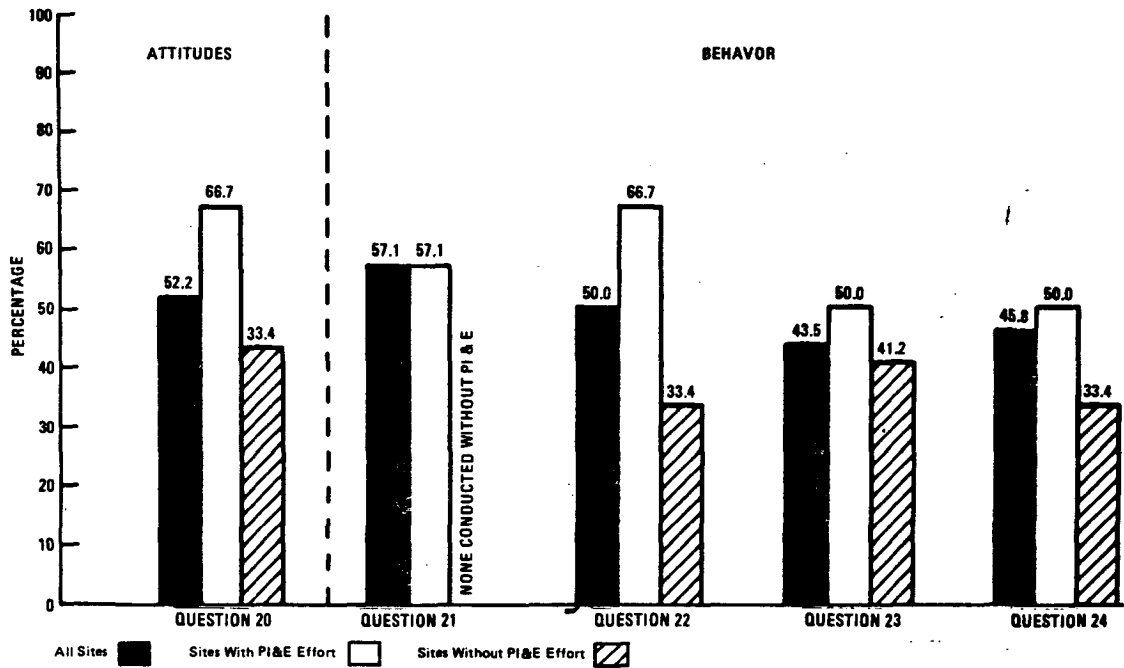


Figure 2 (Continued)

CAMPAIGN EXAMPLES

A description of public information campaigns aimed at each of the questions in the survey would be too lengthy to attempt here; a few campaigns have been selected for elaboration. They provide evidence of the level of effort applied to achieve a positive change.

QUESTION

	ALL SITES	SITES WITH PI&E	SITES WITHOUT PI&E
1. Which one of these do you feel causes the greatest number of automobile accidents?	11 of 24 45.8	11 of 20 55.0	0 of 4 0
2. Would you guess that more fatal accidents are caused by the many social drinkers (people that occasionally drink too much) or by the smaller number of problem drinkers (people who frequently drink a great deal)?	10 of 16 62.5	10 of 14 71.4	0 of 2 0
3. Out of every ten traffic deaths, how many would you say are caused by drinking drivers?	14 of 23 60.9	12 of 16 75.0	2 of 7 28.6

QUESTION

ALL SITES	SITES WITH PI&E	SITES WITHOUT PI&E
4. Have you every heard the term "Blood Alcohol Level" or "Blood Alcohol Concentration?"		
5 of 10 50.0	5 of 10 50.0	0 of 0 0
5. What do you think the term "Blood Alcohol Concentration" or "Blood Alcohol Level" means?		
16 of 22 72.7	14 of 19 73.7	2 of 3 66.7
6. The Blood Alcohol Concentration is based on a chemical test, such as a breath test, and is used to determine if a person is legally drunk or intoxicated. Which of these do you understand is the legal definition of being drunk in this state?		
17 of 22 77.3	16 of 20 80.0	1 of 2 50.0
7. A younger person just starting to drink will get drunk faster than an older person on the same amount of liquor.		
16 of 23 69.6	7 of 10 70.0	9 of 13 69.2
8. A person just starting to drink will get drunk faster on the same number of drinks than a person who has just eaten something.		
12 of 24 50.0	8 of 15 53.3	4 of 9 44.4
9. If a person uses a "mixer," like soda water, with liquor, he can drink more without getting drunk than if he drank the liquor straight.		
22 of 23 95.6	8 of 9 88.9	14 of 14 100.0
10. A small person will get drunk faster than a large person on the same number of drinks.		
19 of 24 79.2	14 of 16 87.5	5 of 8 62.5
11. A person who has had one drink should not be allowed to drive an automobile.		
13 of 23 56.5	5 of 7 71.4	8 of 16 50.0

QUESTION

ALL SITES	SITES WITH PI&E	SITES WITHOUT PI&E
12. If a person sticks to the same kind of drink, he is less likely to get drunk than if he mixes different kinds of drinks, like beer and whiskey or gin and scotch.		
17 of 23 73.9	5 of 6 83.3	12 of 17 70.6
13. A person who is used to drinking can drink more and not become drunk than a person who drinks only once in a while.		
21 of 22 95.4	6 of 7 85.7	15 of 15 100.0
14. Alcohol is considered a drug.		
7 of 9 77.8	6 of 7 85.7	1 of 2 50.0
15. Alcohol will affect a person faster if he's under medication like a tranquilizer or antidepressant.		
20 of 22 90.9	10 of 10 100.0	10 of 12 83.3
16. Strong black coffee is helpful in sobering a person up before he drives.		
20 of 24 83.3	16 of 18 88.9	4 of 6 66.7
17. Beer is pretty much like a soft drink as far as making a person drunk is concerned.		
17 of 22 77.3	10 of 12 83.3	7 of 10 70.0
18. Have you read or heard of a campaign or program in the area that would reduce alcohol-related traffic deaths?		
23 of 25 92.0	20 of 22 90.9	3 of 3 100.0
19. Do you recall what agency or organization is sponsoring the program?		
17 of 20 85.0	14 of 17 82.3	3 of 3 100.0
20. When you've driven after drinking have you ever thought you really shouldn't be on the road?		
12 of 23 52.2	6 of 9 66.7	6 of 14 42.8

QUESTION

ALL SITES	SITES WITH PI&E	SITES WITHOUT PI&E
21. Has anyone ever tried to persuade you not to drive because you had been drinking?		
4 of 7 57.1	4 of 7 57.1	0 of 0 0
22. Have you ever refused to drive or decided not to drive because you had had too much to drink?		
12 of 24 50.0	8 of 12 66.7	4 of 12 33.4
23. How often do you drive after having anything to drink? Would you say often, occasionally, hardly ever, or never?		
10 of 23 43.5	3 of 6 50.0	7 of 17 41.2
24. If you drive after drinking too much, what are your chances of being stopped by the police?		
11 of 24 45.8	9 of 18 50.0	2 of 6 33.4

Oklahoma City. The question, "Out of every ten traffic deaths, how many would you say are caused by drinking drivers?" was designed to test the amount of progress made in developing an awareness of the seriousness of drunk driving. The overall progress of all sites is apparent in Table 2 on the following page. Twelve of 16, or 75% of the sites which made the issue a subject of PI&E efforts, showed positive changes, while only two of seven, or 28.5% of those with no PI&E effort on this issue indicated progress. The ASAPs with PI&E campaigns noted a gradual increase in the median percentage of persons responding correctly, from 25% in the baseline year to 27.2% the first year and 29% the last reported operational year. ASAPs without a PI&E effort showed a decline of 1% from 26% to 25% between the baseline and first operational years. The percentage rose again the last operational year to 26% for a net gain of zero.

The Oklahoma City ASAP, among others, showed substantial progress in informing the public about the extent of alcohol-related highway fatalities. Their 1971 baseline household survey indicated only 23% of the respondents knew that five out of every ten traffic deaths are caused by drinking drivers. In 1972 they addressed several specific materials to this subject, including the following:

- Radio:

- 30 second spot — "When he starts to drink he doesn't know when to stop"

- 30 second spot — "Sometimes he can only come to one kind of stop"

- 60 second spot — "Maybe one drink won't make a difference"

- 60 second spot — "The party's over"

- Television:

- 30 second spot — "Maybe one drink won't make a difference"

- 30 second spot — "Baby with a revolver"

- 60 second spot — "Comic? Sure! But when the Problem Drinker . . ."

- 60 second spot — "There's a killer loose"

- 60 second spot — "TV sports weekend with beer"

Table 2

QUESTION: OUT OF EVERY TEN TRAFFIC DEATHS, HOW MANY WOULD YOU SAY ARE CAUSED BY DRINKING DRIVERS?

RESPONSE: FIVE

	All Sites	Sites with PI&E Effort	Sites without PI&E Effort
TOTAL	23	16	7
NUMBER WITH POSITIVE CHANGES YEAR ONE TO LAST OPERATIONAL YEAR	14	12	2
BASELINE YEAR			
Number Reporting	23	16	7
Range – Percent of Correct Responses	21.9-34.2	21.9-30.7	23.0-34.2
Median – Percent of Correct Responses	25.9	25.0	26.0
FIRST OPERATIONAL YEAR			
Number Reporting	23	16	7
Range – Percent of Correct Responses	18.9-36.6	23.4-36.6	18.9-32.1
Median – Percent of Correct Responses	27.0	27.2	25.0
SECOND OR THIRD OPERATIONAL YEAR			
Number Reporting	15	9	6
Range – Percent of Correct Responses	22.4-47.0	25.0-47.0	22.4-31.0
Median – Percent of Correct Responses	28.1	29.0	26.0

Newspaper articles and ads, speakers' presentations, brochures, newsletters and information bulletins, TV and radio local programs, and two Fair exhibits also emphasized the problem.

Despite the heavy multi-media effort the percentage of correct responses rose only 4% to 27% in the 1972 survey. The PI&E countermeasure decided to continue a strong push on the question. In 1973 they added the following:

- Radio:
 - 30 second spot – "Some people figure a little wine is good for the blood"
 - 30 second spot – "Mary Beth is 18"
 - 30 second spot – "If you're going to play the game . . . you'd better know the odds"
 - 60 second spot – "Drunk Announcer"
- Television:
 - 30 second spot – "Cocktail Party"
 - 30 second spot – "Sometimes he can only come to one kind of stop"
 - 60 second spot – "TV sports weekend with beer"

Additional newspaper ads and stories, speech presentations, two Fair exhibits, films, posters, brochures, newsletters, information bulletins and local radio and TV shows were also produced.

The determined effort paid off in 1973. The household survey results showed a dramatic increase in correct responses to 47.4%, a jump of 20.4% in one year and 24.4% over two years. Still, the considerable progress in reported knowledge did not end the PI&E emphasis. In 1974 they created and used several new materials that again addressed the same facts. The new wave of materials included radio and television spots plus other supportive media that provided factual information about the problem. The new radio and television materials were:

- Radio:

- Two 60 second spots – "Victim's personal story"
- Two 60 second spots – "Policeman's Personal description"
- Two 60 second spots – "Drinking driver's personal story"
- 60 second spot – "What could they do"
- 60 second spot – "You watched and stood there silent"
- 60 second spot – "Brother Paul"

- Television:

- 30 second spot – "We have a problem in Oklahoma City"
- 30 second spot – "We're doing a better job of stopping those who drink too much to drive"
- 60 second spot – "We've faced the problem here in Oklahoma City"
- 60 second spot – "We've cut our casualties"
- 60 second spot – "This is the way it starts"
- 60 second spot – "There's a lot of tragedy"

The considerable effort of the Oklahoma City project contributed to the dramatic rise in the number of persons responding correctly about the number of highway deaths caused by drinking drivers. Not all issues require as much emphasis. The Oklahoma City ASAP might have achieved good results with less effort. But their success is evidence of a well-conceived and implemented strategy. Their initial assessment of community awareness and needs revealed in the baseline household survey became the foundation for designing diverse messages in a multi-media approach to informing the Oklahoma City audience. The media, materials, and messages were changed at regular periods to provide a fresh presentation of the same information. The household survey results presented in the following table indicate the payoff.

Table 3

QUESTION: OUT OF EVERY TEN TRAFFIC DEATHS, HOW MANY WOULD YOU SAY ARE CAUSED BY DRINKING DRIVERS?

