

## DRINKING-DRIVING ATTITUDES: A SURVEY OF FAIRFAX COUNTY, 1971

by

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## ABSTRACT

The objective of this study was to gather and tabulate baseline data on selected attitudes and opinions held by the public of Fairfax County, Virginia. The study was designed to assist the program of the Alcohol Safety Action Project, currently in operation in that county.

The subject matter of this initial study of Fairfax County was public opinion and attitudes revealed by a questionnaire concerning various aspects of drinking and driving. The data obtained are being used as a baseline to ascertain attitude change over the duration of this particular ASAP (Alcohol Safety Action Project).

The value of this approach lies in the fact that public opinion and awareness of a project such as ASAP are crucial to its overall effectiveness. If the project is to reach a level of optimal functioning, beliefs and opinions must be ascertained. With these data, one can observe where there are doubts and misconceptions on the part of the public. Measures, or countermeasures, will then be instituted to correct these doubts and misconceptions.

As the nature of social problems and social services has changed, so have the attitudes and behavior of the public. Motivation and understanding are now key elements in public service programs, and one of the necessary conditions to achieving motivation and understanding is that the individual believe in the value of the program being undertaken.

In a program such as ASAP, aimed at getting drunken drivers off the roads of Fairfax County, favorable public opinion and public support are necessary. Because the program will affect many persons living in the ASAP area, their assessment of the drinking-driving problem is crucial in determining the directions the project will take, especially in the fields of public information and education.

The study deals with the opinions and attitudes held by the general public of Fairfax County, based on a detailed questionnaire designed by the Virginia Highway Research Council, the federal government, and the Stoneland Corporation. The answers were gathered, and cross-tabulations were run on the results.



## SUMMARY OF FINDINGS AND CONCLUSIONS

A summary of the major findings is as follows.

- (1) When the questionnaire participants were asked to name the greatest cause of automobile accidents, the most frequent responses were driving under the influence of alcohol (29%), disregard of traffic laws by drivers (28%), and driving too fast (21%). It has been estimated that alcohol-related accidents are about one-tenth of the total of all automobile accidents.
- (2) A majority of the persons questioned (57%) feel that social drinkers cause more fatal accidents than do problem drinkers. Only 35% of the sampled population think that problem drinkers are the more severe problem, and 8% have other opinions or no opinion. Every cross-tabulation examined (education, occupation, marital status, age, and sex), with the exception of race (nonwhite respondents named problem drinkers), felt that social drinkers are the greater killers on our highways. The fact is, however, that problem drinkers cause more fatal accidents than do social drinkers.
- (3) Most of the questionnaire participants felt that between three to six traffic deaths out of ten are caused by drinking drivers. Five traffic deaths was the most frequent response.
- (4) Only 8% of the respondents were correct in stating the penalty applicable to a first offense conviction of DWI (Driving While Intoxicated); 60% stated a less severe penalty than that provided by law, 11% gave a more severe penalty, and 21% did not know.

When asked specifically what the penalty is for a first offense DWI conviction and allowed to respond in more than one category, 54% stated that a discretionary fine of up to \$200 was levied. Thirty-eight percent of the sample respondents answered that a discretionary license suspension of 12 months occurred, only 11% felt that the driver's license was automatically suspended for 1 year, and 14% gave some other response. At the time of this survey, the penalties for a first offense DWI conviction were a mandatory license suspension for 1 year, a fine of \$200 - \$1,000, and confinement in jail for a period of 1 to 6 months.

When asked their opinion of what should happen upon a first offense DWI conviction and allowed to check more than one answer, 78% of the questionnaire participants felt a temporary license suspension was in order and 43% named a fine. For a person convicted of drunken driving a third time, 73% of the public felt that the driver's license should be permanently suspended (temporary license suspensions fell to only 19%). A fine, jail sentence and medical treatment were also mentioned.

- (5) Seventy-six percent of the respondents were substantially correct in their answers to the definition of "Blood Alcohol Concentration or Blood Alcohol Level." Ten percent answered the definition perfectly, 12% answered it incorrectly, and 2% did not know. The better educated and younger

respondents were more likely to be correct. There was no consensus, however, as to the BAC level (Blood Alcohol Concentration) constituting DWI (at the time of this survey, the BAC level was 0.15%). Seventeen percent thought that the 0.05% level was correct, while 15% felt that it was 0.08%. Only 12% said the level was 0.15%. Most respondents seemed to be guessing, and 29% said that they simply did not know.

- (6) There were 11 true-false questions about alcohol:
- (a) Sixty-eight percent thought a younger person will get drunk faster than an older person on the same amount of liquor (the statement is true).
  - (b) Ninety-four percent of the sample participants agreed a person drinking on an empty stomach will get drunk faster than a person who has just eaten something (true).
  - (c) Fifty-two percent thought that the statement that a person using a mixer can drink more without getting drunk was false (the statement is false). Sixty-four percent of nonwhite respondents and forty-eight percent of those persons sampled under 20, however, thought the statement was true.
  - (d) Forty-seven percent did not think that a small person will get drunk faster on the same number of drinks as a larger person (this statement is true, however).
  - (e) Seventy-six percent of the participants felt that a person who has had 1 drink should still be allowed to drive (the statement is true). There was very little difference between the cross-tabulations examined.
  - (f) The proposition that if a person sticks to the same kind of drink he is less likely to get drunk is false. Forty-nine percent of the sample believed it was true, 45% disagreed with the statement, and 7% didn't know. The largest number of respondents thinking the statement was true were the less educated individuals, older persons, nonwhites and women.
  - (g) Sixty-four percent of the survey participants felt that a person used to drinking can drink more and not become drunk than a person inexperienced in drinking. (However, this statement is considered false.)
  - (h) When asked if alcohol will affect a person faster if he smokes marijuana before or while drinking, 54% said they did not know. Thirty-eight percent agreed with the statement, and 8% disagreed. There is no correct answer to this question, as no definitive studies on this subject have been published. However, the highest affirmative responses came from the military (63%), nonwhites (57%), and those persons under twenty years of age (52%).



- (i) Ninety-two percent said that alcohol will affect a person faster if he is taking tranquilizers or pep pills. The statement is true.
  - (j) The statement that strong black coffee will help sober a person up before he drives was agreed with by 57% of the total sample. It is false, however, as coffee cannot change the basic rate at which alcohol is metabolized by the body.
  - (k) Ninety-six percent of the survey participants disagreed that beer is much like a soft drink as far as making a person drunk is concerned. This statement is obviously false.
- (7) About half of the persons interviewed said that they had heard or read of a campaign to reduce alcohol-involved traffic deaths (47%). However, only 3% of the 500 persons interviewed could relate this to the Fairfax ASAP. Again, persons under 20, the nonwhites, and less educated are less likely to have heard of the Fairfax ASAP or of any anti-DWI campaign.
- (8) Those interviewed were asked their opinions of the effectiveness of several methods that might be adopted to discourage drunken driving. They ranked greater law enforcement, more severe penalties, and a mechanical device that would prevent a drunk from starting his car as the most effective methods.

A large-scale public information campaign, improved treatment facilities, special alcohol education programs for drunken drivers, and random road checks by the police to identify drunken drivers were judged to be moderately effective.

It is interesting to note that methods involving stricter law enforcement and greater police involvement were increasingly popular with the older respondents.

- (9) Eighty-three percent of the survey participants stated that they occasionally drink. When asked what they usually drink, a discrepancy arose when 89% responded instead of 83%. Of those responding, 46% replied that they drank liquor most often, 30% indicated beer, and 24% preferred wine. As one might expect, beer drinking was most frequent amongst the younger age groups, while liquor usage increased with age, education, and socioeconomic level.
- (10) Forty-three percent of the population sampled considered themselves to be very light drinkers, while 26% felt they were fairly light drinkers. Only 1% classified themselves as fairly heavy to heavy drinkers.

By the arbitrary definition being used for the purposes of this study, a person who said that he had 3 or more drinks on 4 or more of the past 7 days was classified as a heavy drinker. Eight percent of the sample met this criterion. As a rule, most people tended to underestimate their drinking habits.

- (11) Five percent responded that they often drive after drinking, with 20% stating that they do this occasionally.
- (12) Twenty-five percent of those surveyed said there were occasions when they refused to drive because they felt they had had too much to drink. The chief reason given for refraining from driving after drinking was fear of accident involvement. Fear of being arrested was the second most frequent reason given.
- (13) When heavy drinkers (according to the arbitrary definition) were asked what their chances of having a serious or fatal crash after drinking were, they tended to feel their chances were lower than did the moderate or light drinker categories. Also, those who said that they often or occasionally drive after drinking tended to be those who were classified as heavy drinkers.
- (14) For purposes of this analysis, the heavy drinker has been defined as one who said he had 3 or more drinks on 4 or more occasions per week. According to this study, although this person does not greatly differ from the sampled population, there are some things which do differentiate him from the general population. The heavy drinker is more likely to be male, single, a heavy smoker, dines away from home more often and is away from home more nights per month than the rest of the population.

The following conclusions emerge from this study.

- (1) The public generally does not know what constitutes drunken driving, legal drunkenness, impaired driving, or the penalties assigned to each.
- (2) The public is not well informed as to the serious threat posed by the problem drinker versus the social drinker.
- (3) This sample views stricter enforcement and more severe penalties as the methods most likely to curb drunken driving.
- (4) People tend to underestimate their own level of drinking.
- (5) The public is not as informed as it should be of the effects of alcohol on the body and of these effects on driving ability.
- (6) About half of those interviewed felt that they could drive after having too much to drink and still avoid a serious or fatal accident.

## DRINKING—DRIVING ATTITUDES

A Survey of Fairfax County, 1971

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## BACKGROUND

Motor vehicle accidents are one of the five leading causes of death in our country. In 1971, there were approximately 55,000 fatal accidents in our nation resulting from motor vehicle crashes.<sup>1/</sup> During this same time period, the Commonwealth of Virginia recorded 1,054 fatal accidents, which resulted in the deaths of 1,218 persons.<sup>2/</sup> In addition, there were 79 fatal accidents in the Fairfax ASAP jurisdiction, in which 87 persons were killed.<sup>3/</sup> Alcohol has been shown to play a major role in a substantial number of these traffic deaths. In fact, the greatest source of violent deaths in the United States is the drinking or drunken driver. In addition, the FBI, in its Uniform Crime Report, reports that the crime of general drunkenness represents more than 40% of all arrests and leads the nation as the major single crime.

Alcohol related deaths have been shown to range from 40% to 60% of all fatal traffic accidents. Thus, the drinking driver represents the major human cause of approximately half of all highway deaths. As the first special report to the Congress by the Department of Health, Education and Welfare states, alcohol is the most abused drug in the United States. It is estimated that about 7% of the total adult population of the United States manifests the behavior associated with alcoholism and alcohol abuse.<sup>4/</sup> To place the number of alcohol-related highway deaths in perspective, one need only compare them with the deaths occasioned by the Vietnam War. It has been estimated that since the beginning of American involvement in Indochina, some 45,000 lives have been lost. In this same time period (about 10 years), some 270,000 deaths have been attributed to the drunken driver. And yet, the Vietnam conflict has greatly shaken the American conscience, while the drunken driver has barely penetrated it.

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- <sup>1/</sup> As yet unpublished statistics from the Office of Accident Investigation and Data Analysis, Washington, D. C.
- <sup>2/</sup> As yet unpublished statistics from the Virginia Highway Safety Division.
- <sup>3/</sup> Data compiled from the police jurisdictions of Fairfax County, Fairfax City, Vienna, Herndon, and Falls Church.
- <sup>4/</sup> Alcohol and Health, A First Special Report to the United States Congress. (Department of Health, Education and Welfare, Washington, D. C., December 1971).

The growth of our affluent society, the comparatively low cost of automobiles, and the rate of advance in the power of such cars have been so tremendous that our roads, our legislation, and our attitude toward alcoholic offenders have often failed to keep pace. It is true that some improvements have been made in our laws, and, for a short time around Christmas and other holidays, when the casualty list is too large to overlook, appeals are made to the public; however, the matter is too soon forgotten.

Much of the problem with drinking-driving rests squarely on the shoulders of the public. Many people, who see others being stopped for driving while intoxicated, have the attitude of "there, but for the grace of God, go I." Drinking is an accepted social fact of American life, as is driving. Only in combination do the two prove dangerous as highway safety factors. It has become accepted that it is not a crime to drink and drive, unless one is "drunk" in the fullest sense of the word.

Many drivers have, at least on one occasion, mixed drinking and driving in moderate portions. However, when the level of drinking reached is above moderation, a true threat is present. Practically everyone is exposed to the risks associated with drinking and driving, either as a driver, a passenger, a pedestrian, or a concerned member of society.

Perhaps the ambivalent attitude on the public's part is due, in part, to the belief that the usual DWI offender is but a social drinker; i. e., a driver who happened to drink too much and was caught. However, there is evidence that the serious DWI violator is not a social drinker. He is, instead, a "problem drinker", a person who stands a good chance of having a high incidence of alcoholic and psychological disorders. Many of the current sanctions for DWI have little effect on this type person. Taking his license away will not necessarily stop him from driving.

Drinking-driving is a problem of national importance and priority. Every year the toll of persons killed by the drunken driver continues to rise. This suggests that whatever methods have been used to combat drunken drivers have not succeeded. This failure means many problems for the legislator and judge, problems in law enforcement technique, organization and training, and problems in safety and engineering. Perhaps, this is the primary reason why the Department of Transportation, in its Office of Alcohol Countermeasures, has established 35 Alcohol Safety Action Projects (ASAPs) across the country and Puerto Rico. The ASAPs are federal demonstration projects, under federal 403 funding from the Highway Safety Act of 1966, aimed at getting drunken drivers off the highways. ASAP is now the federal government's unit of social and political effort to curtail drinking-driving parameters.

The Fairfax ASAP is located approximately 15 miles west of the District of Columbia. It is under the sponsorship of the federal government and the Highway Safety Division of Virginia. The Northern Virginia project has a \$2.1 million grant, running from July 1, 1971 to December 31, 1974. Its task is to get the drinking driver, primarily the problem drinker, off the roads of Northern Virginia. The project covers the entire area of Fairfax County, including the incorporated communities of Fairfax City, Vienna, Herndon, and Falls Church (see Figure 1).

Fairfax County is the largest county by population in Virginia. It has experienced a dynamic growth rate over the past decade. The population of the county appears to be a heavily transient one, with a large portion of the residents being federal government employees.

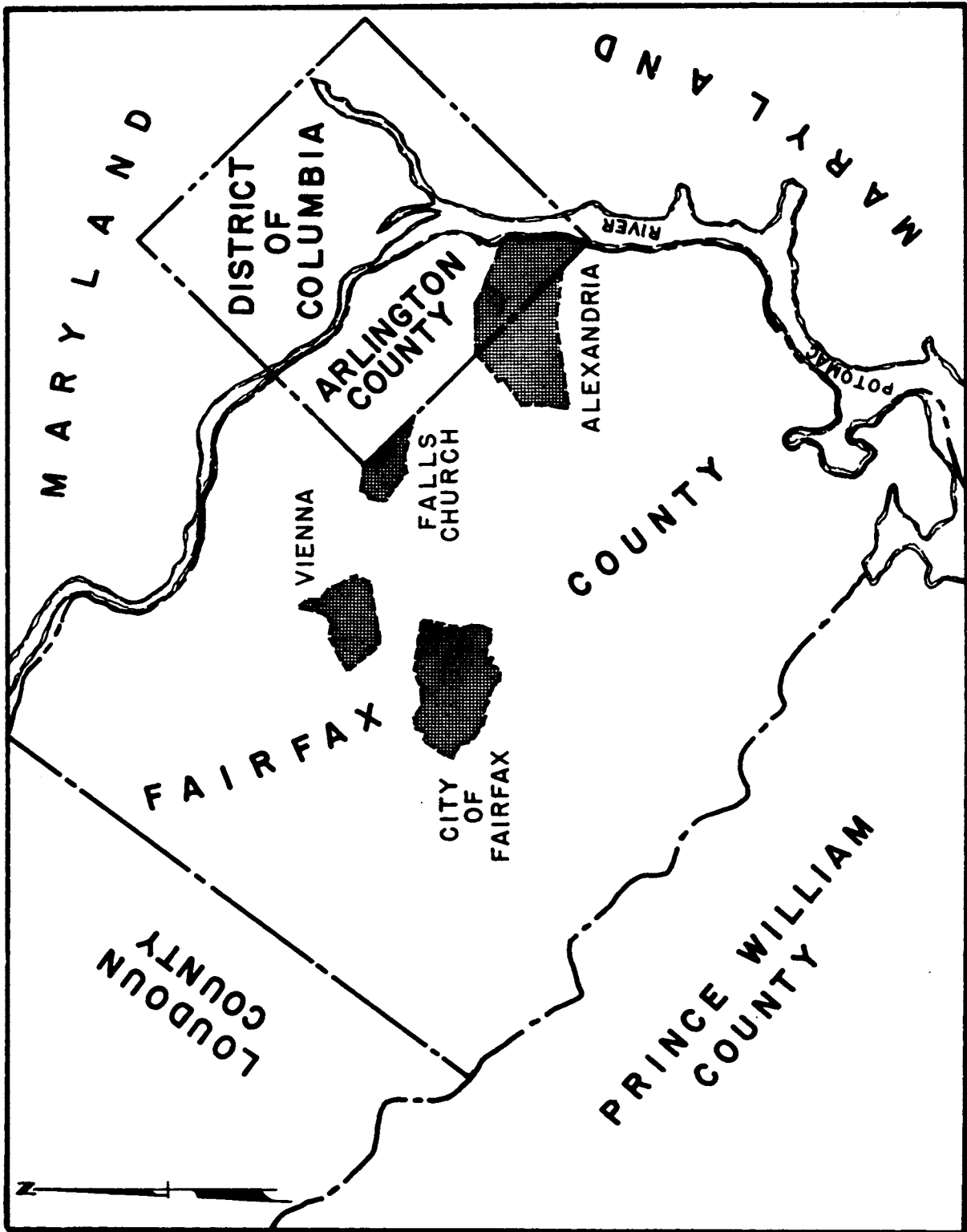


Figure 1. ASAP communities.

## METHODOLOGY

The Virginia Highway Research Council, fulfilling its role as evaluator for the Fairfax ASAP, subcontracted with the Stoneland Corporation, a research and development firm located in Chesapeake, Virginia, to carry out the first and 3 subsequent household surveys. The 3 remaining surveys will be conducted at 1-year intervals during the life of the project. Each will roughly correspond to the completion of a year of project operation.

In addition, the Virginia Highway Research Council will conduct 2 household surveys in the area of the control site, Henrico County, Virginia. Control site selection was extremely difficult because of the unique characteristics of Fairfax County — (1) its dynamic growth rate (73% between 1960 and 1970) and (2) its proximity to the Nation's Capital.

After an examination of all possible control sites in Virginia, Henrico County was selected. Table 1 lists selected demographic comparisons between Fairfax and Henrico Counties.

Henrico County is adjacent to Richmond, Virginia, the State Capital, and contains a large number of state government employees. It is the third largest county by population in the state and is growing rapidly, although not at the same rate as Fairfax. Also, it provides a site that is largely "uncontaminated" from ASAP media influence.

Specific sites which were considered but rejected include (1) Arlington, (2) Chesapeake, (3) Norfolk, (4) Newport News, and (5) Hampton. All were rejected because they were either too urban or dependent on their port status to make comparison practical.

Table 1

Selected Features of Henrico and Fairfax Counties

	<u>Fairfax County</u>	<u>Henrico County</u>
Population density	1,012/sq. mile	660/sq. mile
Population change 1960-1970	+73%	+32%
Age distribution, % >21	43.5%	40%
Per capita income	\$2,902	\$3,597
Age distribution, 35-54	26.2%	27.8%
Percent nonwhite	4%	6.8%
Family income — ratio to state average	1.73	1.40
Percent family income less than \$3,000	7.8%	5.8%
Percent urban population	89.6%	83.8%

An out of state control site was considered but was rejected because of the unique nature of Virginia's drinking-driving laws (see Appendix A).

Thus, while the control site's match with Fairfax is not perfect, it is the closest match within the state and major differences between the 2 areas will be compensated for in the evaluation.

Interviews for this initial survey were conducted by personnel of the Stoneland Corporation. The sample universe included all persons 16 years or older living in the Fairfax ASAP area. Interviews were completed with 250 men and 250 women, in 500 different households. A random cluster sampling procedure, using 1970 census tract information furnished by the Northern Virginia Planning Commission, was used to obtain a diversity of samples throughout Fairfax County, Fairfax City, Vienna, Herndon, and Falls Church.

In determining the number of subjects to be sampled per census tract, each tract was assigned the same percentage of the total sample size as the percentage of total ASAP area population in that tract; i. e. , a census tract containing 3% of the total population would be represented by 3% of the sample of 500, which is 15.

After determination of the number of sample subjects to be interviewed in each census tract, the specific subjects were chosen by a random cluster sample technique. In no case did a cluster contain more than 5 subjects.

Each interview was conducted on a personal basis in the respondent's home. On the average, an individual interview lasted approximately 25 - 35 minutes, depending on the nature of the responses given. If a subject was not at home for the interview, it was rescheduled. This was done until 3 unsuccessful interview calls were made. Then, another randomly selected subject was used as a replacement.

This baseline study sought to examine ASAP residents' attitudes and practices concerning drinking and driving (see Appendices B and C for copies of the cover letter and questionnaire).

The collected data are presented primarily in table form, along with a corresponding narrative. Results are seen both by individual response and by various group cross-tabulations, the questions being grouped together by subject matter. Only a portion of the possible cross-tabulations are listed in this report. Some were not run, while others were deemed unimportant (see Appendix C). Statistical analysis is kept at a minimum, for in-depth statistical comparison will be made after the remaining surveys.

#### DISCUSSION OF QUESTIONNAIRE RESULTS

All numbers referred to in this discussion can be found in the tables in Appendix D. The tables are labeled according to the corresponding question number shown in the text.

Traffic Accidents

- 1.a. Which one of these do you feel causes the greatest number of automobile accidents?

Twenty-nine percent of the survey participants felt that driving under the influence of alcohol was the greatest cause. Twenty-eight percent and twenty-seven percent, respectively, thought that disregard of traffic regulations by drivers and driving too fast were the main causes. It is interesting that the response "something wrong with cars" received no votes.

As the responses illustrate, a plurality of those persons sampled feel that drinking-driving is the highest single cause of traffic accidents. The largest percent response to this particular question came from those under 20 years of age and those above 60.

The idea that alcohol and automobiles do not mix well in combination is not a new one. An early study in the United States was undertaken by Heise, who compared driving behavior with alcohol levels in the mid-nineteen thirties.<sup>5/</sup> Studies then began to appear showing that up to 30% of accident-involved drivers had blood alcohol levels as high as .15%.<sup>6/</sup>

Recently, there has been an increase in studies concerning alcohol and traffic accidents, none of them favorable to drinking and driving. From these studies, the conclusion seems warranted that the risk of accident involvement, especially in regard to fatal accidents, is significantly increased by alcohol. In a survey conducted by the Association of Casualty and Surety Companies, reports from 43 states ascertained the number of drinking drivers who had been involved in accidents. The studies indicated that from 1% to 25% of traffic accidents were caused by drinking drivers, with a majority of the states reporting 10% or over as those drinking who had accidents.<sup>7/</sup> In a Canadian study,<sup>8/</sup> the use of alcohol was seen to be the major cause of accidents, 9% of the time.<sup>9/</sup>

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<sup>5/</sup> Heise, H. A., "The Specificity of the Test for Alcohol in Body Fluids," American Journal of Clinical Pathology, (V. 4, 1934), pp. 182-188. Heise, H. A., "Alcohol and Automobile Accidents," Journal of the American Medical Association, (V. 103, 1934), p. 739.

<sup>6/</sup> Holcomb, R. L., "Alcohol in Relation to Traffic Accidents," Journal of the American Medical Association, (V. 111, 1938), pp. 1076-1085.

<sup>7/</sup> Seales, T. A., "The Drinking Driver," Traffic Safety Research Review, (V. 1, 1957), pp. 80-93.

<sup>8/</sup> Lucas, G. H. W., "Contribution of Alcohol to Motor Car Accidents," Medical Aspects of Traffic Accidents, Proceedings of the Montreal Conference, (1955), pp. 253-258.

<sup>9/</sup> For good informational references see Filkins, L. D., and Geller, N. K., eds., Community Response To Alcoholism and Highway Crashes (Ann Arbor: Highway Safety Research Institute, University of Michigan, 1970). Selzer, M. L., Gikes, P. W., and Huelke, D. F., eds., The Prevention of Highway Injury, (Ann Arbor: Highway Safety Research Institute, University of Michigan, 1970).



1. b. 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)?

Fifty-seven percent of the respondents stated that the social drinker caused more accidents, while 35% felt that problem drinkers were the cause. Eight percent of those sampled had other opinions or no opinion.

The highest frequency distributions stating that the social drinker was the main cause came from those divorced, single, or widowed, and those under 20 years of age. The largest distribution viewing the problem drinker as the major cause of fatal accidents came from nonwhites and persons between the ages of 40-50. There was more variation of response between age groups than for any other cross-tabulation.

In a previous Virginia study, conducted by the Virginia Highway Research Council, all categories of responses agreed that most of the accidents involving drinking drivers are caused by social drinkers.<sup>10/</sup>

The facts are these:

Of traffic fatalities, both vehicle and pedestrian, alcohol is a major causative factor in about 50 percent; in these alcohol-involved fatalities, problem drinker-drivers and problem drinker-pedestrians are responsible for about two-thirds, and young people inexperienced in combining drinking and driving and mature social drinkers, driving while impaired or intoxicated, cause about one-third.<sup>11/</sup>

In general, studies both here and abroad have found that from 25-75% of drivers responsible for fatal accidents have been drinking. The myth that social drinkers cause most of the fatal traffic accidents is incorrect. This myth is inhibitive in several ways. First, it helps the problem drinker to rationalize that he is a social drinker rather than to face the self-realization that must occur for him to seek treatment. It further fails to adequately admonish those social drinkers who do have an increased accident risk why their risk is greater and why they need to take special precautions. Also, it avoids the fact that many social drinkers drive and drive despite warning — they must learn to limit their drinking-driving risk by eating with their drinking, by drinking near the basic metabolic rate, and by waiting at least half an hour after their last drink before driving.

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<sup>10/</sup> Ames, W. A., and Peters, E. G., "Driving Under the Influence of Alcohol: Determining an Optimum Sanction," (Charlottesville: Virginia Highway Research Council, November 1971).

<sup>11/</sup> United States Department of Transportation, National Highway Traffic Safety Administration, "TSP Newsletter," (February 1972), p. 13.

The problem drinker is, however, the major threat. The Michigan studies of Selzer,<sup>12/</sup> selected from a sample of drivers convicted of drinking-driving offenses, found that 57% were alcoholic, 15% were likely alcoholics, and 6% were pre-alcoholics — a total of 78%.

- 1.c. Out of every 10 traffic deaths, how many would you say are caused by drinking drivers?

The majority of responses from those sampled fell between 3 and 6 deaths. The large distribution was 5 deaths, which received 26%. Four deaths totalled 16%, 3 deaths totalled 14%, and 6 deaths received 13%.

All cross-tabulations were in concurrence that approximately half of all highway deaths are caused by the drinking driver. As has been pointed out, most studies have shown that about 50% of all traffic fatalities are caused by the drunken driver.

#### Driving While Intoxicated Penalties

- 2.a. What is the penalty in this state for first offense driving while intoxicated?

When asked what the penalty was for driving while intoxicated (DWI) at the time of this survey, only 8% of the total sample stated the penalty correctly. That response compares with 11% who stated the penalty more severely than it actually was. Sixty percent of the responses stated a less severe penalty, while 21% simply said they did not know. The responses for the cross-tabulations were consistent with the general total response.

- 2.b. What do you think occurs at present upon the first conviction of driving while intoxicated?

The penalties in Virginia at the time of the survey for a first conviction of DWI were a 1 year suspension of the driver's license (this was mandatory — the license was suspended by the Division of Motor Vehicles upon receipt of the conviction report), a fine of \$200-\$1,000, and confinement in jail for a period of 1 to 6 months (which are not mandatory).<sup>13/</sup>

When asked what the law was concerning a first DWI conviction, and allowed to check more than one answer, 54% of the sample felt that a discretionary fine up to \$200 was levied, 38% thought that the driver's license was suspended for a discretionary 12 month period, 11% felt that a discretionary jail sentence up to 12 months

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<sup>12/</sup> Selzer, M. L., Payne, C. E., Gifford, J. D., and Kelly, W. L., "Alcoholism, Mental Illness, and the Drunk Driver," American Journal of Psychiatry, (V. 120, 1963), pp. 326-333.

<sup>13/</sup> Virginia Code Annotated, Sc. 18.1-58 to 59.

was handed down, and a like percentage believed that the license was mandatorily suspended for 12 months. Only 3% thought that the driver's license was permanently suspended. These frequencies also remain fairly constant across group tabulation lines.

2. c. Indicate which phrase accurately describes your knowledge of the offense of impaired driving.

Twenty-seven percent of the respondents had never heard of the offense of impaired driving. In addition, 27% said they had some knowledge of it, while 21% said they had heard of it but did not know anything about it. Twenty percent of the survey participants indicated that they had some general knowledge of it. Only 4% of the sample said that they were well informed as to the offense of impaired driving, and 1% gave no response.

Women, nonwhites, and those with less than a high school education are less likely to know what impaired driving is when compared with the other groups.

In the previously mentioned study by Ames and Peters, based on the identical same question, it was found that this offense is one of low public visibility. Perhaps, though, this lack of knowledge is a natural consequence of the fact that the offense per se is not initially charged, but is an outgrowth of the original DWI charge.

In the Commonwealth of Virginia, the offense of impaired driving was a lesser included offense of an initial DWI charge. This offense arose (it ceased to exist as of July 1, 1972, when new drinking-driving laws went into effect) when the amount of alcohol in the blood of the accused at the time of the offense was as much as 0.10% but less than 0.15% by weight. The offense was a misdemeanor and resulted in the mandatory suspension of the driver's license for a six month period. The fine for this offense could not exceed \$1,000 and the jail sentence could not exceed twelve months.<sup>14/</sup>

2. d. What do you think should happen if a driver is convicted of Driving While Intoxicated?

The respondents were allowed to give more than one answer to this question. Seventy-eight percent of the sample felt that a temporary license suspension was in order in this case. An additional 43% thought that a fine should be levied, while 11% felt that medical treatment was required. Only 7% of those surveyed felt that a jail sentence and only 5% thought that a permanent license suspension should result from a first offense conviction for DWI. The individual groups examined felt basically the same way about a DWI conviction as did the total sample.

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<sup>14/</sup> Virginia Code Annotated, Sc. 18.1-9.

In the Ames and Peters study, a majority of the respondents were in favor of giving more discretion to the judge or jury in determining the type of license suspension. In fact, 52.3% of the judges and commonwealth's attorneys favored allowing a greater measure of discretion. In addition, the study found little public support for imposition of a jail sentence for a first conviction of driving while intoxicated.