RESPONSE: FIVE

	1971	1972	1973
Less than five of ten	40.0	24.0	14.0
Five of ten	23.0	27.0	47.0
More than five of ten	28.0	36.0	23.0

Lincoln, Nebraska. The Lincoln, Nebraska ASAP provides another example of the level of effort required to achieve positive changes. During their initial planning phase, the project decided to focus intensive and extensive efforts on two objectives:

1. To reeducate the general public about its own misconceptions of alcohol, and the relationship between BAC and risk of crash involvement, and
2. To increase the general public's perception of crash/arrest risk should they choose to drive their cars in Lincoln with BAC of .10% or above.

After reviewing baseline survey data and assessing the Lincoln audience's media preferences, the PI&E staff determined to use collateral materials and personal communication techniques as their primary public information tools. During 1973 they made extensive use of the following materials and/or campaigns:

1. BAC chart displayed on a litter bag
2. Taxi signs
3. A.Q. (Alcohol Quotient) Machines
4. A bottle stopper handout which includes a BAC chart
5. A point of purchase campaign which distributed information on the law and BAC in 85 local drinking establishments and retail stores.

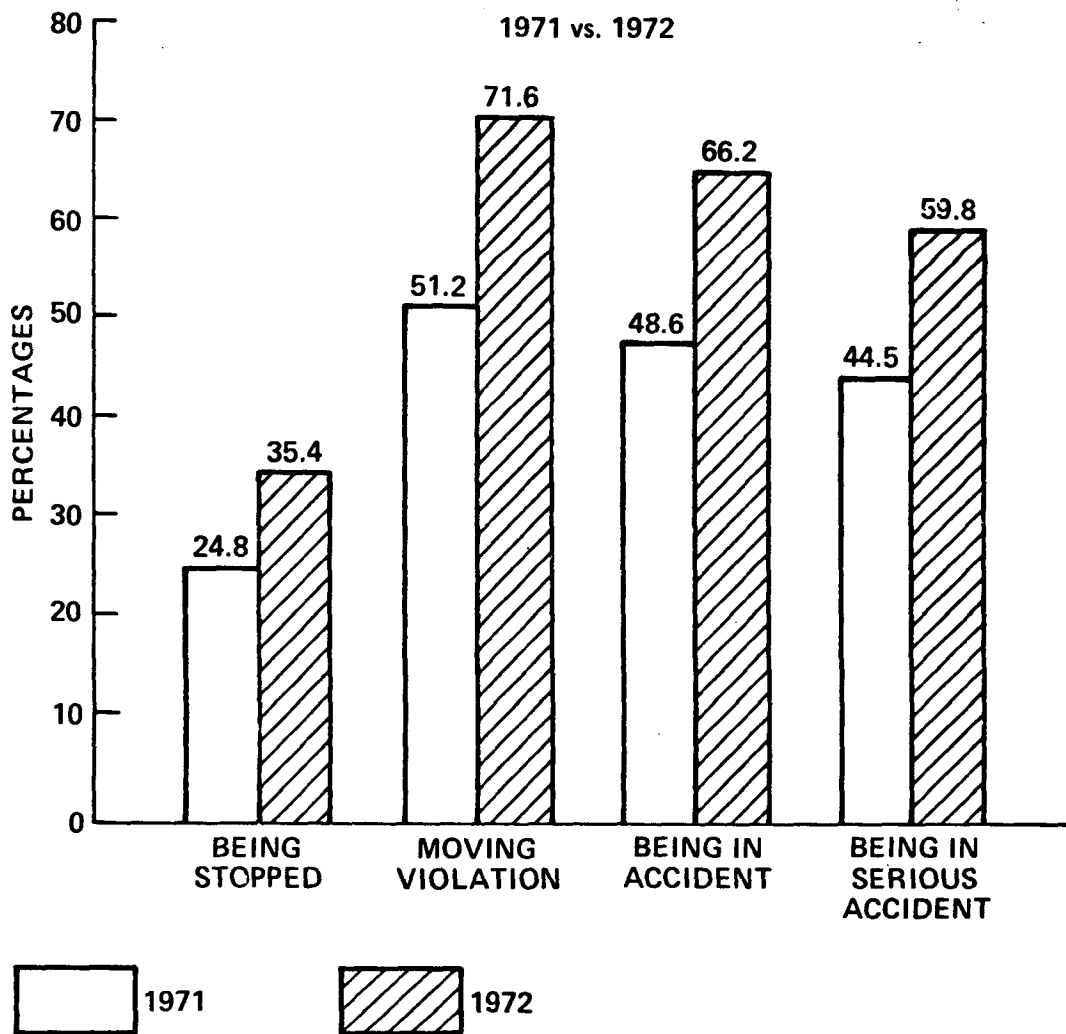


Figure 3. Comparison Between Those Who Stated That the Chances of Being Involved Were "High" or "Very High" if They Drove After Drinking Too Much

The A.Q. Machine made the greatest demonstrable impact in terms of penetration. According to the 1972 household survey, 14% of the public had heard or seen the A.Q. Machine and 1% had actually operated it. The same survey indicated 13% had heard of the litter bag campaign and 5% had actually received a bag. All of the items were used in conjunction with campaigns geared specifically to the risk of arrest and risk of accident issue. The results of Lincoln's planning are apparent in a comparison of household survey results to perception of risk questions.

On the same question, aggregated survey data showed half of all reporting sites that focused PI&E on the perceived risk of arrest issue achieved positive results, while only 33.4% of those without a PI&E effort showed a gain.

BEHAVIOR CHANGES

The risk of arrest question is one of four behavior-oriented questions asked in the surveys. The others ask if anyone had ever tried to persuade the respondent not to drive because he or she had been drinking, if the respondent had ever refused to drive or decided not to drive because he or she had too much to drink, and how frequently the respondent drank. An analysis of the aggregated data indicates that all behavior issues addressed by PI&E campaigns showed better results than those without campaigns. The average percentage showing positive changes with PI&E was 56%, while those without PI&E averaged a 37% success rate.

At the same time, the median percentage of correct responses to three of the four questions declined from the baseline year to the last operational year. The decreases were not significant, but do indicate two factors:

1. Most sites did not begin to emphasize specific modifications in drinking/driving behavior until they had been operating for a considerable length of time, and
2. Behavior changes resulting from public information and education are very difficult to achieve.

Past research on traffic safety campaigns seems to indicate that public information can provide the facts necessary to make sensible decisions and form responsible attitudes, but direct relationships between public information campaigns and the adoption of advocated behavior are difficult to verify.

The ASAPs' results thus far indicate, at the very least, that Public Information and Education is a critical component in the countermeasure system, both because of its direct influence on the audience and its role in expanding the effects of other countermeasure's activities.

In summary, the impact of the Public Information and Education countermeasure is significant, and most effective in achieving desired changes in the levels of knowledge about alcohol and driving. Household surveys have recorded more positive changes in drinking/driving attitudes for those sites which employed PI&E efforts than for those which did not. The PI&E countermeasures have achieved modest positive results in influencing behavior especially compared with non-campaign sites.

EVALUATIONS OF SPECIFIC COUNTERMEASURE ACTIVITIES

Tampa, Florida. As part of the increased emphasis on evaluation, NHTSA encourages the ASAPs to conduct small scale evaluations of specific campaigns. Such analyses are particularly useful in pinpointing the effect of a particular technique, presentation, or material upon a pre-selected target audience. The Tampa ASAP evaluation of a speakers' bureau presentation exemplifies the benefits of small scale studies.

In Tampa, the ASAP speaker's bureau representative obtained the cooperation of the local office of a nationwide insurance company in making an alcohol and driving

presentation accompanied by a pre-/post-test of knowledge gains among the employees in attendance. The study aimed to answer four questions:

1. To what extent would a presentation increase the general level of knowledge (initial gains);
2. Would there be a loss of knowledge over time (decay);
3. Would the decay be sufficient to return the audience to their initial levels (maintenance of gains); and,
4. Assuming decay was not total in the time period available, how long could an audience be expected to retain the information presented?

The study methodology called for the insurance company to allow pre- and post-testing of approximately 100 out of 300 employees who were to hear the speaker's presentation. The selected personnel, representing a cross section of employees, were unaware of their participation in the study *per se*. The pre-test was administered exactly seven days before the presentation, the first post-test immediately after the presentation and the second post-test 65 days later.

The presentation itself consisted of a ten-minute speech on the relationship of alcohol and highway safety and a 12-minute film entitled "How Much Is Too Much?" A five-minute discussion period followed, bringing the total presentation time to 27 minutes. All three tests consisted of the same 10 questions. Table 4 charts the test questions and results. Figure 4 presents the item-by-item percent desired response.

Overall, the changes between the pre-test and the first post-test were impressive. Questions realized as much as a 72% increase in the desired direction and seven of nine questions showed statistically significant increases, with the remaining being too high on the pre-test to show any such gains.

An analysis of the test data showed the presentation was highly effective. Sixty-five days after the presentation all questions where increases were possible over the pre-test level continued to show significantly higher increases (two questions were at the 97% level on the pre-test). Of the three items where evidence of decay was found two items could be interpreted as not being personally meaningful to the sample (Table 4, questions 7 and 10) while the third (question 5) indicated evidence of confusion about two points in the presentation.

The study further determined that the speakers' bureau presentation should be repeated at six month intervals to maintain a knowledge level just above that indicated in the pre-test. The information described here, and additional inferences drawn from a closer examination of the data, enabled the Tampa ASAP to set goals for knowledge maintenance and to design and schedule specific presentations accordingly. The evaluation cost little in money and manpower resources, yet yielded precise information on the effects of the speakers' bureau effort.

Table 4

Percent Change in Desired Response^a

Question	Desired Response	PRE-POST 1		POST 1-POST 2		PRE-POST 2	
		Change ^b	p	Change ^b	p	Change ^b	p
1) A small person will get drunk faster than a large person on the same number of drinks.	True	62.5 ↑	< .001	6.0 ↓	ns	56.5 ↑	< .001
2) Strong black coffee, tea, aspirin, and cold showers are all helpful in sobering a person up before he drives.	False	43.1 ↑	< .001	4.7 ↓	ns	38.4 ↑	< .001
4) Three or four drinks in an hour does not hurt driving ability for most people because the body uses up the alcohol very fast.	False	2.8 ↓	ns	2.7 ↑	ns	0.1 ↓	ns
5) Alcohol is used up faster if you exercise or work hard after drinking.	False	46.8 ↑	< .001	10.2 ↓	< .05	36.6 ↑	< .001
6) The most serious effect of alcohol on your driving is to increase your self-confidence while at the same time making it harder for you to act and react safely.	True	9.2 ↑	ns (< .10)	3.4 ↑	ns	12.6 ↑	< .05
7) The legal limit of alcohol in the blood in Florida is:	.10	37.7 ↑	< .001	18.1 ↓	< .05	19.6 ↑	< .001
8) The amount of alcohol in a 12-oz bottle of beer is much less than the amount of alcohol in a 1-oz. shot of whiskey.	False	29.3 ↑	< .001	8.6 ↓	ns (< .10)	20.7 ↑	< .001
9) Would you be willing to ride with a driver obviously under the influence of alcohol?	No	1.2 ↑	ns	0.1 ↓	ns	1.1 ↑	ns
10) Approximately how many drivers do you think were arrested for driving while intoxicated last year in Hillsborough County?	6,000	72.4 ↑	< .001	34.1 ↓	< .001	38.3 ↑	< .001

^a Only desired responses are indicated. "ns" = not statistically significant
^b In percent. Arrows indicate direction of change: ↑ = increase ↓ = decrease