2.e. What do you think should happen to a person convicted of Driving While Intoxicated for the Third Time?

When asked their opinion of what should happen after a third conviction of DWI and allowed to respond in more than one category, 73% of the sample indicated that they thought a permanent license suspension appropriate (this compares with only 5% for a first DWI conviction) while 19% favored a temporary license suspension (78% thought a temporary license suspension was a sufficiently severe sanction for a first DWI conviction). In addition, 33% of the survey participants felt that a fine was in order (43% for a first conviction). A third conviction also brought about an increase in the number favoring a jail sentence (7% to 26%) and medical treatment (11% to 27%) as compared to their opinion concerning first offense convictions.

The largest percentage change amongst group cross-tabulations came from those with some college education, nonwhites, and older persons. All favored much stiffer legal penalties when compared with their opinions as to the appropriate sanctions for a first offense DWI conviction.

As this survey indicates, for years a moralistic approach to the problem of the drunken driver has been taken. This approach regards drinking as more of a behavioral problem than a health problem. Instead of treating people for this illness, society has thrown them in jail. Society is more concerned about punishing the drunken driver than curing him. The fact is that very few people regard this problem on the highways very seriously.

This is unfortunate, for DWI may be the result of a series of complex inter-related circumstances, the consequence of which is impaired driving performance. However, these arrested drivers may also have been fatigued, poorly motivated, taking other drugs, or emotionally and physiologically unstable.

Our society has set up stiff legal penalties for dealing with the drunken driver. There are advocates of even stiffer punishment, especially after a series of particularly horrible accidents. Despite widespread agreement on this idea, people seem to shy away from severity.

It is known that in jury trials for drunken driving there is small chance of conviction. Most jurors thus reflect tolerance for drunken behavior in our society. The miscarriage of justice in many jury trials occurs because drinking is such an acceptable part of our lifestyle.

Because the penalties are so great (the loss of one's license in our society is extremely costly), the number of convictions decreases (thus reducing the chance of a problem drinker receiving help).

A sample in Indiana<sup>15/</sup> revealed that most persons were opposed to a 1-year mandatory license suspension, feeling that a shorter time period was sufficient. It was found there that the major reason for not driving after drinking was fear of arrest rather than fear of accident involvement (the results of this survey on this question will be seen later).

This study shows that the public does not know what the penalties are for DWI or the lesser charge of impaired driving. When asked their opinion of what these penalties should be, the respondents indicated that they should be less severe than they are presently for a first conviction DWL. However, for a third conviction of DWI, the public is in favor of much stiffer penalties than presently exist. This perhaps represents the typical American attitude — from very light to very heavy sanctions of punishment, not necessarily rehabilitation.

### Blood Alcohol Concentration

3.a. What do you think the term "Blood Alcohol Concentration or Blood Alcohol Level" means?

Seventy-six percent of the responses were correct on this question and 10% of the responses were completely correct. On the other hand, 12% answered this question incorrectly, and 2% did not know.

In examining the cross-tabulations, it was found that the less than high school educated, nonwhites, and persons 60 years or older tended to answer this question incorrectly. Those under 20 years of age or those of the professional-technical-managerial types were more likely to answer correctly.

Blood alcohol concentration is the relative amount of alcohol in the bloodstream at a given time. It is the weight of alcohol per volume of blood expressed in milligrams per 100 milliliters.

3.b. 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 to be the legal definition of being drunk in this state? (range from any trace to 0.20%).

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<sup>15/</sup> Fox, B. H., and Fox, J. H., "Drinking-Driving — A Public Health Concern," Alcohol and Traffic Safety, (Bethesda: United States Department of Health, Education, and Welfare, 1963).

The largest single response to this question was "I don't know" (29%). The largest affirmative response was at the 0.05% level (17%). The 0.08% level received 15%, 0.10% received 14%, the .12% level received 9%, and the 0.15% level received 11%; the .20% level received 3%, and any trace received 2% of the sample responses.

The responses from the cross-tabulations used are not meaningful because of the range of the varied responses to this question. It is evident that most of those sampled simply did not know what the BAC level for drunken driving was in the Commonwealth of Virginia at the time of the survey — 0.15%.

There have been many studies concerning the correlation between BAC levels and other variables. They all point to the same conclusion — driving behavior is altered by using alcoholic beverages. For example, a study in Michigan by Borkenstein and his co-workers, <sup>16/</sup> has demonstrated that there is no increase, on the average, in crash risk below a blood alcohol concentration of 0.05%. From this level, however, crash risk rises rapidly until it is  $7\frac{1}{2}$  times the normal risk at a BAC of 0.10%. Above this level, the risk curve rises extremely rapidly until it becomes 20 to 50 times the normal level above a BAC of 0.15%.

Two  $1\frac{1}{2}$  ounce drinks usually result in a BAC of about 0.04% for a male of average height and weight. Borkenstein found that an experienced driver with a BAC of 0.04% was no more likely to have an accident than a completely sober one. In fact, subjects with a BAC of 0.03% were statistically one-third less likely to cause an accident than a driver whose BAC was 0.00% (see Figure 2).

In a recent study, perhaps the ultimate statement concerning drinking-driving is set forth:

Driving behavior was altered by relatively low blood alcohol concentrations.... Support for this conclusion is indicated by the observed increases in use of the accelerator when driving speed was an important aspect of the task. Moreover, the fact that after alcohol ingestion, the driver performs differently (whether demonstrably better or worse) illustrates that alcohol indeed has some effect, thus raising questions about the driver's performance potential under alcohol. <sup>17/</sup>

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<sup>16/</sup> Borkenstein, R. F., Crowther, R. F., Shumate, R. P., Zrel, W. B., and Zybman, R., The Role of the Drinking Driver in Traffic Accidents, (Bloomington: Department of Police Administration, Indiana University, 1964).

<sup>17/</sup> Perrine, M. W., and Huntley, M. S., "Influences of Alcohol Upon Driving Behavior in an Instrumented Car," (Burlington: Project ABETS, Department of Psychology, University of Vermont, 1971 — prepared for the United States Department of Transportation, National Highway Traffic Safety Administration), p. 28.

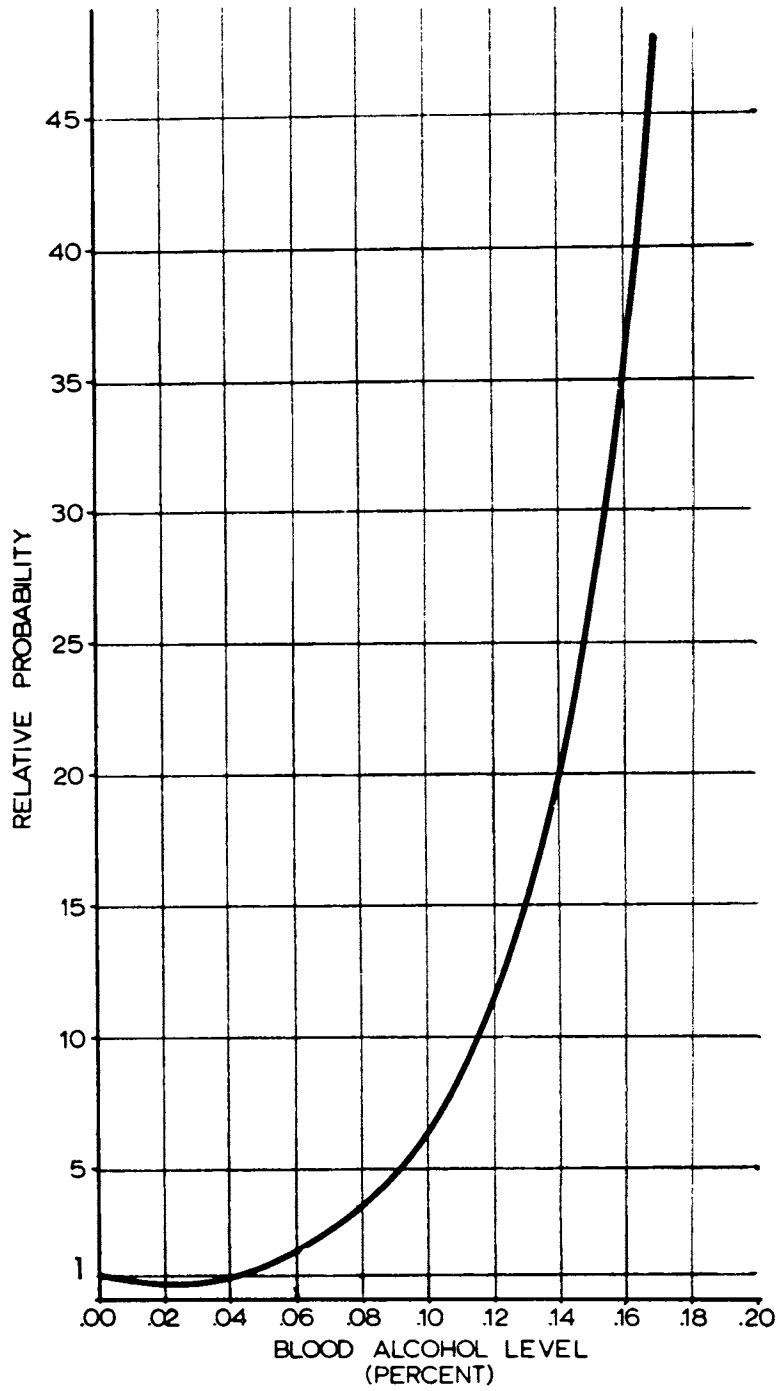


Figure 2. Relative probability of causing an accident.  
(From Borkenstein, *op. cit.*, p. 166.)

- 3.c. How many drinks do you think you would have to have to reach the level where you would be considered legally drunk?

Twenty-three percent of the survey participants stated that 3 drinks would be sufficient to get them legally drunk. An additional 20% said that they did not know. Fourteen percent thought that 2 drinks would be enough, and another 14% said 4 drinks. As with the previous question, there was an extremely wide diversity of opinion, with 29% giving responses other than those mentioned above. This same diversity is reflected in each of the variables examined.

#### Drinking and Intoxication

Here is a list of statements about drinking and becoming intoxicated. Please read each statement and tell me if you think it is true or false.

- 4.a. A younger person just starting to drink will get drunk faster than an older person on the same amount of liquor.

Sixty-eight percent of the sample thought this statement was true, while 28% thought it was false. Four percent did not indicate a choice. The largest affirmative response to this question came from those under 20 years of age and those above 60 years of age.

In conversation with the Office of Alcohol Countermeasures,<sup>18/</sup> it was determined that this statement is basically true. If both the younger person and the older person are the same height and weight, the BAC of the two will be approximately the same. However, the younger person, not experienced in handling drinking situations, will probably feel and act more impaired than will the older person.

- 4.b. A person drinking on an empty stomach will get drunker faster on the same number of drinks than a person who has just eaten something.

There was almost unanimous agreement with this statement. Ninety-four percent of the respondents did in fact agree with it. Only 5% disagreed with it and 1% said they did not know.

Every cross-tabulation examined showed greater than 90% agreement with this proposition, with the exception of nonwhites (89%) and these persons under 20 years of age (85%).

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<sup>18/</sup> In meeting with persons in the Office of Alcohol Countermeasures, National Highway Traffic Safety Administration, United States Department of Transportation, the answers to the various true-false questions were obtained. For more information, contact the above mentioned office.



This statement is true. It has been shown that by having food in the stomach or by combining eating with drinking the BAC level is affected, and so is the feeling derived from alcohol ingestion.

4. c. If a person uses a "mixer", like soda water, with liquor, he can drink more without getting drunk than if he drinks the liquor straight.

Opinion was fairly well divided on this question. Forty-one percent of the respondents believed this statement was true, 52% believed it was false, and 7% did not know.

Those groups who most often believed this statement was true were nonwhites (64%) and those persons under 20 years of age (48%). Those most likely to answer false to this statement were those with some college education (58%), those in professional-technical-managerial positions (61%), and older persons, particularly those above 60 years of age, (57%).

This question is considered to be false. The alcohol content remains the same, regardless of what is used to mix with the liquor.

4. d. A small person will get drunk faster than a large person on the same number of drinks.

This statement is true (for reference see Appendix F — the Blood Alcohol Chart). The reason for this is obvious — a small person has less weight and body structure; weight and size are instrumental factors in determining the BAC level.

However, only 44% of the total sample agreed with the statement. The statement was said to be false by 47% of those sampled (9% had no response).

On this statement, however, there was a marked difference in response depending on the educational level. Only 28% of those with less than a high school education believed the statement to be true, while 36% of those who completed high school thought it was true. Finally, half of those persons with some college education agreed with the statement. The professional-technical-managerial types scored well on this question with 52% believing it to be true.

Those over 60 years of age tended to respond incorrectly to this question, with only 29% answering true. Also, only 33% of the persons under 20 years of age agreed with it. Of the nonwhite respondents, 36% said it was true while 57% thought it was false.

4. e. A person who has had 1 drink should not be allowed to drive an automobile.

Twenty percent agreed with this statement, while 76% of those sampled disagreed with it. Four percent gave no response.

The statement is considered false by the Office of Alcohol Countermeasures. In almost every case, 1 drink will not adversely affect an individual's driving ability. The

BAC level reached, after considering the various factors (height, weight, metabolic rate, food in stomach, rate of drinking, and general physical and mental condition), would be very low.

The answers to this question were consistent across category lines, with males, people over 60, and the professional-technical-managerial respondents disagreeing most strongly with the statement.

A Virginia study, by Ames and Peters, already cited, questioned its respondents as to whether a person's ability to drive is affected by 1 drink. They found that there was more disagreement than agreement, in every group examined, with the statement that a person's ability to drive is affected by 1 drink (by approximately a 2 to 1 ratio).

- 4.f. 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.

This statement is false. The question refers to getting drunk, not getting ill. Alcoholic content is still alcoholic content, regardless of the form in which it is ingested.

Forty-nine percent of the total sample thought this statement was true, 45% believed it was false, and 6% gave no response. In particular, 79% of the military in the sample believed the statement was true; 64% of the nonwhite respondents and 54% of the women sampled also believed this statement was true.

The men in the sample (52%) and those in professional-technical-managerial occupations (58%) were most likely to be correct in their response to the question.

Education also seems to play a role in the responses to this statement. Sixty-one percent of those with less than a high school education and 45% of those with some college education believed the statement was true.

- 4.g. A person who is used to drinking can drink more and not become drunk than a person who drinks only once in a while.

By a margin of greater than 2 to 1, those interviewed thought this statement was true.

However, this statement is considered false by the Office of Alcohol Countermeasures, when considered in a purely BAC context. If 2 men are the same in most aspects, except that one is a more experienced drinker, then the BACs will be about the same. Of course, this says nothing about the impaired or outward condition of the subjects. Perhaps, the occasional drinker will show more overt signs of drinking than the frequent indulger.

There were no major distribution differences across group lines when compared to the total sample. However, educational response went from 74% with less than a high school education to 61% with some college education. Of those persons under 20 years of age, 80% answered that this statement was true.

- 4.h. Alcohol will affect a person faster if he smokes marihuana before or while drinking.

From this interesting statement, one finds that 54% of the total interviewed did not know; 8% disagreed with the statement, while 38% said it was true.

As the federal government has indicated, there is no correct answer to this question. No definitive studies on the question have been published.

Upon examination of the response categories, one finds that education as a variable shows little difference of opinion on this statement. However, certain groups do have definite opinions when compared with the total.