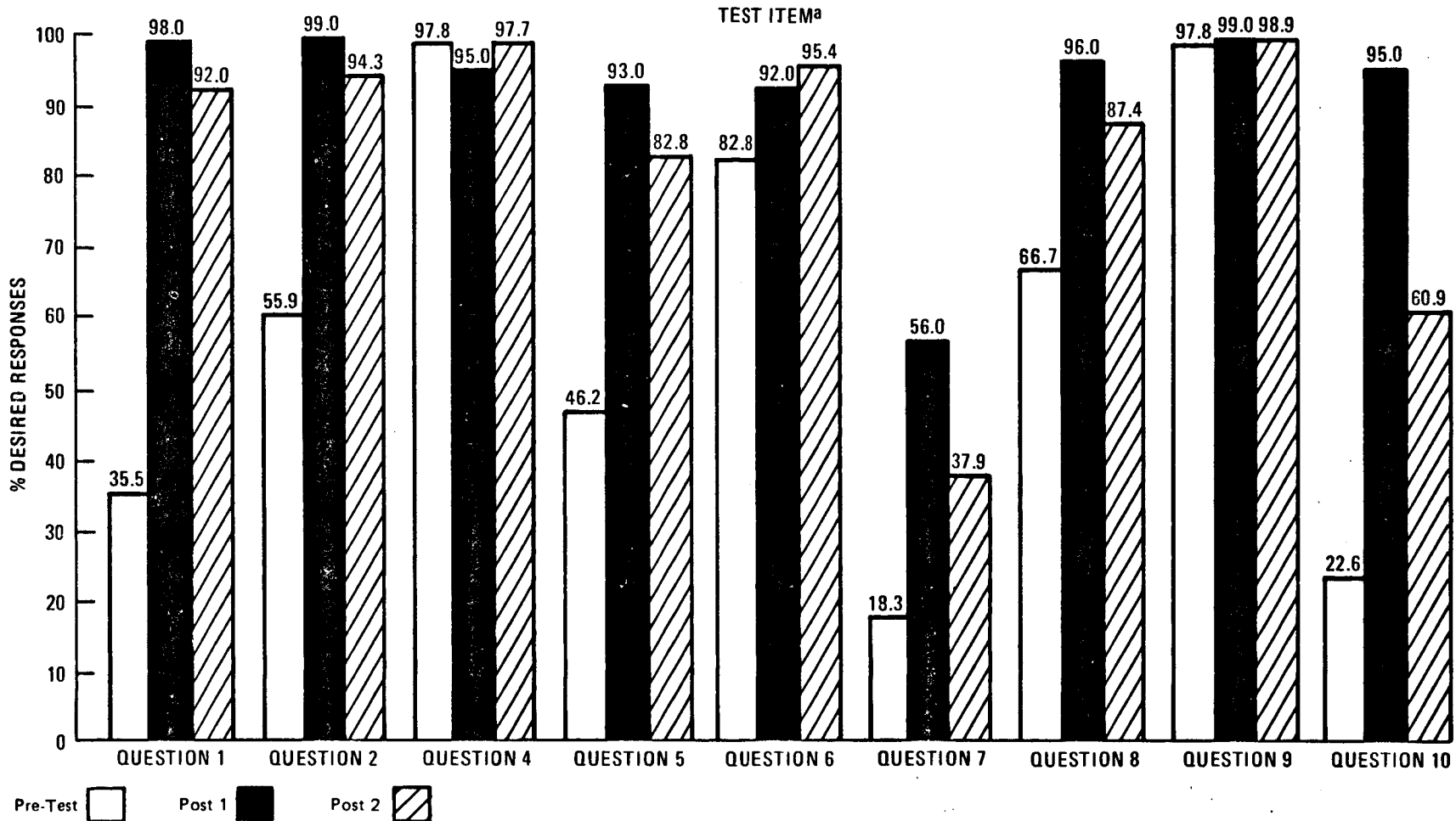


Figure 4. Tampa Speakers' Bureau Evaluation: Item by Item Percent Desired Response^a

^aQuestion 7 had 7 alternatives; Question 10 had 5 alternatives. The remaining questions had 2 alternatives.

IV. NHTSA SUPPORT AND RESEARCH

SUPPORT

In addition to supplying ASAPs with the national guidelines and advertising materials described earlier in the report, NHTSA offers them other support.

A Coordination Center assists the ASAPs by providing the following services:

- Maintenance of a library with a published catalog of all public information materials produced by ASAPs.
- Advice to NHTSA Contract Managers on the acceptability of ASAP communications plans submitted for approval in order to ensure consistency with messages used on the national level.
- Consultation with PI&E personnel about techniques to help ensure the general effectiveness of ASAP public information programs.
- Assistance in the interchange of materials among the ASAPs for possible mutual use.

In addition, consultations to upgrade the professional skills of ASAP directors, Public Information Specialists and NHTSA Contract Technical Managers in their various public information roles are carried out through on-site visits and workshops. Considerable emphasis has been directed to advising ASAP personnel on the use of community survey data and evaluation resources in the design and evaluation of public information and education programs. Other workshops helped ASAP PI&E specialists examine the benefits, problems, and techniques involved in the coordination of alcohol education efforts among diverse community groups. These training sessions also assist them in the development of strategies and mechanisms for increasing their likelihood of obtaining public service time and space in the mass media.

RESEARCH

During the past year NHTSA undertook a major new research effort that will greatly influence the future directions of NHTSA and ASAP public communications programs. As discussed in the introduction to this report, the 1974 NHTSA survey of alcohol and driving attitudes and behavior, conducted under contract by Grey Advertising, revealed that more than half of the American public above the age of 14 consumes alcoholic beverages. The importance of the survey results and their implications for future alcohol countermeasure communications activities are elaborated on here.

Adults. The research showed that frequent social drinking is a mass phenomenon in the United States. At least 54% of ARS-involved adults* participated once a month or more in situations where alcohol is served. This group of drinkers offers an important focal point for NHTSA and ASAP Public Information and Education programs because they account for over 85% of the potential DWI situations. They do most of their drinking with other persons, either in their own home or in the home of someone else. In either place, it is likely that some individuals who consume alcohol must drive after drinking. Of the adults interviewed, 59% said they drank on two or more days in the previous week, with 61% consuming three or more drinks on any one of their drinking days. These statistics indicate the pervasiveness of alcohol consumption. Nearly half of adults are drinking considerable amounts and doing it regularly.

Some drunk driving that occurs in this country can be attributed to the public's misconceptions about the causes and solutions of alcohol impairment.

*ARS-involved adults are those persons who are present in a situation where alcohol is served.

Eighty percent of the ARS-involved adults interviewed believed that sticking with the same kind of drink produces less intoxication than mixing different kinds of drinks. Another 70% felt a can of beer is less intoxicating than an average drink of liquor, and 65% believed an average glass of wine is less intoxicating than an average drink of liquor. Sobering up myths are widely believed. A cold shower was cited as helpful by 68% of the respondents, and black coffee by 52%. (Serving coffee can keep guests from drinking more, but only the passage of time can reduce the level of alcohol in the blood.)

Both the drinking and the non-drinking public verbally acknowledge the seriousness of the drunk driving problem. Fully 76% of those interviewed rated it as a key social issue, fifth after other important national concerns. Persons involved in situations where alcohol is served are willing to take some countermeasures to prevent the occurrence of drunk driving, but these are limited usually to drunk friends and relatives. The actions they are most likely to take include the serving of food with liquor to prevent intoxication and three measures to prevent a drunk from driving: offers to drive them home, an invitation to stay over, or offers to call a taxi. Figures 5 and 6 indicate the likelihood of adoption for several immediate action and preventive measures.

The NHTSA research subdivided the adults who are involved in alcohol-related situations into four subgroups according to their willingness to take certain sets of countermeasure actions. They can be described as:

1. The social conformers
 - Motivated by need for social conformity.
 - Passive, but willing to drive, invite a drunk to stay over, or call a taxi if it is the socially acceptable thing to do.
2. The aggressive restrainers (27%)
 - Motivated by a sense of affiliation and friendship.
 - Willing to act to restrain friend from DWI, even physically.
3. The cautious pre-planners (18%)
 - Already involved in pre-planning.
 - Less willing to take any further action.
4. The legal enforcers (12%)
 - Highly likely to take all countermeasure actions.
 - Will even take legal restraint measures.

The research findings indicate two groups, the passive drivers and aggressive restrainers who account for 70% of all adults involved in alcohol-related situations, offer key opportunities as a focus of public communications efforts, while the remaining segments constitute less viable options. In order to persuade these individuals to take countermeasure actions certain critical education objectives must be achieved. The misconceptions about impairment and its solutions must be corrected and the participants in drinking situations must become more aware of and sensitive to occasions where intoxication is likely to occur. Then they must be convinced to take those countermeasures which have the highest potential for action. Perhaps the most difficult objective to accomplish is the education of the public about ways to recognize when an individual is impaired.

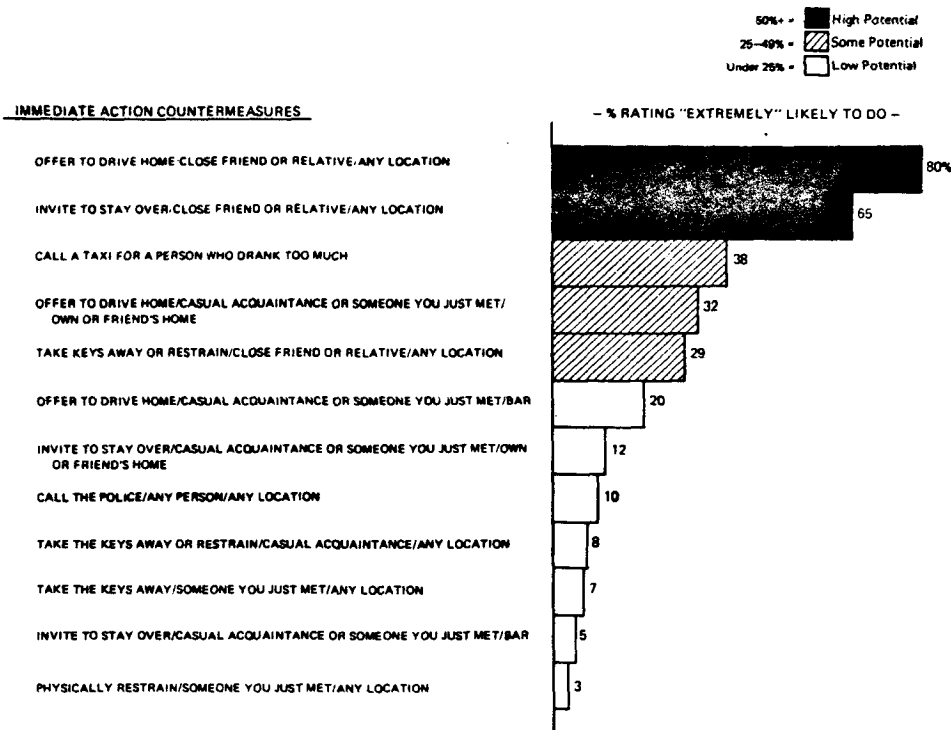


Figure 5. Countermeasures Offering Potential for Immediate Action Among Adults Involved in Alcohol-Related Situations

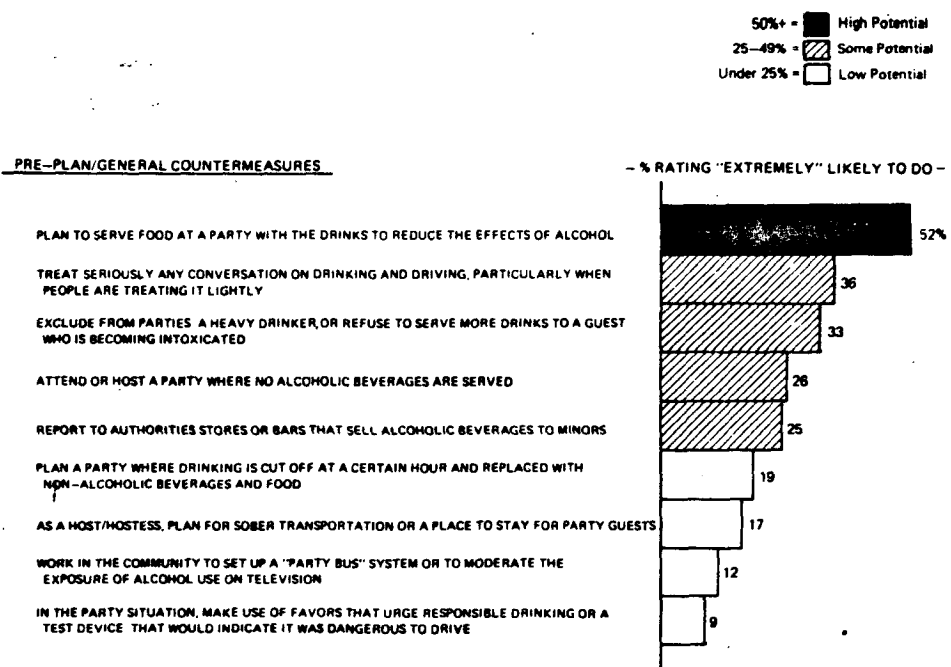


Figure 6. Countermeasures Offering Potential for Pre-Planning Action Among Adults Involved in Alcohol-Related Situations

Youth. The potential and actual drinking driving problem is more serious among youths than adults. Fully 50% of high school youths, ages 14 to 18, are occasionally involved in unsupervised drinking situations with peers. Only slightly more than one-third of the students interviewed said they were not involved in such situations. Of the remaining 66% who were involved, 16% said they drank less than once a month, while 50% of the youths were involved with alcohol once a month or more, and accounted for 98% of the unsupervised group occasions in which alcohol was consumed. An alarming 45% of the young people who do drink are doing so once a week or more. Another 43% of the drinkers consumed four or more drinks on any one day of the week prior to their interview, and 61% said they had been drunk at least once in the previous month.

Not only are alcohol-involved youths drinking frequently but they also are driving when drunk. Half of the self-reported drinkers indicated they had driven drunk in the past month. Twenty-five percent drove drunk three or more times and the remaining 25% once or twice in the same period of time.