Nonwhites, military personnel, and those under 20 years of age are more opinionated on this question than any other group. Nonwhites had an above average affirmative response (57%) and a higher negative (14%) and a lower "don't know" response (29%). This also holds true for military personnel (63% true, 5% false, 32% no response) and those persons under 20 years of age (52% true, 26% false, 22% no response). Interestingly enough, 43% of those persons over 60 years of age said this statement was true, 0% said it was false, but 57% said they didn't know.

- 4.i. Alcohol will affect a person faster if he's under medication like a tranquilizer or antidepressant.

Ninety-two percent of the sample indicated agreement with this proposition, only 3% expressed disagreement with it, and 5% didn't know.

This question is true. The mixing of drugs (alcohol plus other drugs) is not an intelligent thing to do.

- 4.j. Strong black coffee is helpful in sobering a person up before he drives.

This statement is false. Black coffee cannot change the basic rate at which alcohol is metabolized by the body. It is acknowledged, however, that black coffee may be beneficial before driving. Even an awake drunken driver is better than a drowsy drunken driver.

Only 39% of our respondents indicated that this statement was false. Fifty-seven percent said it was true, while 4% had no response.

Educational levels again influenced the responses. Sixty-seven percent of those having less than a high school education agreed with the statement; the agreement then decreased to 60% for high school graduates; and finally, the level of agreement decreased to 54% for those with some college education. Also, nonwhites (79%) and persons under 20 years of age (70%) were more likely to agree with this statement.

- 4.k. Beer is pretty much like a soft drink as far as making a person drunk is concerned.

Obviously, this question is false, and the responses reflect this. Ninety-six percent of the sample disagreed with the proposition and only 3% thought it was true, while 1% gave no response.

All the survey participants answered more than 90% false on this question, with the exception of nonwhites and persons over 60 years of age.

When examining this entire group of statements and the responses to them, one finds that the young and the nonwhite tend to be more informed than anyone else. In addition, the incidence of correct responses varied significantly with educational attainment. Thus, there seems to be room for educational efforts to improve knowledge in this area. Knowledge of the effects of alcohol may be seen as more a function of education than of any other single factor.

#### Drinking—Driving Campaigns

- 5.a. Have you read or heard of a campaign or program that would reduce alcohol-related traffic deaths?

Forty-seven percent of the survey participants responded that they had heard of a campaign to reduce drinking—driving deaths. Fifty-two percent, on the other hand, said they had not heard of such a program, and 1% did not answer the question.

Those who had not heard of such a program tended to be military (only 37% had heard of a program), nonwhite (18%), under 20 years of age (33%), and those persons with less than a high school education (33%).

Persons knowing something about a program of this nature were those who had been divorced (75%), those with some college education (53%), and those in a professional-technical-managerial type occupation (52%).

- 5.b. Where did you read or hear about such a program?

Twenty-five percent of the total sample had heard about a drinking—driving campaign on television. Seventeen percent stated that they had read about it in the newspapers; 9% had heard about it on the radio, while 6% had read about it in a magazine. Thirty-four percent of the sample did not respond to this question, and as can be seen in 5.a., 52% should not have responded, so 18% were incorrect in responding to this question.

- 5.c. What did the campaign or program say?

There was a wide variety of opinions on this question. The standard reply, "if you drink don't drive," was the only response in double figures with 19% of the total sample. Four percent of the respondents stressed the effects of drinking and

driving, while 3% felt that the police should have more testing equipment. Two percent said they remembered the effects of alcohol on the driver.

5.d. Do you recall what agency or organization is sponsoring the program?

Only 3% of the total sample could relate ASAP to the drinking-driving program they had heard of. This percent represents only 15 persons out of a total of 500. Twenty-two percent said they could not recall who was sponsoring the program, and 15% related a state other than Virginia as the sponsor of such a campaign.

Middle-aged persons and those persons with some college education recorded the highest ASAP response with 4%. As the results clearly indicated, ASAP was not a household word at the time of the survey.

#### Methods to Reduce Drinking--Driving

6. How effective do you think each of the following methods would be in reducing the drinking-driving problem?

6.a. Greater police enforcement of drunk-driving laws.

Fifty-one percent of the total sample felt that greater police enforcement would be a very effective method of reducing drunken driving. In addition, 40% thought it would be a fairly effective method.

One notable aspect arises from the group comparisons: as age increases, so does the feeling of need for greater police enforcement. This feeling went from a low of 30% who thought that this method was very effective in those persons under 20 years of age to a high of 71% from those persons above 60 years of age.

6.b. A large-scale public information and education campaign.

Thirty-seven percent of the individuals thought that this approach would be very effective, while 45% thought it to be a fairly effective approach. Eighteen percent felt that it was not a very effective method.

Those who thought that this approach was not effective clustered around the middle-aged groups. Those who considered this method to be effective were non-whites and those persons with less than a high school education.

6.c. Improved treatment services for problem drinkers.

This approach was considered very effective by 41% of the total sampled. It was also considered fairly effective by 40% of those sampled. Eighteen percent thought this method was not effective, and 1% gave no response.

Those finding this method to be ineffective were primarily males and those persons in the military.

6.d. More severe penalties for convicted drunken drivers.

This method was considered by those sampled to be the single most effective deterrent measure. The method received a 57% very effective rating. In addition 30% rated it fairly effective. Thirteen percent said it was not effective.

As in the case of greater police enforcement, age had a bearing on the responses. As age increased so did the percentage given to more severe penalties as very effective. These percentages ranged from 48% to 71%.

6.e. Having convicted drunken drivers use a pill which causes them to be sick if they drink alcohol.

This method was considered the least effective by the sample. Only 19% and 18% of the respondents, respectively, felt that this was a very or fairly effective method. These contrast with 62% who said they felt it was an ineffective method for reducing drunken driving. One percent gave no response.

The responses as to the effectiveness of this measure ranged from an effective tool for those with less than a high school education to a noneffective method for those with some college education.

6.f. Special alcohol-education courses for convicted drunken drivers.

An educational approach was felt to be effective by 81% of the total sample. Thirty percent felt it to be very effective, while 51% felt it to be a fairly effective method. Eighteen percent thought that this method would have little or no effect on the drinking driver, and 1% gave no response.

The military thought that this rehabilitative type of approach was not the solution. Only 5% of the military felt this method would be effective, while 26% thought it would not be effective at all. The remaining cross-tabulations were like the overall total sample response.

6.g. Police using random road checks to find drivers who have been drinking.

In contrast to other "police" methods, only 29% of the respondents considered this a very effective approach to reduce drinking-driving. Forty-four percent, however, felt this was a fairly effective method. Twenty-six percent felt this was not an effective method, thus making it the second most noneffective method, and 1% did not know. Perhaps the respondents were thinking of themselves when answering the questions.

Nonwhites and older persons were more likely to feel that this would be an effective method. Persons under 20 years of age considered this to be the most ineffective method among the cross-tabulations (41%).

6.h. A device that would prevent a drunken person from starting the car.

This method was considered the second highest very effective method among the survey participants. Fifty-two percent felt it to be a very effective method. However, only 22% thought it would be a fairly effective method, while 26% of those surveyed did not think it would be effective at all. This 26% noneffective response was thus the second highest noneffective response to combat drinking-driving.

In summary of this section, respondents were asked to express their opinions as to the effectiveness of several methods that might be used to discourage driving under the influence of alcohol. Greater police enforcement of laws, more severe penalties, and an anti-drunk automobile starting device were rated the highest in effectiveness.

A large-scale public information campaign, special alcohol-education programs for drunken drivers, and random road checks were rated moderately effective.

The use of a pill to make drivers sick if they drink was not considered to be effective by two-thirds of the sample. However, random road checks and car starting devices were also held to be noneffective by a quarter of the respondents.

In general, there was a trend for the less educated and nonwhite respondents to feel more strongly than others about the proposed methods; specifically those involving rehabilitation. Affirmative responses for greater law enforcement increased with the age of the respondent.

#### Driving and Driving Violations

7.a. About how many miles do you yourself drive in a year?

Seven percent of the sample said they do not drive. Thirty-eight percent of the respondents indicated that they drove less than 10,000 miles per year, while 40% stated that they drove between 10,000-19,999 miles per year. Only 10% of the survey participants said that they drove between 20,000-29,999 miles per year, and 5% drove over 30,000 miles per year.

The respondents who had less than a high school education, or were nonwhite, or were 60 years of age or older, or were women tended to say they did not drive at all.

7.b. For which one of the following reasons do you do most of your driving?

Half of the respondents said that most of their driving was done for personal or family reasons. Approximately one-third said that driving to and from work was their primary reason for driving. Actual work-related driving and vacations received only a small percent of the entire total.

Nonwhite, male professional respondents did most of their driving to and from work. Military respondents did more of their primary driving for personal reasons, while women and young persons did most of their driving for personal reasons.

7.c. In a typical week how many days do you drive?

Fifty-six percent of the respondents stated they drove every day of the week. Twenty-six percent said they drove 5 or 6 days out of a typical week. The remaining 18% was divided among none through 4 days out of a typical week.

Professional and military types drove the most (every day of the week), while women with less than a high school education and nonwhites fell most below the average for everyday driving.

7.d. How many tickets for driving violations have you had in the last 3 years, not counting parking violations?

Seventy-three percent of the total sample said they had not received any tickets in the last 3 years. Fourteen percent said they had received 1, 4% said they had received 2, while 1% said they had received 3 tickets. Eight percent of the sample did not respond to this question, the majority of whom don't drive.

In examining the various group responses, one finds that there was little variation between age groups in the numbers of tickets received. However, the nonwhite respondents seemed more likely to have received a ticket or tickets during the last 3 years.

7.e. In the past 3 years, how many traffic accidents, no matter how minor, have you been involved in when you were driving a car?

A majority of those persons sampled (68%) said they had not had a traffic accident within the past 3 years. However, 18% said they had had 1 accident, 4% had had 2 accidents, 2% had had 3 accidents, and 8% of the total sample did not respond.

Those persons under 20 years of age and those persons above 60 years of age were more likely to have had a traffic accident than the rest of the sampled population.

7.f. In the past 3 years, how many times has your driver's license been suspended, for any reason?

Ninety-eight percent of those responding had never lost their driver's license for any reason. In fact, only 8 persons out of a total sample of 500 had lost their driver's license (1.7%), with 5 of them (1.0%) having lost it only once.



Of the 8 persons who had had their licenses revoked, all were male and all had some college education. In addition, 5 of the men were single, widowed or divorced, and 6 were between the ages of 20-39. Perhaps not surprisingly, these characteristics are similar to the characteristics of the heavy drinker as determined by the survey.

### Drinking Habits

- 8.a. Drinking is an accepted part of business and social activity for many people. Do you ever drink beer, wine, or liquor such as whiskey, gin, or vodka?

Eighty-three percent of the persons interviewed said they do indulge, while 16% said they do not drink. There was little difference among the groups of respondents although persons over 60 reported a lesser tendency to drink.

- 8.b. Have you ever drunk beer, wine, or liquor?

One hundred and twelve persons answered yes to this question, while 32 responded negatively. As question 8.a. indicated, 82 responses should have been expected from this question, not 144. Obviously, more persons answered this question than should have.

Assuming that the 32 negative responses are truthful, then 6% of the total sample have never drunk any type or amount of alcoholic beverage. If 82 responses were expected to this question, and 32 are negative ones, then there will be 52 positive responses.

Fifty-two responses equals about 10% of the total sample. Thus, 93% of the total sample has at one time or another drunk some type of alcoholic beverage.

- 8.c. How long ago did you last drink beer, wine, or liquor (responses — less than 1 month, 1-2 months, 3 months to 1 year, and more than 1 year ago).

As with the previous questions, there are too many responses. Fifty-two responses were expected, and 113 were received. Using an arbitrary standard, the responses for less than 1 month are decreased from 62 to 1, while the other responses remain unchanged (1-2 months — 5 responses; 3 months to 1 year — 12 responses; more than 1 year — 34 responses).

Of the 10% of the sample who have drunk alcohol on some occasion but do not drink now, 7% last tasted alcohol over 1 year ago.

- 8.d. Which of these do you drink most often — beer, wine, or liquor?

In Fairfax County, liquor is the most popular of the 3 choices, with 46% of the respondents saying that they drink liquor most often. Beer was named by 30%, while 24% said that wine was their favorite drink.

Beer drinking is associated with persons under 40 years of age (especially under age 20), nonwhites, males, and those with a high school education or less. The use of hard liquor tended to increase with age, education, and socioeconomic level. There was no clear demographic delineation of wine drinkers.

- 8.e. At the present time do you consider yourself to be a light, moderate, or heavy drinker?

While only 416 people should have responded to this question, there were 447 responses. Of those responding, 48% considered themselves to be very light drinkers, with 29% stating that they are fairly light drinkers. Twenty-one percent considered themselves to be moderate drinkers, while only 2% (8 persons) of the respondents felt that they were fairly heavy to heavy drinkers.

There was no major demographic variation to this question.

- 8.f. About how many days during this past week did you drink the number of drinks shown below (by the drink we mean a glass of wine, bottle or can of beer, or a single shot of liquor)?

When asked to recall their drinking pattern of the past week, however, many of those sampled fell into a moderate drinker category, rather than in the light drinker category in which they had placed themselves. By the arbitrary definition for this survey, a person who said he had 3 or more drinks on 4 or more of the past 7 days was considered a heavy drinker. Eight percent of the total sample met this criterion (this compares with only 1% who classified themselves as such).

Moderate drinkers were those who reported having had some drinks during the week, but not up to the level of the heavy drinker. Sixty-seven percent of the sample fell into this category (nineteen percent of those sampled classified themselves as moderate drinkers).

The 25% who reported little or no drinking during the past week were categorized as light or non-drinkers (when asked to classify themselves, 76% of the sample chose these categories).

There was little demographic variation, except for those persons above 60 years of age (more moderate drinkers from their light drinker classifications), and nonwhites (more moderate drinkers from their light drinker classifications). The heavy drinker classification stayed fairly consistent (8%) across all demographic variables.

#### Drinking and Driving

- 9.a. How often do you drive after having anything to drink? Would you say often, occasionally, hardly ever or never?

As in other questions, there were more responses to this question (460) than expected (416). Five percent of the total sample stated that they often drive after drinking. Twenty percent replied that they drink and drive occasionally, while 67%

responded that they hardly ever or never drink and drive.

Demographic variables were consistent with the total response, with the exception of those under 20 years of age and men, much more so than women, who tended to drink and drive more often than anyone else.

9.b. How much is the most you will drink and continue to drive?

Two and 3 drinks (10% each) were most often named as the limit people will drink before driving, although 10 or more drinks received 2% of the total response.

Persons under 20 years of age, however, did feel that they could drink more, on the average, and then drive than did the rest of the respondents. Also, the amount of liquor consumed in relation to driving decreased with age.

9.c. How far do you usually drive after drinking?

There was no definite agreement on this question. Sixteen percent of those respondents said they drove between 1 and 5 miles. Ten percent replied they drove 8 and 10 miles, and 8% usually drove less than a mile (8%, however, did say they drove 11 miles or more). There was, again, little demographic variation, with the exception of males, who said they drove further distances.

9.d. When you've driven after drinking have you ever thought you really shouldn't be on the road?

9.e. Have you ever refused to drive or decided not to drive because you thought you had had too much to drink?

Two hundred and fifteen people responded to this question. Twenty-one percent of the total sample, (48% of those responding to question 9.d) answered yes to it, while 22% of the total sample (52% of those responding) replied no. When responding to question 9.e., 25% of the total sample did say that they did refuse to drive after drinking. Nineteen percent of the total sample had never refused to drive because they thought they had had too much to drink.

9.f. If the answer to question 9.e. was YES, was the refusal to drive because of knowledge of laws, fear of arrest or fear of accident?