The NHTSA research pinpoints beer as the most preferred alcoholic beverage, with 75% of the respondents reporting it as the beverage they drink most often. The drinkers showed very little understanding of the relationship between the amount of drinking and Blood Alcohol Content, especially for beer. Asked the number of cans of beer they could consume in a two hour period before becoming legally intoxicated, 57% indicated five or more, 36% claimed three or four cans, and only 7% believed their limit was as low as one or two cans.

Like their adult counterparts, the ARS-involved youths believe in the alcohol myths. Eighty-one percent felt mixing drinks can increase the effect of alcohol, and more than 70% thought beer and wine are less intoxicating than liquor. They also espoused the positive effect of cold showers and black coffee in sobering up when drunk, giving the two solutions a 70% and 62% affirmative rating respectively.

While these myths may contribute to the misinformed and often irresponsible behavior of drinking teenagers, an even more serious misconception is apparent from the research results. An alarming number of young people believe their driving skills are unimpaired when they have been drinking. Twenty-one percent felt their driving skills remained unchanged, 4% thought alcohol improved their handling of a car a little, and 3% thought the improvement was substantial. Another 30% indicated their driving was only a little worse, while only 8% said their skills deteriorated markedly. Among the 50% of high school students who drink, 32% say they were in a car where the driver was drinking heavily, once a month or more. Half of the drinkers admitted to driving drunk, 25% of them have driven drunk three or more times in the previous month.

Factors which may contribute to the high incidence of drunk driving among young people include their lack of concern about the dangers of driving when intoxicated. They generally have little respect for authority and do not perceive the consequence of being stopped by the police when drunk as serious. Furthermore, they see little possibility that death or maiming will result for teenagers who drive drunk. These particular perceptions may increase their likelihood of taking risks.

Drinking teens are more motivated by peer pressure than by any respect for authority. Seventy-two percent of the respondents who are involved in alcohol-related situations with their peers list a friend their own age as the person who has the most influence over their behavior. In order, the next most influential persons are brothers and sisters, still likely to be young persons, and finally, parents.

These young people are ordinary teenagers, not misfits or outcasts. They achieve across a wide range of academic levels and are socially involved in a variety of activities as displayed in Figure 7. They tend to drink in group situations with other young people. Figure 8 reveals that most of their drinking occurs, in order, at a friend's home, outdoor places such as beaches and parks, and their own home. The data in Figure 9 represents teenagers' stated reasons for drinking. Fifty-four percent of the young people interviewed say they drink to celebrate and have fun. They also like the taste of alcohol (52%) and the feeling of getting high (36%).

Based on the survey results, psychologists described the personality and lifestyle of youths involved in alcohol-related situations as follows:

"When compared with the non-involved group, these young people tend to be a good deal more social and group oriented. They like to be with a group of their peers in most of their social activities. They are more likely to be liberal and permissive and feel that their current social environment is overly restrictive and authoritarian in its attitudes towards young people."

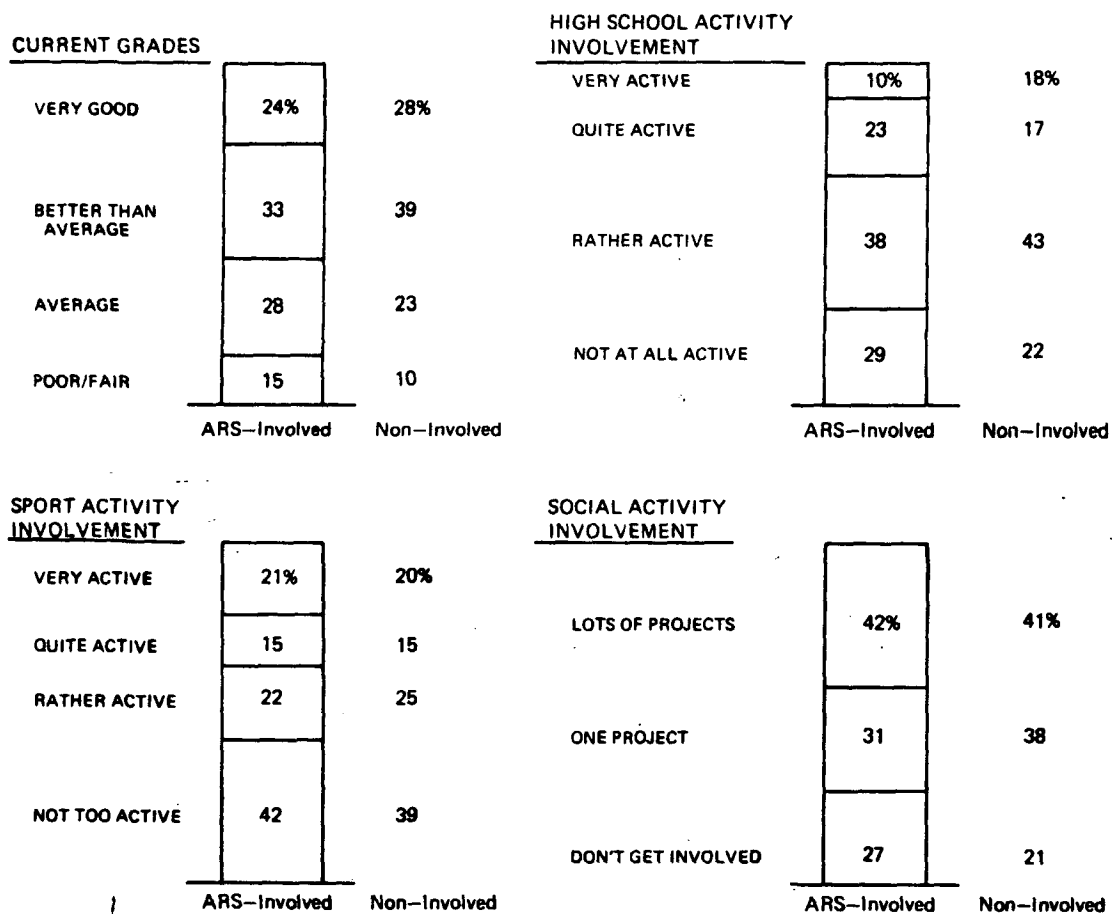


Figure 7. School and Social Involvement of High School Students Involved in Alcohol-Related Situations

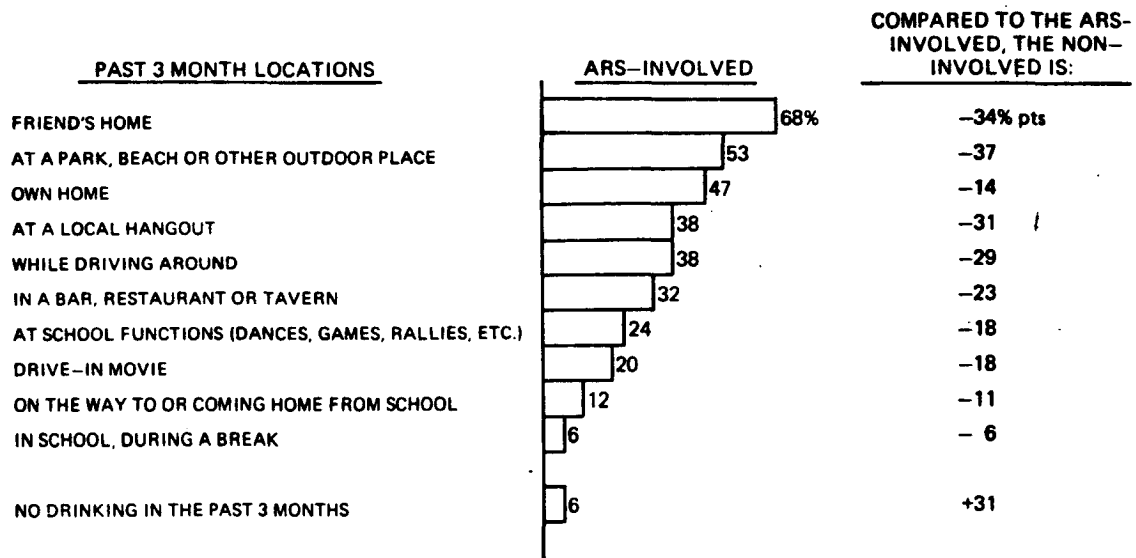


Figure 8. Locations Where High School Students Drink

(Base: High School Sample Who Drink)

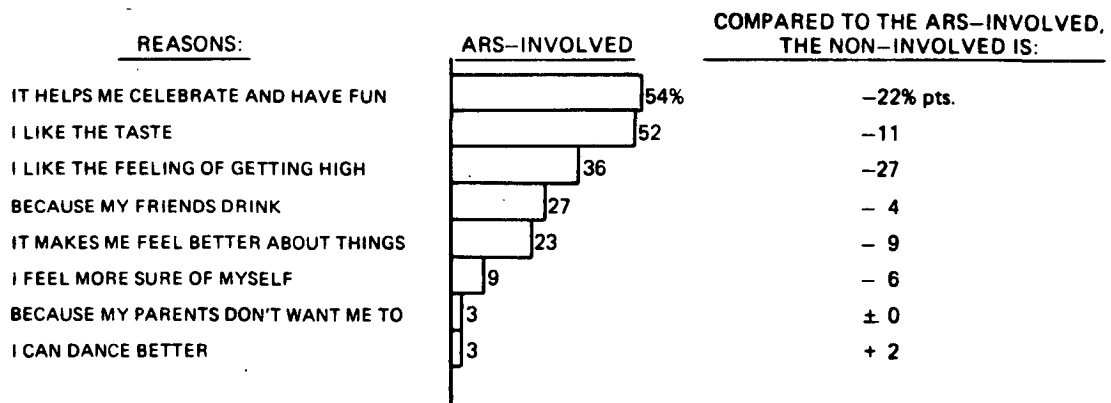


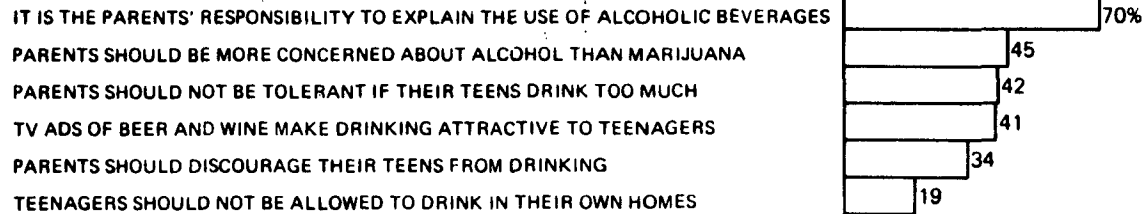
Figure 9. Reasons Teenagers Give for Drinking Alcoholic Beverages

"Their involvement in drinking tends to be very much of a social activity. It is also actuated by their desire to experiment with new experiences and their self-confidence in their ability to make their own decisions about what they want to do."⁵

Asked about their alcohol attitudes, 70% of the teens (see Figure 10) who are involved in alcohol-related situations say it is their parents' responsibility to explain the use of alcoholic beverages. But only 45% believe their parents should be more concerned about alcohol than marijuana. Less than half (42%) felt parents should not be tolerant if their teenage children drink in excess. At the same time 52% feel alcoholic beverages are a very important part of most parties, and 44% say there is no way to stop people who want to drink.

-% RATING "STRONGLY" OR "SOMEWHAT" AGREE-

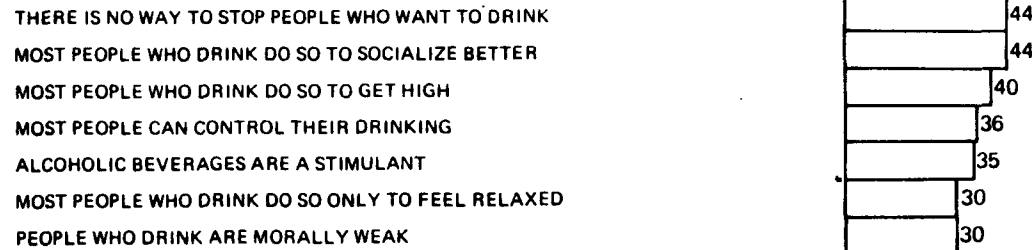
ALCOHOL AND THE TEENAGER ATTITUDES



COMPARED TO THE ARS-INVOLVED, THE NON-INVOLVED IS:

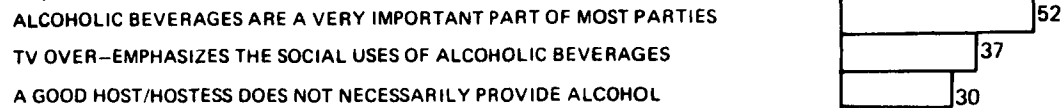
± 0% pts.
- 8
+ 5
+15
+23
+20

ALCOHOL AND THE PERSON ATTITUDES



-18
- 1
- 7
- 2
- 4
- 6
+15

ALCOHOL AND THE SOCIAL SCENE ATTITUDES






-22
+ 8
+20

Figure 10. Alcohol Attitudes of Teenagers Involved in Alcohol-Related Situations

While the current environment for getting teenagers to take steps to prevent drunk driving is not highly favorable, there are some indications of an underlying willingness of young people to become personally involved with friends. Of the measures listed in the survey, the possibility of offering to drive a drunk person home received the highest rating of 59%. The countermeasure least likely to be acted upon was a call to the police. Figure 11 indicates the potential acceptance of various options.