In contrast to the Indiana study, which found that fear of arrest was the primary reason for not driving (see footnote 15), this survey found that fear of accident involvement was the primary reason. Twenty-two percent of the survey (or 87% of those answering this question) felt that fear of having an accident was the major reason for not driving and drinking, 1% of the survey (5% of those responding to the question) said that fear of arrest was the reason, and 2% of the survey (8% of those responding) gave knowledge of the law as the reason. All demographic variables were consistent on this point.

- 9.g. If you drive after drinking too much, what do you think the chances of your committing a moving traffic violation will be?

Of the total sample, 31% felt that their chances of committing a moving violation were very high, 34% thought their chances were high, 17% said they were about even, 11% said they were low or very low, and 8% did not know. Group response was consistent with the total sample response.

- 9.h. If you drive after drinking too much, what are your chances of being stopped by the police?

Only 28% of the respondents felt that their chances of being stopped by the police were high or very high. In fact, 32% of the sample felt they were low or very low. Thirty-three percent said that they were just about even. Seven percent of the respondents did not know.

Forty-four percent of the nonwhite respondents replied that their chances of being stopped by the police were high or very high, while persons under 20 years of age thought they would be about even (37%).

- 9.i. If you drive after drinking too much, what are your chances of being involved in an automobile accident?

Of the total sample, 58% thought their chances of having an accident were high or very high. Only 13% thought they were low or very low, while 20% thought the chances were about even.

The variables examined were fairly consistent with the total sample response, with the exception of military personnel, who thought their chances were lower.

- 9.j. If you drive after drinking too much, what are your chances of being involved in a serious or fatal automobile accident?

Forty-nine percent of the survey participants felt their chances of having a serious or fatal automobile accident were high or very high. Twenty-two percent, however, felt their chances were low or very low. Eighteen percent still thought they would be about even, and 11% didn't know.

The only notable variation was racial — nonwhites felt they were more likely to be involved in a serious or fatal automobile accident.

#### Miscellaneous Cross-Tabulations

- 10.a. How often do you drive after having anything to drink, by heaviness of drinking?

As this question illustrates, the heavy drinkers (3 or more drinks on 4 or more days per week) are more likely to say they often or occasionally drive after drinking (57%). This percentage compares with only 29% for the moderate drinkers and 4% for light or non-drinkers.

- 10.b. If you drive after drinking too much what are your chances of having a serious or fatal crash, by heaviness of drinking and tendency to drive after drinking?

When asked what their chances were of having a serious or fatal crash if they drove after drinking too much, heavy drinkers felt that their chances were lower than did the moderate or light/non-drinker categories. In addition, those respondents who said they often drove after drinking were more likely to say their chances of a serious or fatal crash were low.

- 10.c. Things you have done in the last two or three years.

When asked how many out of 10 "activation" events they had participated in, a majority of the sample, 61%, had voted in the last 2 elections (elections not specified). The second highest response came with telling someone that they should vote (45%). The third most frequent participation event was helping on a fund raising drive (31%).

The three lowest categories were running for public office (1%), writing a letter to the editor (10%), and taking an active part in a political campaign (13%).

- 10.d. (1) Have you ever taken in-class driver education?  
(2) Have you ever taken behind-the-wheel driver education?

Over 70% of the sample had never taken in-class driver education. Approximately 30% of those sampled had taken in-class training.

The greatest inconsistency amongst groups of variables came with age. Ninety-three percent of those persons under 20 years of age had taken in-class driver education, while this percentage declined to a low of 8% and 14% for those persons 40-59 and 60 years or older, respectively.

On the second part of this question, 27% of the respondents said they had had behind-the-wheel driver training. Seventy-two percent said they had not received this type of training.

Again, age seemed to be the deciding factor. Seventy-eight percent of those persons under 20 years of age had received behind-the-wheel training, while only 5% of those persons 60 years or older had received this training.

- 10.e. Heaviness of drinking, by the analytical definition.

The survey respondents were classified, based on their answers to question 8.f., as heavy, moderate, and light or non-drinkers. Eight percent of the sample fell into the heavy drinker classification, while only 1% of the sample classified themselves as such. Sixty-seven percent of the total fell into the moderate drinker category, while 19% classified themselves as this category. Sixty-nine percent of the respondents saw themselves as light or non-drinkers, while 25% fell into the arbitrary category.

The cross-tabulations were in general agreement with the total sample breakdown on this particular question.

In conclusion, this survey indicates that the public is not well informed of the hazards of drinking and driving. Society must come to grips with itself before it can effectively begin to remove alcoholics and drunken drivers from jails, gutters, or from behind the steering wheels of death-dealing vehicles.

Drinking and driving are symptomatic of a failure of our society. This type of behavior occurs in a social context which is almost a prescription for encouraging this deviant behavior.

The attitude of society, as this survey indicates, is inconsistent and vague toward the drinking driver. The point at which this disapproved behavior begins is not clear at all. While the persistent violator of this law (drunken-driving) is disapproved of, if he is caught again and again, the behavior per se does not seem to be disapproved of. The very use of the terms "accident" or "incident" conveys the attitude toward the responsibility of those involved. The rights and privileges of the offender are stressed, rather than his responsibility to society or society's responsibility to him.

Efforts to combat the problem of the drinking-driver and the problem drinking-driver are inconsistent, irregular, and administered haphazardly. The field of drinking-driving is in need of extended research, both as to the causation of drinking accidents and their prevention and as to the field of rehabilitative services for the offender. The Fairfax Alcohol Safety Action Project is an attempt to fill some of the vital gaps that exist in the field of drinking-driving research.

APPENDICES





APPENDIX A

DRINKING-DRIVING STATUTES IN VIRGINIA  
(AT TIME OF SURVEY AND AT PRESENT)

**§ 18.1-55.1. Use of chemical test to determine alcohol in blood; procedure; qualifications and liability of person withdrawing blood; costs; evidence; suspension of license for refusal to submit to test; localities authorized to adopt parallel provisions.—**(a) As used in this section "license" means any operator's, chauffeur's or learner's permit or license authorizing the operation of a motor vehicle upon the highways.

(b) Any person whether licensed by Virginia or not, who operates a motor vehicle upon a public highway in this State on and after July one, nineteen hundred sixty-four, shall be deemed thereby, as a condition of such operation, to have consented to have a sample of his blood taken for a chemical test to determine the alcoholic content thereof, if such person is arrested for a violation of § 18.1-54 or of a similar ordinance of any county, city or town within two hours of the alleged offense.

(c) If a person after being arrested for a violation of § 18.1-54 or of a similar ordinance of any county, city or town and after having been advised by the arresting officer that a person who operates a motor vehicle upon a public highway in this State shall be deemed thereby, as a condition of such operation, to have consented to have a sample of his blood taken for a chemical test to determine the alcoholic content thereof, and that the unreasonable refusal to do so constitutes grounds for the revocation of the privilege of operating a motor vehicle upon the highways of this State, then refuses to permit the taking of a sample of his blood for such tests, the arresting officer shall take the person arrested before a committing magistrate and if he does again so refuse after having been further advised by such magistrate of the law requiring a blood test to be taken and the penalty for refusal, and so declares again his refusal in writing upon a form provided by the Division of Consolidated Laboratory Services (hereinafter referred to as Division), or refuses or fails to so declare in writing and such fact is certified as prescribed in paragraph (j), then no blood sample shall be taken even though he may thereafter request same.

(d) Only a physician, registered professional nurse, graduate laboratory technician or a technician or nurse designated by order of a court of record acting upon the recommendation of a licensed physician, using soap and water to cleanse the part of the body from which the blood is taken and using instruments sterilized by the accepted steam sterilizer or some other sterilizer which will not affect the accuracy of the test, or using chemically clean sterile disposable syringes, shall withdraw blood for the purpose of determining the alcoholic content thereof. No civil liability shall attach to any person authorized to withdraw blood as provided herein as a result of the act of withdrawing blood from any person submitting thereto, provided the blood was withdrawn according to recognized medical procedures; and provided further that the foregoing shall not relieve any such person from liability for negligence in the withdrawing of any blood sample.

(d1) Portions of the blood sample so withdrawn shall be placed in each of two vials provided by the Division which vials shall be sealed and labeled by the person taking the sample or at his direction, showing on each the name of the accused, the name of the person taking the blood sample, and the date and time the blood

sample was taken. The vials shall be placed in two containers provided by the Division, which containers shall be sealed so as not to allow tampering with the contents. The arresting or accompanying officer shall take possession of the two containers holding the vials as soon as the vials are placed in such containers and sealed, and shall transport or mail one of the vials forthwith to the Division. The officer taking possession of the other container (hereinafter referred to as second container) shall, immediately after taking possession of said second container give to the accused a form provided by the Division which shall set forth the procedure to obtain an independent analysis of the blood in the second container, and a list of those laboratories and their addresses, approved by the Division; such form shall contain a space for the accused or his counsel to direct the officer possessing such second container to forward that container to such approved laboratory for analysis, if desired. The officer having the second container, after delivery of the form referred to in the preceding sentence (unless at that time directed by the accused in writing on such form to forward the second container to an approved laboratory of the accused's choice, in which event the officer shall do so) shall deliver said second container to the chief police officer of the county, city or town in which the case will be heard, and the chief police officer who receives the same shall keep it in his possession for a period of seventy-two (72) hours, during which time the accused or his counsel may, in writing, on the form provided hereinabove, direct the chief police officer having possession of the second container to mail it to the laboratory of the accused's choice chosen from the approved list. As used in this section, the term "chief police officer" shall mean the sheriff in any county not having a chief of police, the chief of police of any county having a chief of police, the chief of police of the city or the sergeant or chief of police of the town in which the charge will be heard.

(d2) The testing of the contents of the second container shall be made in the same manner as hereafter set forth concerning the procedure to be followed by the Division, and all procedures established herein for transmittal, testing and admission of the result in the trial of the case shall be the same as for the sample sent to the Division.

(d3) A fee not to exceed \$15.00 shall be allowed the approved laboratory for making the analysis of the second blood sample which fee shall be paid out of the appropriation for criminal charges. If the person whose blood sample was withdrawn is subsequently convicted for violation of § 18.1-54, or of a similar ordinance of any county, city or town, the fee charged by the laboratory for testing the blood sample shall be taxed as part of the costs of the criminal case and shall be paid into the general fund of the State treasury.

(d4) If the chief police officer having possession of the second container is not directed as herein provided to mail it within seventy-two (72) hours after receiving said container then said officer shall destroy same.

(e) Upon receipt of the blood sample forwarded to the Division for analysis, the Division shall cause it to be examined for alcoholic content and the Director of the Division or his designated representative shall execute a certificate which shall indicate the name of the accused, the date, time and by whom the blood sample was received and examined, a statement that the container seal had not been broken or otherwise tampered with, a statement that the container was one provided by the Division and a statement of the alcoholic content of the sample. The certificate attached to the vial from which the blood sample examined was taken shall be returned to the clerk of the court in which the charge will be heard. The certificate attached to the container forwarded on behalf of the accused shall also be returned to the clerk of the court in which the charge will be heard, and such certificate shall be admissible in evidence when attested by the pathologist or by the supervisor of the laboratory approved by the Division.

(f) When any blood sample taken in accordance with the provisions of this section is forwarded for analysis to the Division, a report of the results of such analysis shall be made and filed in that office. Upon proper identification of the

vial into which the blood sample was placed, the certificate as provided for in this section shall, when duly attested by the Director of the Division or his designated representative, be admissible in any court, in any criminal proceeding, as evidence of the facts therein stated and of the results of such analysis.

(g) Upon the request of the person whose blood sample was taken for a chemical test to determine the alcoholic content thereof, the results of such test or tests shall be made available to him

(h) A fee not exceeding ten dollars shall be allowed the person withdrawing a blood sample in accordance with this section, which fee shall be paid out of the appropriation for criminal charges. If the person whose blood sample was withdrawn is subsequently convicted for violation of § 18.1-54 or of a similar ordinance of any county, city or town, the amount charged by the person withdrawing the sample shall be taxed as part of the costs of the criminal case and shall be paid into the general fund of the State treasury.

(i) In any trial for a violation of § 18.1-54 of the Code or of a similar ordinance of any county, city or town, this section shall not otherwise limit the introduction of any relevant evidence bearing upon any question at issue before the court, and the court shall, regardless of the result of the blood test or tests, if any, consider such other relevant evidence of the condition of the accused as shall be admissible in evidence. The failure of an accused to permit a sample of his blood to be withdrawn for a chemical test to determine the alcoholic content thereof is not evidence and shall not be subject to comment at the trial of the case; nor shall the fact that a blood test had been offered the accused be evidence or the subject of comment.

(j) The form referred to in paragraph (c) shall contain a brief statement of the law requiring the taking of a blood sample and the penalty for refusal, a declaration of refusal and lines for the signature of the person from whom the blood sample is sought, the date and the signature of a witness to the signing. If such person refuses or fails to execute such declaration, the committing justice, clerk or assistant clerk shall certify such fact, and that the committing justice, clerk or assistant clerk advised the person arrested that such refusal or failure, if found to be unreasonable, constitutes grounds for the revocation of such person's license to drive. The committing or issuing justice, clerk or assistant clerk shall forthwith issue a warrant charging the person refusing to take the test to determine the alcoholic content of his blood, with violation of this section. The warrant shall be executed in the same manner as criminal warrants.

(k) The executed declaration of refusal or the certificate of the committing justice, as the case may be, shall be attached to the warrant and shall be forwarded by the committing justice, clerk or assistant clerk to the court in which the offense of driving under the influence of intoxicants shall be tried.

(l) When the court receives the declaration of refusal or certificate referred to in paragraph (k) together with the warrant charging the defendant with refusing to submit to having a sample of his blood taken for the determination of the alcoholic content thereof, the court shall fix a date for the trial of said warrant, at such time as the court shall designate, but subsequent to the defendant's criminal trial for driving under the influence of intoxicants.

(m) The declaration of refusal or certificate under paragraph (k), as the case may be, shall be prima facie evidence that the defendant refused to submit to the taking of a sample of his blood to determine the alcoholic content thereof as provided hereinabove. However, this shall not be deemed to prohibit the defendant from introducing on his behalf evidence of the basis for his refusal to submit to the taking of a sample of his blood to determine the alcoholic content thereof. The court shall determine the reasonableness of such refusal.

(n) If the court shall find the defendant guilty as charged in the warrant, the court shall suspend the defendant's license for a period of 90 days for a first offense and for six months for a second or subsequent offense or refusal within one

year of the first or other such refusals; the time shall be computed as follows: the date of the first offense and the date of the second or subsequent offense.

(o) The court shall forward the defendant's license to the Commissioner of the Division of Motor Vehicles of Virginia as in other cases of similar nature for suspension of license unless, however, the defendant shall appeal his conviction in which case the court shall return the license to the defendant upon his appeal being perfected.

(p) The procedure for appeal and trial shall be the same as provided by law for misdemeanors.

(q) No person arrested for a violation of § 18.1-54 or a similar ordinance of any county, city or town shall be required to execute in favor of any person or corporation a waiver or release of liability in connection with the withdrawal of blood and as a condition precedent to the withdrawal of blood as provided for herein.

(r) The court or the jury trying the case shall determine the innocence or the guilt of the defendant from all the evidence concerning his condition at the time of the alleged offense.

(s) The steps herein set forth relating to the taking, handling, identification, and disposition of blood samples are procedural in nature and not substantive. Substantial compliance therewith shall be deemed to be sufficient. Failure to comply with any one or more of such steps or portions thereof, or a variance in the results of the two blood tests shall not of itself be grounds for finding the defendant not guilty, but shall go to the weight of the evidence and shall be considered as set forth above with all the evidence in the case, provided that the defendant shall have the right to introduce evidence on his own behalf to show noncompliance with the aforesaid procedure or any part thereof, and that as a result his rights were prejudiced.

(t) The governing bodies of the several counties, cities and towns are authorized to adopt ordinances paralleling the provisions of (a) through (s) of this section. (Code 1950 (Suppl.), §§ 18-75.1, 18-75.2; 1954, c. 406; 1956, c. 557; 1956, Ex. Sess., c. 45; 1960, cc. 358, 548; 1962, c. 625; 1964, c. 240; 1966, c. 635; 1970, c. 622; 1972, c. 741.)

**Cross reference.** — For this section as amended effective Jan. 1, 1973, see the following section, bearing the same number.

**Code Commission note.** — Many of the cases in the following annotation were decided under repealed §§ 18.1-55 and 18.1-56, which covered the same subject matter as this section.

**Effective date.**—The act inserting this section is made effective July 1, 1964.

**The 1966 amendment** added the last sentence of subsection (d), substituted "sheriff in any county not having a chief of police" for "sheriff of the county" in the last sentence of subsection (d1), inserted "the chief of police of any county having a chief of police" in such sentence, and added subsection (t).

**The 1970 amendment** increased the fee in the first sentence of subsection (h) from five dollars to ten dollars.

**The 1972 amendment** substituted "Division of Consolidated Laboratory Services (hereinafter referred to as Division)" for "Chief Medical Examiner of Virginia (hereinafter referred to as Chief Medical Examiner)" in subsection (c), substituted

"Division" for "Chief Medical Examiner" in four places and for "State Health Commissioner" in one place in subsection (d1), substituted "Division" for "Chief Medical Examiner" in two places in subsection (d2), rewrote the first sentence of subsection (e), substituted "Division" for "State Health Commissioner" at the end of the third sentence of subsection (e) and for "office of the Chief Medical Examiner" in the first sentence of subsection (f) and substituted "the Director of the Division or his designated representative" for "the Chief Medical Examiner, or any Assistant Chief Medical Examiner" in the second sentence of subsection (f).

**Law Review.**—For comment on use of blood tests as evidence of intoxication in Virginia, see 18 W. & L. Law Rev. 370. For note on Virginia's implied consent statute, a survey and appraisal, see 49 Va. L. Rev. 386. For note on the Virginia blood test statute discussing statistical methods of evaluating blood samples, see 56 Va. L. Rev. 349 (1970). For survey of Virginia law on criminal law and procedure for the year 1969-1970, see 56 Va. L. Rev.

1572 (1970). For survey of Virginia law on administrative law for the year 1969-1970, see 56 Va. L. Rev. 1603 (1970).

**Constitutionality.**—See *Shumate v. Commonwealth*, 207 Va. 877, 153 S.E.2d 243 (1967).

**The concept of the law** is that a driver, if arrested under the drunk driving statute (§ 18.1-54), may be asked to consent to taking the test and for an unreasonable refusal, the penalty of a suspended license would be imposed. *United States v. Gholson*, 319 F. Supp. 499 (E.D. Va. 1970).

This section, also known as the “implied consent” statute of Virginia, in essence provides that a person who uses the highways of Virginia may, when arrested for drunken driving under § 18.1-54, be required to take a blood test. If the driver unreasonably refuses to do so, then he shall be taken before a committing magistrate and if he refuses again, no blood test will be taken and his license may be suspended. *United States v. Gholson*, 319 F. Supp. 499 (E.D. Va. 1970).

**Sections relating to blood test should be read together.** — Former §§ 18.1-55 and 18.1-56 and § 18.1-57 must be read together, since they were related and the last two referred to the blood alcohol test made under § 18.1-55. *Russell v. Hammond*, 200 Va. 600, 106 S. E. (2d) 626; *Wade v. Com.*, 202 Va. 117, 116 S. E. (2d) 99.

It was held in *Russell v. Hammond*, 200 Va. 600, 106 S.E.2d 626 (1959), that former §§ 18-75.1, 18-75.2, and 18-75.3, from which present §§ 18.1-55.1, 18.1-56.1, and 18.1-57 are derived, should be read together. This was correct because the former three sections all related to the blood test. *United States v. Gholson*, 319 F. Supp. 499 (E.D. Va. 1970).

**But § 18.1-54 is separate.**—The “implied consent” statute (this section) and the drunken driving statute (§ 18.1-54) are not intricately related, but rather completely separate offenses with separate penalties. *United States v. Gholson*, 319 F. Supp. 499 (E.D. Va. 1970).

**And need not be read together with this section.**—The defendant’s contention at the trial that § 18.1-54 and this section should be read together by virtue of the decision of *Russell v. Hammond*, 200 Va. 600, 106 S.E.2d 626 (1959) has no merit. Section 18.1-54 is a separate statute and is not cited in *Russell v. Hammond* as being read together with the blood test statutes. *United States v. Gholson*, 319 F. Supp. 499 (E.D. Va. 1970).

**The blood test is a new and more objective test and definition.** — As compared with the statutory definitional test of in-

toxication set out in § 4-2 (14), the blood test is a new and more objective test and definition for an accused who consents to a blood analysis. *United States v. Gholson*, 319 F. Supp. 499 (E.D. Va. 1970).

Former §§ 18.1-55 and 18.1-56 and § 18.1-57 supplied a new and more objective test and definition for an accused consenting to a blood analysis. The test was designed to protect an accused whose faculties were not impaired, while withholding protection from one, who, under the sobering influence of an accident or arrest, was able temporarily to avoid the appearance of intoxication. *Kay v. United States*, 255 F. (2d) 476.

**For protection of those unjustly accused.** —Former § 18.1-55 served the salutary purpose of protecting from unjust conviction accused persons who were not in fact intoxicated, by supplying a scientifically accurate method of determining the question. *Walton v. Roanoke*, 204 Va. 678, 133 S. E. (2d) 315.

**But § 4-2 (14) provides for another test.** —Even though this section provides a procedure for determining the alcoholic content of blood of one arrested for drunken driving, it is clear that this is not the only procedure for determining intoxication. In fact, § 4-2 (14) provides for another test. *United States v. Gholson*, 319 F. Supp. 499 (E.D. Va. 1970).

Even where a blood sample was taken but was invalid because not sufficiently identified, the defendant could be retried for drunken driving under the definition set forth in § 4-2 (14). *United States v. Gholson*, 319 F. Supp. 499 (E.D. Va. 1970).

**To support a conviction for drunk driving it is not necessary to take a blood test.** *United States v. Gholson*, 319 F. Supp. 499 (E.D. Va. 1970).

**There is no mandatory requirement that the blood test be given** in all cases of drunken driving. This is borne out by subsection (i) of this section. *United States v. Gholson*, 319 F. Supp. 499 (E.D. Va. 1970).

**And there is no automatic right to a blood test.**—It does not appear that a person arrested for driving under the influence has the automatic right to a blood test. *United States v. Gholson*, 319 F. Supp. 499 (E.D. Va. 1970).

**Operation of vehicles is subject to reasonable regulation.**—The right to operate a motor vehicle on the highways of this State is not a property or unrestrained right, but a privilege which is subject to reasonable regulation under the police power of the State in the interest of pub-

lic safety and welfare. *Walton v. Roanoke*, 204 Va. 678, 133 S. E. (2d) 315.

Operation of a motor vehicle on a public highway is not a natural right but a conditional privilege, which may be suspended or revoked under the police power. The operator's license is not a contract or a property right in a constitutional sense. It is a privilege granted to those who are qualified, and it is withheld from those who are not. *Deaner v. Commonwealth*, 210 Va. 285, 170 S.E.2d 199 (1969).

**A defendant is not compelled to submit to the blood test.** He can refuse to submit, and his refusal will result at most only in a revocation of his privilege to drive, and then only if the refusal is found after fair trial to have been unreasonable. *Walton v. Roanoke*, 204 Va. 678, 133 S. E. (2d) 315.

The defendant had the power to refuse a blood test under this section and his refusal could not be used as evidence in his trial, or considered on appeal. *Clemmer v. Commonwealth*, 208 Va. 661, 159 S.E.2d 664 (1968).

If a driver unreasonably refuses to consent to a blood test when picked up on a drunken driving charge, he may be civilly liable and his license may be suspended for the unreasonable refusal. *United States v. Gholson*, 319 F. Supp. 499 (E.D. Va. 1970).

**Hence constitutional prohibitions against self-incrimination are not violated.**—Former § 18.1-55 did not violate the Virginia Constitution, as it did not compel testimony from defendant. *Walton v. Roanoke*, 204 Va. 678, 133 S. E. (2d) 315.

The Fifth Amendment to the Federal Constitution, even if applicable to the states, is limited to oral testimony and does not preclude the use of one's body or secretions therefrom or proof of the results of their chemical analyses. *Walton v. Roanoke*, 204 Va. 678, 133 S. E. (2d) 315.

**Consent to take a blood test is given when a person operates a motor vehicle.** *Deaner v. Commonwealth*, 210 Va. 285, 170 S.E.2d 199 (1969).

**It is not a qualified consent** and it is not a conditional consent, and therefore there can be no qualified refusal or conditional refusal to take the test. *Deaner v. Commonwealth*, 210 Va. 285, 170 S.E.2d 199 (1969).

The fact that under the Virginia statute an accused is afforded an opportunity to establish the reasonableness of his refusal does not operate to dilute the consent previously given, or convert that consent into a qualified or conditional one. The statute does excuse from taking the test one whose refusal is reasonable. An illustration

is where a person's health would be endangered by the withdrawal of blood. *Deaner v. Commonwealth*, 210 Va. 285, 170 S.E.2d 199 (1969).

**Implied consent not part of penalty.**—The implied consent of one who operates a vehicle on the public highways of Virginia to take a blood test, in event he be charged with drunk driving, is not a part of the penalty or punishment inflicted for drunk driving. It is a measure flowing from the police power of the State designed to protect other users of State highways. *Deaner v. Commonwealth*, 210 Va. 285, 170 S.E.2d 199 (1969).

**No indicia of criminal prosecution.**—An analysis of this section shows none of the indicia of a criminal prosecution. The criminal offense which gives rise to the procedure under the implied consent law is driving under the influence of alcohol or drugs. The same motor vehicle operation may give rise to two separate and distinct proceedings—one a civil and administrative procedure and the other a criminal action. Each action proceeds independently of the other and the outcome of one is of no consequence to the other. *Deaner v. Commonwealth*, 210 Va. 285, 170 S.E.2d 199 (1969).

There is nothing about the entire proceeding under this section that parallels the procedure in a criminal prosecution. *Deaner v. Commonwealth*, 210 Va. 285, 170 S.E.2d 199 (1969).

An administrative and civil proceeding is not converted into a criminal action merely because the procedural steps preliminary to trial, and incident to appeal, are the same as in a misdemeanor case. *Deaner v. Commonwealth*, 210 Va. 285, 170 S.E.2d 199 (1969).

**The warrant referred to by this section** is obviously not a criminal warrant. It is in the nature of a writ or precept from a competent authority in pursuance of law, directing the doing of an act, and addressed to the officer or person competent to do the act. *Deaner v. Commonwealth*, 210 Va. 285, 170 S.E.2d 199 (1969).

This section directs that the warrant "be executed" in the same manner as a criminal warrant. This is to prescribe an appropriate method of serving notice on the accused. *Deaner v. Commonwealth*, 210 Va. 285, 170 S.E.2d 199 (1969).

**No right to consult counsel.**—For the Supreme Court to uphold the contention of defendant that his right to consult counsel before refusing or taking the blood test is a constitutional right, would virtually nullify the implied consent law. *Deaner v.*

Commonwealth, 210 Va. 285, 170 S.E.2d 199 (1969).

The blood test prescribed by this section is a part of a civil and administrative proceeding and defendant had no right to condition his taking the test upon his ability first to consult with counsel. *Deaner v. Commonwealth*, 210 Va. 285, 170 S.E.2d 199 (1969).

**Admission of the certificate does not deprive defendant of his right of confrontation** by witnesses. *Kay v. United States*, 255 F. (2d) 476.

The certificate showing the alcoholic content of the blood as prescribed by former § 18-75.2 was admissible as an exception to the hearsay rule. *United States v. Gholson*, 319 F. Supp. 499 (E.D. Va. 1970).

**This section is largely procedural.** *United States v. Gholson*, 319 F. Supp. 499 (E.D. Va. 1970).

**Statute is not merely procedural but amounts to redefinition of offense.**—While the blood-test statute may be said to be largely procedural, it is a preliminary, prejudicial procedure which may be employed only with the consent of the accused. It is designed for the protection of the accused, to insure the reliability of the report of the test and to protect the validity of the presumptions established by § 18.1-57. Those presumptions are not merely procedural, for they amount to a redefinition of the offense. *Kay v. United States*, 255 F. (2d) 476.

**And as such was adopted by federal Assimilative Crimes Act.**—As a new definition of the substantive offense, former §§ 18.1-55 and 18.1-56 and § 18.1-57 were adopted by the federal Assimilative Crimes Act of 1948, and were applicable in a prosecution in a federal court for driving while intoxicated on a federal parkway within the territorial limits of Virginia. *Kay v. United States*, 255 F. (2d) 476.

As a new definition of the substantive offense, this section was adopted by the Assimilative Crimes Act of 1948. *United States v. Gholson*, 319 F. Supp. 499 (E.D. Va. 1970).

Where the blood test was given under statutory procedure, the United States Court of Appeals for the fourth circuit adopted that procedure as a definition of the crime under the Assimilative Crimes Act. *United States v. Gholson*, 319 F. Supp. 499 (E.D. Va. 1970).

**Thus certificate is admissible in federal court.**—In a federal court, the certificate would be admissible under the provisions of 28 U. S. C. A. § 1732, as a writing made, pursuant to statutory requirement,

in the regular performance of the official duty of the **Chief Medical Examiner** of Virginia (now the Director of the Division of Consolidated Laboratory Services). *Kay v. United States*, 255 F. (2d) 476, commented on in 16 W. & L. Law Rev. 62.

**It is not admissible in civil cases.**—The certificate of the Medical Examiner executed under former § 18.1-55 was not admissible in a civil case. *Russell v. Hammond*, 200 Va. 600, 106 S. E. (2d) 626; *Brooks v. Hufham*, 200 Va. 488, 106 S. E. (2d) 631; *Kissinger v. Frankhouser*, 194 F Supp 276.

The certificate of the Medical Examiner (now the Director) executed under this section is not admissible in a civil case. *Robertson v. Commonwealth*, 211 Va. 62, 175 S.E.2d 260 (1970).

**It is admissible only in prosecutions under § 18.1-54 or similar ordinances** of any county, city or town. It is not admissible in a prosecution for manslaughter. *Wade v. Com.*, 202 Va 117, 116 S. E. (2d) 99.

**In a prosecution under the Assimilative Crimes Act** for drunken driving on a military post in Virginia, the magistrate need not consider § 18.1-54 and this section together, but may consider § 18.1-54 as a separate offense and disregard any evidence as to blood tests with respect to a drunken driving charge. *United States v. Gholson*, 319 F. Supp. 499 (E.D. Va. 1970).

**This section is irrelevant to prosecutions under federal regulations.** — See *United States v. Eubanks*, 435 F.2d 1261 (4th Cir. 1971).

**The receipt in evidence of the certificate does not foreclose inquiry** into the regularity of the procedure, the freedom of the sample from contamination or the accuracy of the chemical analysis. *Kay v. United States*, 255 F. (2d) 476.