- % RATING "EXTREMELY" LIKELY TO DO -

50%+ =  High Potential Countermeasures
 25-49% =  Moderate Potential Countermeasures
 Under 25% =  Low Potential Countermeasures

COUNTERMEASURES

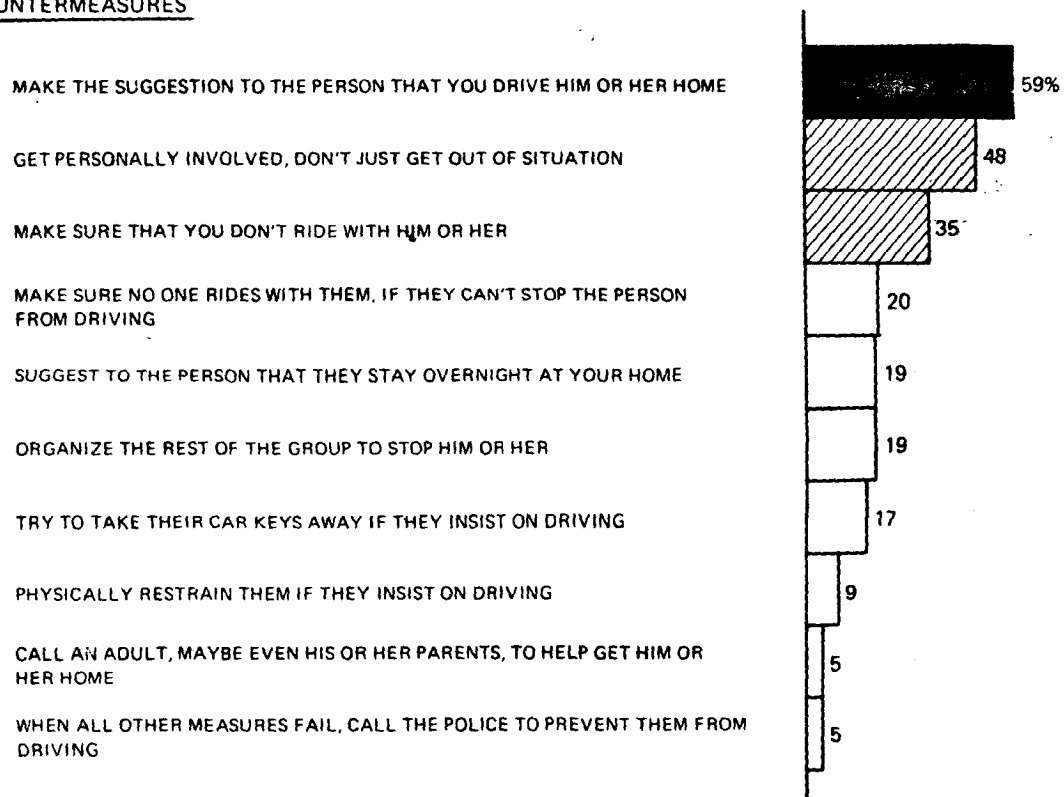


Figure 11. Countermeasures Alcohol-Involved High School Students Might Take When the Potential DWI Is a Peer

The youth research clearly indicates that youth should be a high priority target audience for alcohol countermeasure communications. Public information programs need to address individual youths, their peer influentials, and the public around them, including parents, schools, and law enforcement personnel.

Youth communications should aim to correct current misconceptions about drinking and driving, especially the beliefs that a teenager can compensate when he is

drunk and driving, that a can of beer is less potent than an average drink of liquor, and that black coffee or a cold shower are effective mechanisms for sobering up.

These communications must show that if it is acceptable group behavior to receive help when one is impaired, and that personal involvement in taking appropriate countermeasure action is expected behavior. The research team also identifies specific objectives for groups surrounding the teenager. These objectives are:

Parents

- Create an awareness of the magnitude and seriousness of the problem;
- Encourage parents to help educate their children about the facts and potential dangers of drunk driving; and
- Support the desired teen countermeasure actions.

Schools

- Create programs to help young people examine their drinking driving behavior and develop decision-making skills to avoid drunk driving; and
- Gain support for youth peer group action against drunk driving.

Law Enforcement Personnel

- Increase the awareness of growing problem of teenage DWI; and
- Treat the problem seriously.

CONCLUSION

In conclusion, the evaluation of ASAP Public Information and Education efforts indicates they have achieved a significant impact in making positive changes on the issues raised in the survey questions. Their greatest success occurred in attempts to provide accurate information about the causes, severity and consequences of the alcohol/driving problem. The NHTSA research, conducted among a different population, showed a greater deal of ignorance among audiences not addressed by PI&E efforts. The attitudinal and behavioral research further indicates the critical need to develop means by which people can diagnose alcohol impairment.

Public communications at the community level must continue to emphasize the important facts about alcohol and driving, but they must also increase attempts to persuade the public to take actions to prevent the incidence of drunk driving. Acceptable countermeasures have been identified and they can be communicated to the public.

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Footnotes

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2. Grey Marketing and Research Department, Grey Advertising Inc. "A Strategic Study on Alcohol and Highway Safety," Vol. II. High School Youth. Prepared for the Office of Driver and Pedestrian Programs, NHTSA, DOT. January, 1975. Contract No. ADM 41-74-0022.
3. Hendrick, R. E., Wilhelm, J. R., Meltzer, M. F., and Waterburg, R. C. Public Information and Program Feasibility Study for Alcohol Countermeasure Program, Vol. 1. Technical Discussion, Martin Marietta Corporation, Orlando, Fla., Dec., 1970, Final Report Contract No. DOT FH-11-7588.
4. Wilde, G. J. S. as quoted in "The Use of Mass Media for Highway Safety," Report DOT HS-801-209, June, 1974.
5. Grey Marketing and Research Department, Grey Advertising, Inc. "A Strategic Study on Alcohol and Highway Safety," Vol. II. High School Youth. Prepared for Office of Driver and Pedestrian Programs, NHTSA, DOT. January, 1975. Contract No. ADM 41-74-0022.

Figures

1. Wilde, G. J. S. as quoted in "The Use of Mass Media for Highway Safety," Report DOT HS-801-209, June, 1974.
4. Blount, W. R., and Sheppard, H. H. "Maintenance of Initial Knowledge Gains 65 Days After an Alcohol and Driving Presentation and Projecting Time to Total Decay." Report of Tampa, Florida ASAP, DOT Contract No. HS-062-1-080.
- 5, 6. Grey Marketing and Research Department, Grey Advertising Inc. "A Strategic Study on Alcohol and Highway Safety," Vol. 1. Adults 18-55. Report prepared for The Office of Driver and Pedestrian Programs, NHTSA, DOT, January, 1974. Contract No. ADM 41-74-0022.
- 7-11. Grey Marketing and Research Department, Grey Advertising Inc. "A Strategic Study on Alcohol and Highway Safety," Vol. II. High School Youth. Prepared for Office of Driver and Pedestrian Programs, NHTSA, DOT. January, 1975. Contract No. ADM 41-74-0022.

Table

4. Blount, W. R. and Sheppard, H. H. "Maintenance of Initial Knowledge Gains 65 Days After an Alcohol and Driving Presentation and Projecting Time to Total Decay." Report of Tampa, Florida ASAP, DOT Contract No. HS-062-1-080.

Appendix

APPENDIX A

QUESTION: WHICH ONE OF THESE DO YOU FEEL CAUSES THE GREATEST NUMBER OF AUTOMOBILE ACCIDENTS?

QUESTION: WOULD YOU GUESS THAT MORE FATAL ACCIDENTS ARE CAUSED BY THE MANY SOCIAL DRINKERS (PEOPLE THAT OCCASIONALLY DRINK TOO MUCH) OR BY THE SMALLER NUMBER OF PROBLEM DRINKERS (PEOPLE WHO FREQUENTLY DRINK A GREAT DEAL)?

RESPONSE: DRIVING UNDER THE INFLUENCE OF ALCOHOL

RESPONSE: PROBLEM DRINKERS

	All Sites	Sites with PI&E Effort	Sites without PI&E Effort		All Sites	Sites with PI&E Effort	Sites without PI&E Effort
TOTAL	24	20	4	TOTAL	16	14	2
NUMBER WITH POSITIVE CHANGES YEAR ONE TO LAST OPERATIONAL YEAR	11	11	0	NUMBER WITH POSITIVE CHANGES YEAR ONE TO LAST OPERATIONAL YEAR	10	10	0
BASELINE YEAR				BASELINE YEAR			
Number Reporting	24	20	4	Number Reporting	16	14	2
Range – Percent of Correct Responses	20.0-92.0	20.0-92.0	39.0-55.3	Range – Percent of Correct Responses	31.1-58.8	31.1-58.8	44.4-46.9
Median – Percent of Correct Responses	42.0	40.5	47.8	Median – Percent of Correct Responses	45.5	45.5	45.6
FIRST OPERATIONAL YEAR				FIRST OPERATIONAL YEAR			
Number Reporting	24	20	4	Number Reporting	16	14	2
Range – Percent of Correct Responses	29.0-89.0	29.0-89.0	38.0-50.9	Range – Percent of Correct Responses	31.9-67.3	39.1-67.3	31.9-33.1
Median – Percent of Correct Responses	43.0	42.3	44.2	Median – Percent of Correct Responses	46.2	47.0	32.5
SECOND OR THIRD OPERATIONAL YEAR				SECOND OR THIRD OPERATIONAL YEAR			
Number Reporting	16	14	2	Number Reporting	11	10	1
Range – Percent of Correct Responses	32.0-65.0	32.0-65.0	41.0-51.0	Range – Percent of Correct Responses	30.8-53.0	37.0-53.0	
Median – Percent of Correct Responses	45.5	45.5	46.0	Median – Percent of Correct Responses	43.0	44.0	30.8

QUESTION: OUT OF EVERY TEN TRAFFIC DEATHS, HOW MANY WOULD YOU SAY ARE CAUSED BY DRINKING DRIVERS?

QUESTION: HAVE YOU HEARD THE TERM "BLOOD ALCOHOL LEVEL" OR "BLOOD ALCOHOL CONCENTRATION?"

RESPONSE: FIVE

RESPONSE: YES

	All Sites	Sites with PI&E Effort	Sites without PI&E Effort		All Sites	Sites with PI&E Effort	Sites without PI&E Effort
TOTAL	23	16	7	TOTAL	10	10	0
NUMBER WITH POSITIVE CHANGES YEAR ONE TO LAST OPERATIONAL YEAR	14	12	2	NUMBER WITH POSITIVE CHANGES YEAR ONE TO LAST OPERATIONAL YEAR	5	5	
BASELINE YEAR				BASELINE YEAR			
Number Reporting	23	16	7	Number Reporting	10	10	
Range – Percent of Correct Responses	21.9-34.2	21.9-30.7	23.0-34.2	Range – Percent of Correct Responses	53.0-85.0	53.0-85.0	
Median – Percent of Correct Responses	25.9	25.0	26.0	Median – Percent of Correct Responses	67.5	67.5	
FIRST OPERATIONAL YEAR				FIRST OPERATIONAL YEAR			
Number Reporting	23	16	7	Number Reporting	10	10	
Range – Percent of Correct Responses	18.9-36.6	23.4-36.6	18.9-32.1	Range – Percent of Correct Responses	55.4-85.0	55.4-85.0	
Median – Percent of Correct Responses	27.0	27.2	25.0	Median – Percent of Correct Responses	69.6	69.6	
SECOND OR THIRD OPERATIONAL YEAR				SECOND OR THIRD OPERATIONAL YEAR			
Number Reporting	15	9	6	Number Reporting	2	2	
Range – Percent of Correct Responses	22.4-47.0	25.0-47.0	22.4-31.0	Range – Percent of Correct Responses	52.9-69.2	52.9-69.2	
Median – Percent of Correct Responses	28.1	29.0	26.0	Median – Percent of Correct Responses	61.0	61.0	

QUESTION: WHAT DO YOU THINK THE TERM BLOOD ALCOHOL CONCENTRATION OR BLOOD ALCOHOL LEVEL MEANS?