**Inconsistent date on certificate.**—In a prosecution under a city ordinance paralleling former § 18.1-55, an inconsistent date on the Medical Examiner's certificate, which indicated that the blood was withdrawn from defendant the day before his arrest, caused the certificate to be inadmissible in evidence since the prosecution failed to show the inconsistency to be a typographical error. *Lutz v. City of Richmond*, 205 Va. 93, 135 S.E.2d 156 (1964).

**One of the obvious purposes of the statute** was to prescribe a uniform procedure with adequate safeguards and to provide for proof of the result of the analysis without the necessity of producing as a witness every person through whose hands the sample may have passed in the completion of the established routine. *Kay v. United States*, 255 F. (2d) 476.



**Relevant questions going to weight of certificate as evidence.**—The questions as to the qualification of the person taking the sample, the possibility of contamination from the fact that the defendant's arm was wiped with alcohol before the needle was inserted into his vein and the effect, if any, of the presence of a white powder, described as an anti-coagulant, in the vial, are all relevant. Such questions, however, go to the weight of the evidence rather than to the initial admissibility of the certificate. If the proof established a material failure to follow the procedure required by statute, it may be that the certificate should be stricken from the record, but the proof here established no such failure. *Kay v. United States*, 255 F. (2d) 476.

**Failure to comply with subsection (s) goes to weight of evidence.**—Subsection (s) of this section provides that the question of how blood is taken is procedural, and a failure to comply with the directed procedures goes to the weight of the evidence and is to be considered with all the evidence in the case, with the right to the defendant to show noncompliance and resulting prejudice. *Shumate v. Commonwealth*, 207 Va. 877, 153 S.E.2d 257 (1967).

**Reasonable proof that the instrument was properly sterilized is essential in establishing the reliability of the test itself.** *Brush v. Commonwealth*, 205 Va. 312, 136 S.E.2d 864 (1964).

In the absence of proof showing that the instrument used to withdraw defendant's blood was sterilized pursuant to the requirements of this section, the Commonwealth has not met the burden imposed upon it, and the certificates setting forth the alcoholic content of defendant's blood are not admissible. *Brush v. Commonwealth*, 205 Va. 312, 136 S.E.2d 864 (1964).

**Proof that blood analyzed was that of defendant.**—In a prosecution for operating a motor vehicle while under the influence of intoxicants, arising prior to the enactment of former §§ 18.1-55 and 18.1-56 and § 18.1-57, evidence was held insufficient to establish beyond a reasonable doubt that

the blood analyzed was that of defendant. *Rodgers v. Com.*, 197 Va. 527, 90 S. E. (2d) 257.

**Subsection (s) of this section does not change the ultimate burden of proof in a prosecution under this section.** *Shumate v. Commonwealth*, 207 Va. 877, 153 S.E.2d 243 (1967).

**Arresting officer** — Town policeman called in by State trooper, held an arresting officer *Bowman v Com.*, 201 Va. 656, 112 S. E. (2d) 887

**Test given before defendant arrested.**—Where defendant was offered and accepted a blood test within two hours of the offense, but was not arrested until he was released from the hospital several days later, the plain intent of former § 18.1-55 was complied with and evidence of the result of the test was properly admitted. *Bowman v Com.* 201 Va. 656, 112 S. E. (2d) 887

The evaluation of the Bogen's test for alcoholic content of blood comes under the category of an observed physical condition and not an opinion. It must be evaluated by one of experience, but the same is not unlike many diagnoses made by physicians. As an exception to the hearsay rule the final test of admissibility depends upon necessity and circumstantial guaranty of trustworthiness. *Kissinger v. Frankhouser*, 192 F. Supp. 276

**Testimony that accused refused to submit to blood test.**—In a prosecution for drunken driving arising prior to the enactment of former §§ 18.1-55 and 18.1-56, it was held that to permit the arresting officer to testify that defendant at the time of the arrest refused to submit to a blood test did not violate defendant's constitutional privilege against self incrimination. *Gardner v. Com.*, 195 Va. 945, 81 S. E. (2d) 614, commented on in 12 W. & L. Law Rev. 82.

**"Drunk-o-meter" test.**—As to use of "drunk-o-meter" test in prosecution under county ordinance, see *Omohundro v. Arlington County*, 194 Va. 773, 75 S. E. (2d) 496.

**§ 18.1-57. Presumptions from alcoholic content of blood.** — In any prosecution for a violation of § 18.1-54, or any similar ordinance of any county, city or town, the amount of alcohol in the blood of the accused at the time of the alleged offense as indicated by a chemical analysis of the accused's blood in accordance with the provisions of § 18.1-55.1, shall give rise to the following presumptions:

(1) If there was at that time 0.05 per cent or less by weight of alcohol in the accused's blood, it shall be presumed that the accused was not under the influence of alcoholic intoxicants;

(2) If there was at that time in excess of 0.05 per cent but less than 0.15 per cent by weight of alcohol in the accused's blood, such facts shall not give rise to any presumption that the accused was or was not under the influence of alcoholic intoxicants, but such facts may be considered with other competent evidence in determining the guilt or innocence of the accused; provided, however, such facts shall not preclude prosecution and conviction under § 18.1-56.1;

(3) If there was at that time 0.15 per cent or more by weight of alcohol in the accused's blood, it shall be presumed that the accused was under the influence of alcoholic intoxicants. (Code 1950 (Suppl.), § 18-75.3; 1956, c. 557; 1960, c. 358; 1964, c. 240; 1966, c. 636.)

## CHAPTER

*An Act to amend and reenact § 18.1-55.1, as amended, of the Code of Virginia, relating to use of chemical tests to determine alcohol in blood.*

[S 104]

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Approved

Be it enacted by the General Assembly of Virginia :

1. That § 18.1-55.1, as amended, of the Code of Virginia be amended and reenacted as follows:

§ 18.1-55.1. Use of chemical test to determine alcohol in blood; procedure; qualifications and liability of person withdrawing blood; costs; evidence; suspension of license for refusal to submit to test; localities authorized to adopt parallel provisions.—(a) As used in this section "license" means any operator's, chauffeur's or learner's permit or license authorizing the operation of a motor vehicle upon the highways.

(b) Any person whether licensed by Virginia or not, who operates a motor vehicle upon a public highway in this State on and after ~~July~~ *January* one, nineteen hundred ~~sixty-four~~ *seventy-three*, shall be deemed thereby, as a condition of such operation, to have consented to have a sample of his blood *or breath* taken for a chemical test to determine the alcoholic content ~~thereof~~ *of his blood*, if such person is arrested for a violation of § 18.1-54 or of a similar ordinance of any county, city or town within two hours of the alleged offense. *Any person so arrested shall elect to have either the breath or blood sample taken, but not both. It shall not be a matter of defense that either test is not available.*

(c) If a person after being arrested for a violation of § 18.1-54 or of a similar ordinance of any county, city or town and after having been advised by the arresting officer that a person who operates a motor vehicle upon a public highway in this State shall be deemed thereby, as a condition of such operation, to have consented to have a sample of his blood *or breath* taken for a chemical test to determine the alcoholic content ~~thereof~~ *of his blood*, and that the unreasonable refusal to do so constitutes grounds for the revocation of the privilege of operating a motor vehicle upon the highways of this State, then refuses to permit the taking of a sample of his blood *or breath* for such tests, the arresting officer shall take the person arrested before a committing magistrate and if he does again so refuse after having been further advised by such magistrate of the law requiring a blood *or breath* test to be taken and the penalty for refusal, and so declares again his refusal in writing upon a form provided by the Chief Medical Examiner of Virginia (hereinafter referred to as Chief Medical Examiner), or refuses or fails to so declare in writing and such fact is certified as prescribed in paragraph (j), then no blood *or breath* sample shall be taken even though he may thereafter request same.

(d) Only a physician, registered professional nurse, graduate laboratory technician or a technician or nurse designated by order of a court of record acting upon the recommendation of a licensed physician, using soap and water to cleanse the part of the body from which the blood is taken and using instruments sterilized by the accepted steam sterilizer or some other sterilizer which will not affect the accuracy of the test, or using chemically clean sterile disposable syringes, shall withdraw blood for the purpose of determining the alcoholic content thereof.

No civil liability shall attach to any person authorized to withdraw blood as provided herein as a result of the act of withdrawing blood from any person submitting thereto, provided the blood was withdrawn according to recognized medical procedures; and provided further that the foregoing shall not relieve any such person from liability for negligence in the withdrawing of any blood sample.

(d1) Portions of the blood sample so withdrawn shall be placed in each of two vials provided by the Chief Medical Examiner which vials shall be sealed and labeled by the person taking the sample or at his direction, showing on each the name of the accused, the name of the person taking the blood sample, and the date and time the blood sample was taken. The vials shall be placed in two containers provided by the Chief Medical Examiner, which containers shall be sealed so as not to allow tampering with the contents. The arresting or accompanying officer shall take possession of the two containers holding the vials as soon as the vials are placed in such containers and sealed, and shall transport or mail one of the vials forthwith to the Chief Medical Examiner. The officer taking possession of the other container (hereinafter referred to as second container) shall, immediately after taking possession of said second container give to the accused a form provided by the Chief Medical Examiner which shall set forth the procedure to obtain an independent analysis of the blood in the second container, and a list of those laboratories and their addresses, approved by the State Health Commissioner; such form shall contain a space for the accused or his counsel to direct the officer possessing such second container to forward that container to such approved laboratory for analysis, if desired. The officer having the second container, after delivery of the form referred to in the preceding sentence (unless at that time directed by the accused in writing on such form to forward the second container to an approved laboratory of the accused's choice, in which event the officer shall do so) shall deliver said second container to the chief police officer of the county, city or town in which the case will be heard, and the chief police officer who receives the same shall keep it in his possession for a period of seventy-two (72) hours, during which time the accused or his counsel may, in writing, on the form provided hereinabove, direct the chief police officer having possession of the second container to mail it to the laboratory of the accused's choice chosen from the approved list. As used in this section, the term "chief police officer" shall mean the sheriff in any county not having a chief of police, the chief of police of any county having a chief of police, the chief of police of the city or the sergeant or chief of police of the town in which the charge will be heard.

(d2) The testing of the contents of the second container shall be made in the same manner as hereafter set forth concerning the procedure to be followed by the Chief Medical Examiner, and all procedures established herein for transmittal, testing and admission of the result in the trial of the case shall be the same as for the sample sent to the Chief Medical Examiner.

(d3) A fee not to exceed \$15.00 shall be allowed the approved laboratory for making the analysis of the second blood sample which fee shall be paid out of the appropriation for criminal charges. If the person whose blood sample was withdrawn is subsequently convicted for violation of § 18.1-54, or of a similar ordinance of any county, city or town, the fee charged by the laboratory for testing the blood sample shall be taxed as part of the costs of the criminal case and shall be paid into the general fund of the State treasury.

(d4) If the chief police officer having possession of the second container is not directed as herein provided to mail it within seventy-two (72) hours after receiving said container then said officer shall

destroy same.

(e) Upon receipt of the blood sample forwarded to his office for analysis, the Chief Medical Examiner shall cause it to be examined for alcoholic content and he or an Assistant Chief Medical Examiner shall execute a certificate which shall indicate the name of the accused, the date, time and by whom the blood sample was received and examined, a statement that the container seal had not been broken or otherwise tampered with, a statement that the container was one provided by the Chief Medical Examiner and a statement of the alcoholic content of the sample. The certificate attached to the vial from which the blood sample examined was taken shall be returned to the clerk of the court in which the charge will be heard. The certificate attached to the container forwarded on behalf of the accused shall also be returned to the clerk of the court in which the charge will be heard, and such certificate shall be admissible in evidence when attested by the pathologist or by the supervisor of the laboratory approved by the State Health Commissioner.

(f) When any blood sample taken in accordance with the provisions of this section is forwarded for analysis to the office of the Chief Medical Examiner, a report of the results of such analysis shall be made and filed in that office. Upon proper identification of the vial into which the blood sample was placed, the certificate as provided for in this section shall, when duly attested by the Chief Medical Examiner, or any Assistant Chief Medical Examiner, be admissible in any court, in any criminal proceeding, as evidence of the facts therein stated and of the results of such analysis.

(g) Upon the request of the person whose blood *or breath* sample was taken for a chemical test to determine the alcoholic content ~~thereof of his blood~~, the results of such test or tests shall be made available to him.

(h) A fee not exceeding ten dollars shall be allowed the person withdrawing a blood sample in accordance with this section, which fee shall be paid out of the appropriation for criminal charges. If the person whose blood sample was withdrawn is subsequently convicted for violation of § 18.1-54 or of a similar ordinance of any county, city or town, the amount charged by the person withdrawing the sample shall be taxed as part of the costs of the criminal case and shall be paid into the general fund of the State treasury.

(i) In any trial for a violation of § 18.1-54 of the Code or of a similar ordinance of any county, city or town, this section shall not otherwise limit the introduction of any relevant evidence bearing upon any question at issue before the court, and the court shall, regardless of the result of the blood *or breath* test or tests, if any, consider such other relevant evidence of the condition of the accused as shall be admissible in evidence. The failure of an accused to permit a sample of his blood *or breath* to be ~~withdrawn~~ taken for a chemical test to determine the alcoholic content ~~thereof of his blood~~ is not evidence and shall not be subject to comment at the trial of the case; nor shall the fact that a blood *or breath* test had been offered the accused be evidence or the subject of comment.

(j) The form referred to in paragraph (c) shall contain a brief statement of the law requiring the taking of a blood *or breath* sample and the penalty for refusal, a declaration of refusal and lines for the signature of the person from whom the blood *or breath* sample is sought, the date and the signature of a witness to the signing. If such person refuses or fails to execute such declaration, the committing justice, clerk or assistant clerk shall certify such fact, and that the committing justice, clerk or assistant clerk advised the person arrested that such re-

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fusal or failure, if found to be unreasonable, constitutes grounds for the revocation of such person's license to drive. The committing or issuing justice, clerk or assistant clerk shall forthwith issue a warrant charging the person refusing to take the test to determine the alcoholic content of his blood, with violation of this section. The warrant shall be executed in the same manner as criminal warrants.

(k) The executed declaration of refusal or the certificate of the committing justice, as the case may be, shall be attached to the warrant and shall be forwarded by the committing justice, clerk or assistant clerk to the court in which the offense of driving under the influence of intoxicants shall be tried.

(l) When the court receives the declaration of refusal or certificate referred to in paragraph (k) together with the warrant charging the defendant with refusing to submit to having a sample of his blood or breath taken for the determination of the alcoholic content thereof of his blood, the court shall fix a date for the trial of said warrant, at such time as the court shall designate, but subsequent to the defendant's criminal trial for driving under the influence of intoxicants.

(m) The declaration of refusal or certificate under paragraph (k), as the case may be, shall be prima facie evidence that the defendant refused to submit to the taking of a sample of his blood or breath to determine the alcoholic content thereof of his blood as provided hereinabove. However, this shall not be deemed to prohibit the defendant from introducing on his behalf evidence of the basis for his refusal to submit to the taking of a sample of his blood or breath to determine the alcoholic content thereof of his blood. The court shall determine the reasonableness of such refusal.

(n) If the court shall find the defendant guilty as charged in the warrant, the court shall suspend the defendant's license for a period of 90 days for a first offense and for six months for a second or subsequent offense or refusal within one year of the first or other such refusals; the time shall be computed as follows: the date of the first offense and the date of the second or subsequent offense.

(o) The court shall forward the defendant's license to the Commissioner of the Division of Motor Vehicles of Virginia as in other cases of similar nature for suspension of license unless, however, the defendant shall appeal his conviction in which case the court shall return the license to the defendant upon his appeal being perfected.

(p) The procedure for appeal and trial shall be the same as provided by law for misdemeanors.