RESPONSE: COMBINED ANSWER: COMPLETELY CORRECT AND PARTIALLY OR ESSENTIALLY CORRECT

QUESTION: THE BLOOD ALCOHOL CONCENTRATION IS BASED ON A CHEMICAL TEST, SUCH AS A BREATH TEST, AND IS USED TO DETERMINE IF A PERSON IS LEGALLY DRUNK OR INTOXICATED. WHICH OF THESE DO YOU UNDERSTAND IS THE LEGAL DEFINITION OF BEING DRUNK IN THIS STATE?

RESPONSE: CORRECT LIMIT IN EACH SITE'S STATE

	All Sites	Sites with PI&E Effort	Sites without PI&E Effort		All Sites	Sites with PI&E Effort	Sites without PI&E Effort
TOTAL	22	19	3	TOTAL	22	20	2
NUMBER WITH POSITIVE CHANGES YEAR ONE TO LAST OPERATIONAL YEAR	16	14	2	NUMBER WITH POSITIVE CHANGES YEAR ONE TO LAST OPERATIONAL YEAR	17	16	1
BASELINE YEAR				BASELINE YEAR			
Number Reporting	22	19	3	Number Reporting	22	20	2
Range – Percent of Correct Responses	46.3-89.0	46.3-89.0	59.9-76.0	Range – Percent of Correct Responses	9.9-41.4	9.9-41.4	11.2-28.6
Median – Percent of Correct Responses	72.7	71.8	73.6	Median – Percent of Correct Responses	19.9	19.9	19.9
FIRST OPERATIONAL YEAR				FIRST OPERATIONAL YEAR			
Number Reporting	22	19	3	Number Reporting	22	20	2
Range – Percent of Correct Responses	39.4-96.0	39.4-96.0	51.5-92.0	Range – Percent of Correct Responses	10.4-59.0	10.4-59.0	18.5-23.5
Median – Percent of Correct Responses	74.6	74.4	74.9	Median – Percent of Correct Responses	23.9	25.8	21.0
SECOND OR THIRD OPERATIONAL YEAR				SECOND OR THIRD OPERATIONAL YEAR			
Number Reporting	12	12	0	Number Reporting	16	16	0
Range – Percent of Correct Responses	48.8-92.0	48.8-92.0		Range – Percent of Correct Responses	13.2-56.0	13.2-56.0	
Median – Percent of Correct Responses	79.8	79.8		Median – Percent of Correct Responses	26.5	26.5	

QUESTION: A YOUNGER PERSON JUST STARTING TO DRINK WILL GET DRUNK FASTER THAN AN OLDER PERSON ON THE SAME AMOUNT OF LIQUOR.

QUESTION: A PERSON DRINKING ON AN EMPTY STOMACH WILL GET DRUNK FASTER ON THE SAME NUMBER OF DRINKS THAN A PERSON WHO HAS JUST EATEN SOMETHING.

RESPONSE: FALSE

RESPONSE: TRUE

	All Sites	Sites with PI&E Effort	Sites without PI&E Effort		All Sites	Sites with PI&E Effort	Sites without PI&E Effort
TOTAL	23	10	13	TOTAL	24	15	9
NUMBER WITH POSITIVE CHANGES YEAR ONE TO LAST OPERATIONAL YEAR	16	7	9	NUMBER WITH POSITIVE CHANGES YEAR ONE TO LAST OPERATIONAL YEAR	12	8	4
BASELINE YEAR				BASELINE YEAR			
Number Reporting	23	10	13	Number Reporting	24	15	9
Range – Percent of Correct Responses	13.2-74.9	17.0-28.0	13.2-74.9	Range – Percent of Correct Responses	86.5-97.0	86.5-95.0	87.6-97.0
Median – Percent of Correct Responses	25.0	24.5	25.0	Median – Percent of Correct Responses	91.8	92.0	91.8
FIRST OPERATIONAL YEAR				FIRST OPERATIONAL YEAR			
Number Reporting	23	10	13	Number Reporting	24	15	9
Range – Percent of Correct Responses	13.0-73.8	13.0-37.0	19.0-73.8	Range – Percent of Correct Responses	82.0-96.0	82.0-95.0	85.9-96.0
Median – Percent of Correct Responses	27.5	26.8	28.4	Median – Percent of Correct Responses	90.6	91.3	89.0
SECOND OR THIRD OPERATIONAL YEAR				SECOND OR THIRD OPERATIONAL YEAR			
Number Reporting	15	7	8	Number Reporting	15	11	4
Range – Percent of Correct Responses	17.2-37.6	17.2-36.0	23.7-37.6	Range – Percent of Correct Responses	86.6-96.5	86.6-94.0	88.2-96.5
Median – Percent of Correct Responses	26.6	23.0	27.3	Median – Percent of Correct Responses	92.0	92.0	91.3

A4

QUESTION: IF A PERSON USES A "MIXER," LIKE SODA WATER, WITH LIQUOR, HE CAN DRINK MORE WITHOUT GETTING DRUNK THAN IF HE DRANK THE LIQUOR STRAIGHT.

RESPONSE: FALSE

QUESTION: A SMALL PERSON WILL GET DRUNK FASTER THAN A LARGE PERSON ON THE SAME NUMBER OF DRINKS.

RESPONSE: TRUE

A-5

	All Sites	Sites with PI&E Effort	Sites without PI&E Effort		All Sites	Sites with PI&E Effort	Sites without PI&E Effort
TOTAL	23	9	14	TOTAL	24	16	8
NUMBER WITH POSITIVE CHANGES YEAR ONE TO LAST OPERATIONAL YEAR	22	8	14	NUMBER WITH POSITIVE CHANGES YEAR ONE TO LAST OPERATIONAL YEAR	19	14	5
BASELINE YEAR				BASELINE YEAR			
Number Reporting	23	9	14	Number Reporting	24	16	8
Range – Percent of Correct Responses	22.0-54.1	28.8-54.1	22.0-50.9	Range – Percent of Correct Responses	27.6-59.5	27.6-59.5	29.0-37.3
Median – Percent of Correct Responses	44.0	44.0	43.5	Median – Percent of Correct Responses	35.2	38.7	33.0
FIRST OPERATIONAL YEAR				FIRST OPERATIONAL YEAR			
Number Reporting	23	9	14	Number Reporting	24	16	8
Range – Percent of Correct Responses	24.4-62.9	34.0-62.9	24.4-58.4	Range – Percent of Correct Responses	23.8-63.0	23.8-63.0	29.8-41.1
Median – Percent of Correct Responses	46.9	49.0	46.8	Median – Percent of Correct Responses	39.5	47.5	36.5
SECOND OR THIRD OPERATIONAL YEAR				SECOND OR THIRD OPERATIONAL YEAR			
Number Reporting	15	9	6	Number Reporting	16	11	5
Range – Percent of Correct Responses	33.0-64.0	33.0-64.0	35.2-51.6	Range – Percent of Correct Responses	29.2-65.0	29.2-65.0	39.0-58.3
Median – Percent of Correct Responses	47.8	53.0	44.1	Median – Percent of Correct Responses	47.0	47.2	40.0

QUESTION: A PERSON WHO HAS HAD ONE DRINK SHOULD NOT BE ALLOWED TO DRIVE AN AUTOMOBILE.

QUESTION: IF A PERSON STICKS TO THE SAME KIND OF DRINK, HE IS LESS LIKELY TO GET DRUNK THAN IF HE MIXES DIFFERENT KINDS OF DRINKS, LIKE BEER AND WHISKEY OR GIN AND SCOTCH.

RESPONSE: FALSE

RESPONSE: FALSE

	All Sites	Sites with PI&E Effort	Sites without PI&E Effort		All Sites	Sites with PI&E Effort	Sites without PI&E Effort
TOTAL	23	7	16	TOTAL	23	6	17
NUMBER WITH POSITIVE CHANGES YEAR ONE TO LAST OPERATIONAL YEAR	13	5	8	NUMBER WITH POSITIVE CHANGES YEAR ONE TO LAST OPERATIONAL YEAR	17	5	12
BASELINE YEAR				BASELINE YEAR			
Number Reporting	23	7	16	Number Reporting	23	6	17
Range – Percent of Correct Responses	52.8-85.7	58.0-76.2	52.8-85.7	Range – Percent of Correct Responses	8.4-50.0	29.0-50.0	8.4-49.9
Median – Percent of Correct Responses	71.0	73.0	69.6	Median – Percent of Correct Responses	34.3	36.0	34.3
FIRST OPERATIONAL YEAR				FIRST OPERATIONAL YEAR			
Number Reporting	23	7	16	Number Reporting	23	6	17
Range – Percent of Correct Responses	29.0-87.1	66.0-79.2	29.0-87.1	Range – Percent of Correct Responses	6.7-60.2	30.0-47.0	6.7-60.2
Median – Percent of Correct Responses	70.8	72.1	70.1	Median – Percent of Correct Responses	36.0	34.0	36.8
SECOND OR THIRD OPERATIONAL YEAR				SECOND OR THIRD OPERATIONAL YEAR			
Number Reporting	14	5	9	Number Reporting	15	6	9
Range – Percent of Correct Responses	63.0-84.9	69.2-77.2	63.0-84.9	Range – Percent of Correct Responses	29.0-50.0	29.0-50.0	32.8-47.7
Median – Percent of Correct Responses	74.8	73.8	77.8	Median – Percent of Correct Responses	37.3	39.4	37.3

QUESTION: A PERSON WHO IS USED TO DRINKING CAN DRINK MORE AND NOT BECOME DRUNK THAN A PERSON WHO DRINKS ONLY ONCE IN A WHILE.

QUESTION: ALCOHOL IS CONSIDERED A DRUG.

RESPONSE: FALSE

RESPONSE: TRUE

	All Sites	Sites with PI&E Effort	Sites without PI&E Effort		All Sites	Sites with PI&E Effort	Sites without PI&E Effort
TOTAL	22	7	15	TOTAL	9	7	2
NUMBER WITH POSITIVE CHANGES YEAR ONE TO LAST OPERATIONAL YEAR	21	6	15	NUMBER WITH POSITIVE CHANGES YEAR ONE TO LAST OPERATIONAL YEAR	7	6	1
BASELINE YEAR				BASELINE YEAR			
Number Reporting	22	7	15	Number Reporting	9	7	2
Range – Percent of Correct Responses	13.4-34.6	16.0-30.8	13.4-34.6	Range – Percent of Correct Responses	41.8-80.0	49.2-80.0	41.8-79.9
Median – Percent of Correct Responses	23.4	23.0	25.0	Median – Percent of Correct Responses	65.6	65.6	60.8
FIRST OPERATIONAL YEAR				FIRST OPERATIONAL YEAR			
Number Reporting	22	7	15	Number Reporting	9	7	2
Range – Percent of Correct Responses	15.4-45.0	18.0-40.0	15.4-45.0	45.0 Range – Percent of Correct Responses	53.4-83.0	55.7-83.0	53.4-79.2
Median – Percent of Correct Responses	28.2	23.0	29.3	Median – Percent of Correct Responses	73.0	73.0	66.3
SECOND OR THIRD OPERATIONAL YEAR				SECOND OR THIRD OPERATIONAL YEAR			
Number Reporting	14	7	7	Number Reporting	0	0	0
Range – Percent of Correct Responses	17.0-45.0	17.0-45.0	22.0-36.6	Range – Percent of Correct Responses			
Median – Percent of Correct Responses	26.4	18.7	30.0	Median – Percent of Correct Responses			

QUESTION: ALCOHOL WILL AFFECT A PERSON FASTER IF HE'S UNDER MEDICATION LIKE A TRANQUILIZER OR ANTIDEPRESSANT.

QUESTION: STRONG BLACK COFFEE IS HELPFUL IN SOBERING A PERSON UP BEFORE HE DRIVES.

RESPONSE: TRUE

RESPONSE: FALSE

	All Sites	Sites with PI&E Effort	Sites without PI&E Effort		All Sites	Sites with PI&E Effort	Sites without PI&E Effort
TOTAL	22	10	12	TOTAL	24	18	6
NUMBER WITH POSITIVE CHANGES YEAR ONE TO LAST OPERATIONAL YEAR	20	10	10	NUMBER WITH POSITIVE CHANGES YEAR ONE TO LAST OPERATIONAL YEAR	20	16	4
BASELINE YEAR				BASELINE YEAR			
Number Reporting	22	10	12	Number Reporting	24	18	6
Range – Percent of Correct Responses	76.7-95.6	83.0-92.0	76.7-95.6	Range – Percent of Correct Responses	16.8-44.9	24.0-44.9	16.8-43.8
Median – Percent of Correct Responses	86.6	86.6	87.4	Median – Percent of Correct Responses	31.9	30.2	35.0
FIRST OPERATIONAL YEAR				FIRST OPERATIONAL YEAR			
Number Reporting	22	10	12	Number Reporting	24	18	6
Range – Percent of Correct Responses	73.9-97.0	85.2-94.4	73.9-97.0	Range – Percent of Correct Responses	14.4-61.3	24.0-61.3	14.4-45.4
Median – Percent of Correct Responses	90.5	88.6	91.9	Median – Percent of Correct Responses	36.8	36.7	39.3
SECOND OR THIRD OPERATIONAL YEAR				SECOND OR THIRD OPERATIONAL YEAR			
Number Reporting	15	9	6	Number Reporting	16	15	1
Range – Percent of Correct Responses	87.0-97.0	87.0-94.7	90.8-97.0	Range – Percent of Correct Responses	23.2-63.8	23.2-63.8	
Median – Percent of Correct Responses	92.2	92.2	92.8	Median – Percent of Correct Responses	37.2	37.2	44.0

QUESTION: BEER IS PRETTY MUCH LIKE A SOFT DRINK AS FAR AS MAKING A PERSON DRUNK IS CONCERNED.

QUESTION: HAVE YOU READ OR HEARD OF A CAMPAIGN OR PROGRAM IN THE AREA THAT WOULD REDUCE ALCOHOL-RELATED TRAFFIC DEATHS?

RESPONSE: FALSE

RESPONSE: YES

	All Sites	Sites with PI&E Effort	Sites without PI&E Effort		All Sites	Sites with PI&E Effort	Sites without PI&E Effort
TOTAL	22	12	10	TOTAL	25	22	3
NUMBER WITH POSITIVE CHANGES YEAR ONE TO LAST OPERATIONAL YEAR	17	10	7	NUMBER WITH POSITIVE CHANGES YEAR ONE TO LAST OPERATIONAL YEAR	23	20	3
BASELINE YEAR				BASELINE YEAR			
Number Reporting	22	12	10	Number Reporting	25	22	3
Range – Percent of Correct Responses	42.0-96.0	42.0-95.8	77.8-96.0	Range – Percent of Correct Responses	8.5-76.2	8.5-76.2	24.0-50.8
Median – Percent of Correct Responses	86.2	88.4	82.6	Median – Percent of Correct Responses	42.4	42.5	42.4
FIRST OPERATIONAL YEAR				FIRST OPERATIONAL YEAR			
Number Reporting	22	12	10	Number Reporting	25	22	3
Range – Percent of Correct Responses	70.8-94.0	70.8-93.0	79.9-94.0	Range – Percent of Correct Responses	16.4-90.0	16.4-90.0	27.0-54.4
Median – Percent of Correct Responses	88.4	89.1	85.8	Median – Percent of Correct Responses	52.0	52.6	43.3
SECOND OR THIRD OPERATIONAL YEAR				SECOND OR THIRD OPERATIONAL YEAR			
Number Reporting	14	9	5	Number Reporting	16	15	1
Range – Percent of Correct Responses	80.0-96.2	80.0-96.2	81.9-93.9	Range – Percent of Correct Responses	25.0-82.3	40.4-82.3	
Median – Percent of Correct Responses	90.2	90.2	90.2	Median – Percent of Correct Responses	61.2	62.1	25.0

QUESTION: DO YOU RECALL WHAT AGENCY OR ORGANIZATION IS SPONSORING THE PROGRAM?

QUESTION: WHEN YOU'VE DRIVEN AFTER DRINKING HAVE YOU EVER THOUGHT YOU REALLY SHOULDN'T BE ON THE ROAD?

RESPONSE: ASAP

RESPONSE: YES

	All Sites	Sites with PI&E Effort	Sites without PI&E Effort		All Sites	Sites with PI&E Effort	Sites without PI&E Effort
TOTAL NUMBER WITH POSITIVE CHANGES YEAR ONE TO LAST OPERATIONAL YEAR	20 17	17 14	3 3	TOTAL NUMBER WITH POSITIVE CHANGES YEAR ONE TO LAST OPERATIONAL YEAR	23 12	9 6	14 6
BASELINE YEAR Number Reporting Range – Percent of Correct Responses Median – Percent of Correct Responses	20 0.0-55.2 3.8	17 0.0-55.2 4.3	3 1.0-2.7 2.0	BASELINE YEAR Number Reporting Range – Percent of Correct Responses Median – Percent of Correct Responses	23 19.5-70.4 43.8	9 24.5-63.3 40.3	14 19.5-70.4 46.4
FIRST OPERATIONAL YEAR Number Reporting Range – Percent of Correct Responses Median – Percent of Correct Responses	20 0.3-88.0 10.0	17 0.3-88.0 10.4	3 3.9-5.0 5.0	FIRST OPERATIONAL YEAR Number Reporting Range – Percent of Correct Responses Median – Percent of Correct Responses	23 23.9-60.9 48.0	9 23.9-60.9 48.0	14 27.8-57.0 48.0
SECOND OR THIRD OPERATIONAL YEAR Number Reporting Range – Percent of Correct Responses Median – Percent of Correct Responses	13 3.0-70.0 18.0	11 3.0-70.0 21.8	2 7.0-18.0 12.5	SECOND OR THIRD OPERATIONAL YEAR Number Reporting Range – Percent of Correct Responses Median – Percent of Correct Responses	13 33.5-63.0 48.6	6 33.5-63.0 46.2	7 36.0-60.0 48.6

QUESTION: HAS ANYONE EVER TRIED TO PERSUADE YOU NOT TO DRIVE BECAUSE YOU HAD BEEN DRINKING?

QUESTION: HAVE YOU REFUSED TO DRIVE OR DECIDED NOT TO DRIVE BECAUSE YOU HAVE HAD TOO MUCH TO DRINK?

RESPONSE: YES

RESPONSE: YES

A-11

	All Sites	Sites with PI&E Effort	Sites without PI&E Effort		All Sites	Sites with PI&E Effort	Sites without PI&E Effort
TOTAL	7	7	0	TOTAL	24	12	12
NUMBER WITH POSITIVE CHANGES YEAR ONE TO LAST OPERATIONAL YEAR	4	4		NUMBER WITH POSITIVE CHANGES YEAR ONE TO LAST OPERATIONAL YEAR	12	8	4
BASELINE YEAR				BASELINE YEAR			
Number Reporting	7	7		Number Reporting	24	12	12
Range – Percent of Correct Responses	19.3-35.1	19.3-35.1		Range – Percent of Correct Responses	22.3-77.1	24.5-77.1	22.3-65.0
Median – Percent of Correct Responses	27.0	27.0		Median – Percent of Correct Responses	57.8	54.8	58.2
FIRST OPERATIONAL YEAR				FIRST OPERATIONAL YEAR			
Number Reporting	7	7		Number Reporting	24	12	12
Range – Percent of Correct Responses	19.0-44.4	19.0-44.4		Range – Percent of Correct Responses	26.7-66.1	26.7-66.1	30.2-66.0
Median – Percent of Correct Responses	24.0	24.0		Median – Percent of Correct Responses	51.8	54.6	51.8
SECOND OR THIRD OPERATIONAL YEAR				SECOND OR THIRD OPERATIONAL YEAR			
Number Reporting	0	0		Number Reporting	15	7	8
Range – Percent of Correct Responses				Range – Percent of Correct Responses	36.4-68.2	36.4-68.2	37.0-60.0
Median – Percent of Correct Responses				Median – Percent of Correct Responses	54.9	53.0	55.0

QUESTION: HOW OFTEN DO YOU DRIVE AFTER HAVING ANYTHING TO DRINK? WOULD YOU SAY OFTEN, OCCASIONALLY, HARDLY EVER, OR NEVER?

QUESTION: IF YOU DRIVE AFTER DRINKING TOO MUCH, WHAT ARE YOUR CHANCES OF BEING STOPPED BY THE POLICE?

RESPONSE: COMBINED ANSWER: HARDLY EVER AND NEVER

RESPONSE: COMBINED ANSWER: VERY HIGH AND HIGH

A-12

	All Sites	Sites with PI&E Effort	Sites without PI&E Effort		All Sites	Sites with PI&E Effort	Sites without PI&E Effort
TOTAL	23	6	17	TOTAL	24	18	6
NUMBER WITH POSITIVE CHANGES YEAR ONE TO LAST OPERATIONAL YEAR	10	3	7	NUMBER WITH POSITIVE CHANGES YEAR ONE TO LAST OPERATIONAL YEAR	11	9	2
BASELINE YEAR				BASELINE YEAR			
Number Reporting	23	6	17	Number Reporting	24	18	6
Range – Percent of Correct Responses	10.1-78.0	49.0-78.0	10.1-77.7	Range – Percent of Correct Responses	21.0-73.0	21.0-73.0	21.9-53.5
Median – Percent of Correct Responses	65.0	66.5	60.0	Median – Percent of Correct Responses	28.4	28.4	28.7
FIRST OPERATIONAL YEAR				FIRST OPERATIONAL YEAR			
Number Reporting	23	6	17	Number Reporting	24	18	6
Range – Percent of Correct Responses	7.8-79.0	22.0-79.0	7.8-78.0	Range – Percent of Correct Responses	14.2-83.5	14.2-83.5	17.2-54.1
Median – Percent of Correct Responses	66.2	67.6	62.0	Median – Percent of Correct Responses	31.5	33.8	23.8
SECOND OR THIRD OPERATIONAL YEAR				SECOND OR THIRD OPERATIONAL YEAR			
Number Reporting	15	4	11	Number Reporting	16	11	5
Range – Percent of Correct Responses	7.0-78.0	28.0-75.0	7.0-78.0	Range – Percent of Correct Responses	12.2-75.9	12.2-75.9	18.0-34.0
Median – Percent of Correct Responses	62.0	72.0	50.1	Median – Percent of Correct Responses	26.5	27.3	25.9

APPENDIX B COMMUNICATIONS PLAN EXAMPLE

The first step in developing a communications plan is to establish objectives which form the basis for all program activities. Then strategies must be devised for achieving the stated objectives. Part of the strategy must identify the target audiences who will be reached by the proposed communications and the methods for measuring the effects of the efforts. The following presents a communications plan submitted by the Washtenaw County, Michigan ASAP in 1971. It provides an example of the remaining parts of a communications plan which include defining available resources, liaison with interested groups, community participation (volunteers), campaign content, creative strategy, media selection, media placement and evaluation.

If the major objectives set forth for the control program are to be achieved, the program must include efforts (1) to increase public awareness and concern about abusive drinking and driving, (2) to provide information to several groups of professionals (e.g., judges, lawyers, physicians, social workers) which can enable them to handle abusive drinkers more effectively, and (3) to provide information for problem drinkers and their families so as to increase their understanding of the problem and available means of ameliorating it. The success of such control measures as stricter law enforcement, restrictions on driving, and court referral of problem drinkers to medical facilities all depends ultimately on public acceptance — which in turn requires public understanding of the nature and seriousness of the problem.

In general, the public information and education program proposed here will include content dealing with symptoms, predisposing factors, effects, treatment methods, local treatment resources, legal procedures, and needs for funding and voluntary assistance. Although not the primary objective, an important secondary purpose of the program will be to develop other sources of funding which will enable continuation of treatment and referral services well beyond the three-year period of federal support.

The specific nature of the information program content, including the particular themes and appeals to be used, will be determined on the basis of knowledge obtained in pre-program surveys of designated target groups. The information obtained in these surveys will also be used in selecting the most appropriate message sources (e.g., physicians, law enforcement officials, civic leaders, members of Alcoholics Anonymous) to be used in the campaign. To the maximum extent possible, the selection of message sources, content, and media will be tailored specifically to the needs and interests of each designated target group.

In addition to providing information necessary for the development of effective campaign materials, the pre-program surveys will also furnish data to be used as a baseline against which several kinds of intended changes can be assessed at the conclusion of the campaign. The design and measurement methods will make it possible to determine the direction and amount of change which occurs on a number of dimensions; since the measures will include coverage of such factors as message exposure and recall, it will also be possible to distinguish changes produced by the campaign from changes attributable to extraneous events. Rather than using a simple global assessment of program effectiveness, the intention is to develop a sufficient level of detail about outcomes to permit a determination of (1) the relative value of various approaches used with each target group, (2) the extent to which changes in knowledge and attitudes lead to desired behavioral change in each target group, and (3) the relative contribution made by changes in each target group to a reduction in the total problem of abusive drinking and vehicle crashes or violations of law.

There is reason to believe that donations from local businesses can be obtained to cover the cost of paid advertising as an element in the program. The cooperation of

local newspapers and radio stations in providing free space or time for announcements and features is expected, and special efforts will be made to utilize this cooperation. However, control of page selection (for newspapers) and both day-part and "program surround" (for radio) are offered only to paying advertisers, and these factors are often crucial in determining which population segments have the opportunity for exposure to a given message. Paid advertising will permit this control, and thus efficient dissemination of informational content; it will encourage local media managers to provide additional free coverage; it will give the problem and the program a degree of visibility not otherwise obtainable; it will permit the use of "keyed" requests for information; and perhaps most importantly, it will insure that persons who tend to ignore or avoid information about alcohol and driving will be exposed to such information. Since the costs of paid advertising will be met locally, no federal funds will be used for this purpose.

Description of Target Groups, Specific Objectives and Evaluation Procedures

General Objective: to decrease the number of deaths and injuries resulting from highway crashes involving alcohol-impaired drivers in Washtenaw County.

Objective of Public Information Program: to produce in designated persons and groups a level of knowledge and concern regarding alcohol and driving which leads to desired outcomes as specified below.

Target Group	Reached Through:	Intended Effects:	Assessment of Effects
1. general public	newspaper, radio (features, news, interviews, paid advertising)	<p>Increase in percentage of persons who: know amount of drinking that impairs their own driving; know (and accept legitimacy of) court and police procedures; know risk to self and family (number of impaired drivers and relationship between BAC levels and crash probability); know symptoms and effects of abusive drinking; know value of various treatment methods; are willing to support use of public funds for treatment facilities; know WCCA name, purposes, and activities; support and use WCCA as appropriate (e.g., give money, give time as volunteer, refer problem drinkers for help)</p> <p>Decrease in number of persons who: drive after drinking; are charged by police with impaired driving; are involved in vehicle crashes</p>	<p>Comparison at beginning and end of campaign of: responses on surveys; number of referrals to WCCA; number of volunteers contributing time; amount of money contributed; incidence of vehicle crashes involving alcohol</p>

Target Group	Reached Through:	Intended Effects:	Assessment of Effects
2. voluntary organizations (service clubs, church groups, etc.)	meetings, newsletters	similar to above, but with emphasis on contributions of time and money on an organizational basis	same as #1
3. hospital boards	meetings, personal visits by WCCA officials	increased awareness of possibilities for treatment success; acceptance of policy of admitting alcoholics for treatment	comparison of hospital policies at beginning and end of campaign; comparison of number of alcoholics admitted for treatment during one-month periods at beginning and end of campaign
4. physicians	meetings, continuing education courses, medical journal article reprints, etc.	<p>Increase in: awareness of incidence of problem drinking; willingness to treat alcoholics; awareness of other available treatment resources; use of WCCA as a referral center and source of other help for patients</p> <p>Decrease in: class bias in diagnosing alcoholics</p>	Interviews with sample of physicians at beginning and end of campaign; comparison of number (and characteristics) of alcoholics referred to WCCA during two-month periods at beginning and end of campaign
5. lawyers, judges	meetings, printed materials	similar to #4, omitting reference to diagnosis and treatment and adding emphasis on value of treatment as opposed to incarceration	Interviews with judges and lawyers at beginning and end of campaign; comparison of number of police-contact cases involving drinking which are referred for treatment rather than incarcerated (during one-month periods at beginning and end of campaign)

Target Group	Reached Through:	Intended Effects:	Assessment of Effects
6. businessmen, employers	meetings, letters, printed material, personal visits by WCCA officials and by businessmen who support WCCA	Increase in: knowledge of symptoms of abusive drinking; knowledge of own business losses attributable to abusive drinking; awareness of available treatment resources; giving of money to support treatment facilities; support for alcoholism education programs for employees	Before-after surveys, comparison of business contributions to WCCA at beginning and end of campaign; comparison of employee education programs offered at beginning and end of campaign
7. employees of large firms	on-the-job meetings, letters from employer, flyers in pay envelopes, posters	same as #1	same as #1
8. police	meetings, printed materials, posters	Increase in: knowledge of symptoms, predisposing factors, court procedures, treatment resources; appropriate handling of problem drinkers so as to facilitate and support treatment	Before-after surveys
9. social workers, clergy, etc.	meetings, printed materials	same as #8	Before-after surveys
10. problem drinkers	physicians, spouses, clergy, employers, social workers, friends, bar operators, liquor store operators	Increase in: awareness of symptoms and risks of excessive drinking; awareness of own symptoms; awareness of treatment resources; seeking of help Decrease in: drinking episodes; frequency of driving after drinking; police contacts	Before-after surveys of identified problem drinkers; before-after comparison of records of treatment facilities and of police
11. alcoholics	same as #10	same as #10	same as #10
12. families of alcoholics and problem drinkers	for identified drinkers: clergy, social workers, mailings from WCCA; for unidentified drinkers: radio, newspapers	same as #8	same as #8

Target Group	Reached Through:	Intended Effects:	Assessment of Effects
13. news editors, writers, and management	letters and personal visits from WCCA officials	Increase in: awareness of extent of problem; acceptance of responsibility of news media to inform public about the problem and means of ameliorating it; use of informational materials supplied by WCCA; mention of evidence of drinking in reports of vehicle crashes	Interviews with newspaper and radio writers and editors at beginning and end of campaign; comparison of amount of space or time given the problem at beginning and end of campaign; comparison of police records with newspaper reports on selected vehicle crashes for two-month periods at beginning and end of campaign
14. school teachers	meetings, printed materials	Increase in: knowledge about extent, effects, and predisposing factors regarding abusive drinking; use of appropriate and effective methods in teaching about alcohol	Before-after surveys
15. high school students	classroom presentations	Increase in: knowledge about extent, effects, and predisposing factors regarding abusive drinking; knowledge of risks of driving after drinking	Before-after surveys in classrooms; before-after comparison of police records
16. bar operators	meetings, personal visits by WCCA officials and others	Increase in: awareness of extent and consequences of abusive drinking/driving; acceptance of partial responsibility for consequences; willingness to discourage excessive purchases by customers, and to seek transportation help for customers who would drive while impaired	Before-after surveys
17. liquor store operators	same as #16	same as #16	same as #16

PLANNING AND DEVELOPMENT PHASE. It is expected that as much as six months will be required to hire a qualified public health educator, plan the initial surveys, and produce some of the materials to be used in the campaign. By the end of the first year, the necessary records, searches and analysis of all pre-measures on designated target groups will have been completed, a number of specialized informational materials produced, and the program placed in full operation.

Since the early surveys will be used to provide guidance for development of program materials as well as baselines against which later change will be measured, coordination with the Highway Safety Research Institute will be especially close during the first six months. The same will be true in the final year, when the evaluation of various program elements is being conducted.

COMMUNICATION MATERIALS AND PROGRAMS

1. Production of Film

One 15-minute 16mm sound film will be produced during the first year of the program. Perhaps three-quarters of the film will have applicability in other areas of the country, but enough of it must be recognizably local to convince viewers that the drinking-driving problem exists here and the resources to handle it can be developed here. Some of the persons (e.g., judges, public officials, industrialists) and places (e.g., crash scenes, treatment facilities) presented must be clearly identifiable within Washtenaw County. The film will be used with a variety of civic groups whose members are in a position to take constructive action. It will be non-moralistic in tone, and will be high in visual and emotional impact. Its purpose will be to elicit a recognition of the seriousness of the drinking-driving problem and a commitment to do something about it locally.

Complete production costs are budgeted at \$1500 per minute of final print running time, or a total of \$22,500.

2. Purchase of Specialized Films for Designated Audiences

In addition to the film described above, eight currently available 16mm films will be purchased for use with particular groups. Six of these groups will be composed of persons who deal with alcoholic drivers (physicians, lawyers, judges, employers, police, social workers and clergy, families of alcoholics). The other two films will be used with high school students and with blue-collar employees. Since each of these groups is distinctive in its relationship to the problem and in the kind of response desired, it would be pointless to use a single "general" film with all eight groups.

Purchase costs are estimated at \$250 per film for a total of \$2000.

3. Production of Radio Announcements and Special Programs

There are no television stations within Washtenaw County; the area is served primarily by Detroit stations, and it would not be practical to seek programming time from those stations. However, there are five radio stations in the county — one in Ypsilanti (WYSI) and four in Ann Arbor (WAAM, WPAG, and WOIA, which are commercial, and WUOM, the University of Michigan station). Public service announcement time can be obtained on all of these, and a special allocation of time may also be obtained for short programs produced as interviews, documentaries or dramas. Stations are most likely to utilize such programs if they are of professional quality — well produced, high in audience interest, properly timed, and presented in a ready-to-use form which requires no staff time.

The plan is to produce a number of one-minute announcements and a continuing series of short programs ranging from five to thirty minutes in length. The length will be determined by station needs and acceptance of the programs; most will probably

run five to ten minutes. Development and use of the programs will continue through the three years of the project.

Production costs are estimated at \$2000 per year for a total of \$6000.

4. Printed Materials

Most printed materials dealing with alcoholism and highway safety are probably not worth their cost. In general, they tend to be of poor quality both graphically and psychologically; they are often prepared from the point of view of the professional in health or safety without regard to the beliefs or fears of the lay public, and they do not compete successfully with the many other appeals (for money or time or behavior change) which inundate the public. Specialized materials will have to be prepared for each of the target groups designated in this proposal, and they will have to be better than the materials now available in achieving several aims: attracting attention, presenting sound information in a clear and memorable way, and eliciting a desired response. To do this will require the skills of graphic artists, persons who can provide accurate information about the nature and magnitude of the drinking-driving problem, psychologists and health professionals who are knowledgeable about the intended audiences, and competent writers. It will also involve communications research specialists to some extent, since whenever possible the materials will be pretested on small samples of various groups and revised as appropriate before production on a large scale.

The amounts budgeted for this portion of the program, including design, pretesting, production, and distribution, total \$9200 — \$3000 for the first year, \$3500 for the second, and \$2700 for the third.

5. Fees for Speakers at Schools and Meetings of Selected Groups

Perhaps the most consistent finding from previous communication research is that mass communications alone have little impact on imbedded attitudes and habitual behavior. Mass communications reinforced by group discussion, on the other hand, can be quite powerful. It is hoped that most of the people in Washtenaw County will be reached many times by messages about this program presented via newspapers and radio, but it is crucial that they also be confronted with appropriate information in group settings. The Washtenaw County Council on Alcoholism has used volunteer speakers for some time, but on a very small scale. Volunteer speakers will continue to be used, and this will be expanded if possible. However, the scale of activity proposed will require much larger commitments of time from those speakers who prove to be particularly effective, and offering fees for their service should help to insure their continued availability. This will be especially important in the case of daytime meetings which would entail a loss of work time by a speaker.

Estimating 100 fees at \$25 and 36 at \$50 over the three-year period, the total amount budgeted for speakers is \$4300.

PERSONNEL

Public Health Educator

The person sought for this position will have a background in public health, communication techniques, and program evaluation. He should have a Master of Public Health degree with specialization in health education, and at least two years of experience in conducting community-wide public information programs dealing with health topics. He will be responsible for designing some of the surveys to be carried out during Year 1 and Year 3. He will also work directly with those who produce many of the materials to be used, such as the film to be produced locally and the printed materials, as well as writing some of the materials himself. He will maintain

close contact with local newspapers and radio stations. He will set up a speakers' bureau, and will handle arrangements for meetings of various target groups (police, social workers, civic and church organizations, school classes, etc.) at which speakers will make presentations and the films and other materials will be used. He will speak at many meetings himself, including the WCCA courses for alcoholics.

The public health educator will also maintain liaison with other groups in this area which deal with problems of alcoholism and traffic safety — for example, the Michigan Department of Public Health, the Michigan Council on Alcoholism, and the Detroit Health Department. Maintaining liaison with such groups is not just a courtesy; several of them may be conducting programs of their own simultaneously with the campaign in Washtenaw County, and continuing contacts will be necessary to insure that available resources are used efficiently and that appeals used in other campaigns do not conflict with those used here.

Consultants

The major need for consultants will exist in the first year, when pre-measure surveys must be designed and conducted, and when most of the materials to be used in the campaign must be planned and produced. During the second year, some consultation will be used to insure that information about techniques which appear to be working well or poorly in other cities will be fed into this program and appropriate changes made. This will continue into the third year, when research consultation will again be needed in the planning of evaluation methods to assess the relative effectiveness of various elements in the public information program.

The extent to which consultation is needed will depend in large part on the knowledge and skills of the public health educator who will conduct the program. With an estimated average consultation fee of \$100 per day — and assuming that consultation can be provided by mail or telephone, thus obviating travel expenses — allowance has been made in the budget for 48 days of consultation in the first year, 24 days in the second year, and 36 days in the third year.