(q) No person arrested for a violation of § 18.1-54 or a similar ordinance of any county, city or town shall be required to execute in favor of any person or corporation a waiver or release of liability in connection with the withdrawal of blood and as a condition precedent to the withdrawal of blood as provided for herein.

(r) The court or the jury trying the case shall determine the innocence or the guilt of the defendant from all the evidence concerning his condition at the time of the alleged offense.

*(r1) Chemical analysis of a person's breath, to be considered valid under the provisions of this section, shall be performed by an individual possessing a valid license to conduct such tests, with a type of equipment and in accordance with the methods approved by the State Health Commissioner. Such breath testing equipment shall be tested for its accuracy by the State Health Commissioner's Office at least once every six months.*

*The State Health Commissioner is directed to establish a training program for all individuals who are to administer the breath tests, of at least forty hours of instruction in the operation of the breath test equipment and the administration of such tests. Upon the successful completion of*

*the training program the Commissioner may issue a license to the individual operator indicating that he has completed the course and is authorized to conduct a breath test analysis.*

*Any individual conducting a breath test under the provisions of this section and as authorized by the State Health Commissioner shall issue a certificate which will indicate that the test was conducted in accordance with the manufacturer's specifications, the equipment on which the breath test was conducted has been tested within the past six months, the name of the accused, the date, the time the sample was taken from the accused, the alcoholic content of the sample, and by whom the sample was examined. The certificate, as provided for in this section, when duly attested by the authorized individual conducting the breath test, shall be admissible in any court in any criminal proceeding as evidence of the alcoholic content of the blood of the accused. In no case may the officer making the arrest, or anyone with him at the time of the arrest, or anyone participating in the arrest of the accused, make the breath test or analyse the results thereof.*

(s) The steps herein set forth relating to the taking, handling, identification, and disposition of blood or breath samples are procedural in nature and not substantive. Substantial compliance therewith shall be deemed to be sufficient. Failure to comply with any one or more of such steps or portions thereof, or a variance in the results of the two blood tests shall not of itself be grounds for finding the defendant not guilty, but shall go to the weight of the evidence and shall be considered as set forth above with all the evidence in the case, provided that the defendant shall have the right to introduce evidence on his own behalf to show noncompliance with the aforesaid procedure or any part thereof, and that as a result his rights were prejudiced.

(t) The governing bodies of the several counties, cities and towns are authorized to adopt ordinances paralleling the provisions of (a) through (s) of this section.

2. This act shall be effective on and after January one, nineteen hundred seventy-three.

.....  
President of the Senate

.....  
Speaker of the House of Delegates

Approved:

.....  
Governor

## CHAPTER

*An Act to amend and reenact § 18.1-57, as amended, of the Code of Virginia, relating to presumptions from alcoholic content of blood, and to repeal § 18.1-56.1 of the Code of Virginia, relating to impaired driving, and to amend and reenact § 18.1-59 as amended of the Code of Virginia, relating to the penalty for violation of § 18.1-54.*

[S 107]

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 Approved

Be it enacted by the General Assembly of Virginia:

1. That § 18.1-57, as amended, of the Code of Virginia be amended and reenacted as follows:

§ 18.1-57. Presumptions from alcoholic content of blood.—In any prosecution for a violation of § 18.1-54, or any similar ordinance of any county, city or town, the amount of alcohol in the blood of the accused at the time of the alleged offense as indicated by a chemical analysis of the accused's blood in accordance with the provisions of § 18.1-55.1, shall give rise to the following presumptions:

(1) If there was at that time 0.05 percent or less by weight *by volume* of alcohol in the accused's blood, it shall be presumed that the accused was not under the influence of alcoholic intoxicants;

(2) If there was at that time in excess of 0.05 percent but less than ~~0.15~~ 0.10 percent by weight *by volume* of alcohol in the accused's blood, such facts shall not give rise to any presumption that the accused was or was not under the influence of alcoholic intoxicants, but such facts may be considered with other competent evidence in determining the guilt or innocence of the accused; ~~provided, however, such facts shall not preclude prosecution and conviction under § 18.1-56.1;~~

(3) If there was at that time ~~0.15~~ 0.10 percent or more by weight *by volume* of alcohol in the accused's blood, it shall be presumed that the accused was under the influence of alcoholic intoxicants.

§ 18.1-59. Same; forfeiture of driver's license; suspension of sentence.—The judgment of conviction, or finding of not innocent in the case of a juvenile, if for a first offense under § 18.1-54, or for a similar offense under any county, city or town ordinance, shall of itself operate to deprive the person so convicted or found not innocent of the right to drive or operate any such vehicle, conveyance, engine or train in this State for a period of ~~one year~~ *not less than six months nor more than one year in the discretion of the court* from the date of such judgment, and if for a second or other subsequent offense within ten years thereof for a period of three years from the date of the judgment of conviction or finding of not innocent thereof, any such period in either case to run consecutively with any period of suspension for failure to permit a blood sample to be taken as required by § 18.1-55.1. If any person has heretofore been convicted or found not innocent of violating any similar act of this State and thereafter is convicted or found not innocent of violating the provisions of § 18.1-54, such conviction or finding shall for the purpose of this section and § 18.1-58 be a subsequent offense and shall be punished accordingly; and the court may, in its discretion, suspend the sentence during the good behavior of the person convicted or found not innocent.

2. That § 18.1-56.1 of the Code of Virginia be repealed.



APPENDIX B  
COVER LETTER



COMMONWEALTH OF VIRGINIA  
OFFICE OF THE GOVERNOR

November 17, 1971

JOHN T. HANNA  
DIRECTOR  
HIGHWAY SAFETY DIVISION

TELEPHONE NO.  
272-1431 EXT. 274  
P. O. BOX 27472  
RICHMOND 23261

Dear Citizen of the Commonwealth:

I am asking that you take a few minutes of your time to participate in a very important study of highway safety in Virginia. This survey is being conducted by interviewers working for the Virginia Highway Research Council. The funds were provided by the National Highway Traffic Safety Administration of the U. S. Department of Transportation. This traffic safety project has the full support of the Honorable Linwood Holton, the Governor of Virginia. We are inviting you to participate in this study.

The information is to be obtained strictly for scientific research purposes. The research team wishes to determine the attitudes and knowledge of the general public concerning highway safety. They already have information on those drivers who actually have had a serious or fatal crash; however, they don't know very much about those who drive and do not have crashes. Your answers to the questionnaire will be completely confidential and known only to the immediate research staff; your actual name will not even be recorded in their files. The information you provide will be used for research purposes only.

Only a few persons are being interviewed. Thus, you are being offered a unique opportunity to aid meaningful research on traffic safety. I do hope that you will participate.

Thank you very much for your consideration and cooperation on this project. It is a study that we hope will make a significant contribution to safety on our highways.

Sincerely,

A handwritten signature in cursive script that reads "John T. Hanna".

John T. Hanna, Director.  
Highway Safety Division of Virginia

TJS/jan

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APPENDIX C  
SURVEY QUESTIONNAIRE

THE STONELAND CORP.  
 #23-15 — HOUSEHOLD SURVEY  
 1-2-3-4

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 5-6-7

INTERVIEWER: Record Answers by circling codes.

8-1

9-1

1. Which one of these do you feel causes the greatest number of automobile accidents? Just read me the number. (Hand respondent card A with following answers.)

- 10-1 Unsafe highways or streets
- 2 Failure to enforce laws
- 3 Poor traffic laws
- 4 Driving too fast
- 5 Driving under the influence of alcohol
- 6 Disregard for traffic regulations by drivers
- 7 Disregard for traffic regulations by pedestrians
- 8 Drivers and pedestrians who don't know the traffic regulations
- 9 Something wrong with cars
- 0 Drivers who handle a car poorly

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)?

- 11-1 SOCIAL DRINKERS
- 2 PROBLEM DRINKERS
- 3 OTHER (specify) \_\_\_\_\_
- 4 NO OPINION

3. Out of every 10 traffic deaths, how many would you say are caused by drinking drivers?

- |          |              |
|----------|--------------|
| 12-1 ONE | 7 SEVEN      |
| 2 TWO    | 8 EIGHT      |
| 3 THREE  | 9 NINE       |
| 4 FOUR   | 0 TEN        |
| 5 FIVE   | X NO OPINION |
| 6 SIX    |              |

4. What is the penalty in this state for first offense driving while intoxicated?

- 13-1 PENALTY STATED CORRECT
- 2 PENALTY LESS SEVERE
- 3 PENALTY MORE SEVERE THAN ACTUAL PENALTY

- 4a. What do you think should happen if a driver is convicted of driving while intoxicated? (may check more than one)

FIRST TIME

- 14-1 temporary license suspension  
15-1 permanent license suspension  
16-1 fine  
17-1 jail sentence  
18-1 require medical treatment

- 4b. What do you think should happen to a person convicted of driving while intoxicated for the THIRD TIME. (may check more than one)

- 19-1 temporary license suspension  
20-1 permanent license suspension  
21-1 fine  
22-1 jail sentence  
23-1 require medical treatment

- 4c. What do you think occurs at present upon the first conviction of driving while intoxicated? (may check more than one)

- 24-1 discretionary jail up to 12 months  
25-1 discretionary fine up to \$200  
26-1 discretionary 12 month revocation  
27-1 mandatory 12 months revocation  
28-1 permanent license suspension

- 4d. Indicate which phrase accurately describes your knowledge of the offense of impaired driving?

- 29-1 I have never heard of it.  
 2 I have heard of it, but don't know anything about it.  
 3 I have some knowledge of it.  
 4 I have general knowledge of it.  
 5 I am well informed on the subject.

5. What do you think the term Blood Alcohol Concentration or Blood Alcohol Level means?

- 30-1 RESPONDENT'S ANSWER COMPLETELY CORRECT  
 2 RESPONDENT'S ANSWER CORRECT  
 3 RESPONDENT'S ANSWER WRONG

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? (Hand respondent card B with following answers.)

- 31-1 ANY TRACE  
 2 .05%  
 3 .08%  
 4 .10%  
 5 .12%  
 6 .15%  
 7 .20%  
 8 DON'T KNOW

7. How many drinks do you think you would have to have to reach the level where you would be considered legally drunk?

- |                  |               |              |
|------------------|---------------|--------------|
| 32-1 ONE OR LESS | 6 SIX         | X DON'T KNOW |
| 2 TWO            | 7 SEVEN       |              |
| 3 THREE          | 8 EIGHT       |              |
| 4 FOUR           | 9 NINE        |              |
| 5 FIVE           | 0 TEN OR MORE |              |

8. Here is a list of statements about drinking and becoming intoxicated. Please read each statement and tell me if you think it is true or false. (hand respondent card C with the following statements)

	<u>True</u>	<u>False</u>	<u>Don't Know</u>
a. A younger person just starting to drink will get drunk faster than an older person on the same amount of liquor.	33-1	2	3
b. 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.	34-1	2	3
c. 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.	35-1	2	3
d. A small person will get drunk faster than a large person on the same number of drinks.	36-1	2	3

- 4 -

	<u>True</u>	<u>False</u>	<u>Don't Know</u>
e. A person who has had one drink should not be allowed to drive an automobile.	37-1	2	3
f. 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.	38-1	2	3
g. A person who is used to drinking can drink more and not become drunk than a person who drinks only once in a while.	39-1	2	3
h. Alcohol will affect a person faster if he smokes marihuana before or while drinking.	40-1	2	3
i. Alcohol will affect a person faster if he's under medication like a tranquilizer or antidepressant.	41-1	2	3
j. Strong black coffee is helpful in sobering a person up before he drives.	42-1	2	3
k. Beer is pretty much like a soft drink as far as making a person drunk is concerned.	43-1	2	3
9. Have you read or heard of a campaign or program that would reduce alcohol-related traffic deaths?			
44-1 YES			
2 NO (if NO, skip to Question 12)			
10. Where did you read or hear about it?			
45-1 ANOTHER PERSON	50-6 BILLBOARD, ROAD SIGNS		
46-2 RADIO	51-7 PAMPHLET, LEAFLET		
47-3 TV	52-8 POSTERS IN BARS, TAVERNS		
48-4 MAGAZINE	53- OTHER (specify) _____		
49-5 NEWSPAPER			
10.a. What did the campaign or program say? PROBE: Anything else?			
			54-
			55-
11. Do you recall what agency or organization is sponsoring the program?			
56-1 ASAP (local)			
2 OTHER (specify) _____			
3 CAN'T RECALL			

12. How effective do you think each of the following methods would be in reducing the drinking driving problem? Just give me the number on this card. (Hand respondent card D with effectiveness ratings.)
- |   |           |
|---|-----------|
| a. Greater police enforcement of drunk driving laws   | _____ 57- |
| b. A large-scale public information and education campaign                                      | _____ 58- |
| c. Improved treatment services for problem drinkers   | _____ 59- |
| d. More severe penalties for convicted drunk drivers  | _____ 60- |
| e. Having convicted drunk drivers use a pill which causes them to be sick if they drink alcohol | _____ 61- |
| f. Special alcohol-education courses for convicted drunk drivers                                | _____ 62- |
| g. Police using random road checks to find drivers who have been drinking                       | _____ 63- |
| h. A device that would prevent a drunk person from starting the car                             | _____ 64- |
13. About how many miles do you yourself drive in a year?
- 65-1 DON'T DRIVE (skip to Question 19)  
 2 LESS THAN 10,000  
 3 10,000 - 19,999  
 4 20,000 - 29,999  
 5 30,000 MILES OR MORE
14. For which one of the following reasons do you do most of your driving?
- 66-1 PERSONAL OR FAMILY AFFAIRS  
 2 TO AND FROM WORK  
 3 FOR WORK  
 4 VACATIONS  
 5 OTHER (specify) \_\_\_\_\_
15. In a typical week how many days do you drive?
- |                          |            |
|--------------------------|------------|
| 67-7 EVERY DAY           | 1-2        |
| 6 SIX DAYS               | 2-3        |
| 5 FIVE DAYS              | 3-1        |
| 4 FOUR DAYS              | 4-5        |
| 3 THREE DAYS             | 5-         |
| 2 TWO DAYS               | 6-         |
| 1 ONE DAY                | 7          |
| 0 NONE IN A TYPICAL WEEK | 8-1<br>9-2 |
16. How many tickets for driving violations have you had in the last 3 years, not counting parking violations?

\_\_\_\_\_ 10-  
 \_\_\_\_\_

(RECORD #)



17. In the past 3 years, how many traffic accidents, no matter how minor, have you been involved in when you were driving a car?

11-  
(RECORD #)

18. In the past 3 years, how many times has your driver's license been suspended for any reason?

12-  
(RECORD #)

19. Drinking is an accepted part of business and social activity for many people. Do you ever drink beer, wine, or liquor such as whiskey, gin, or vodka?

- 13-1 YES (if yes, skip to Question 22)
- 2 NO

20. Have you ever drunk beer, wine, or liquor?

- 14-1 YES
- 2 NO (if no, skip to Question 30)

21. How long ago did you last drink beer, wine, or liquor?

- 15-1 LESS THAN ONE MONTH
- 2 1-2 MONTHS
- 3 3 MONTHS TO 1 YEAR
- 4 MORE THAN 1 YEAR AGO

22. Which of these do you drink most often — beer, wine, or liquor?

- 16-1 BEER
- 2 WINE
- 3 LIQUOR

23. At the present time do you consider yourself to be a:

- 17-1 VERY LIGHT DRINKER
- 2 FAIRLY LIGHT DRINKER
- 3 MODERATE DRINKER
- 4 FAIRLY HEAVY DRINKER
- 5 HEAVY DRINKER

24. About how many days during this past week did you drink the number of drinks shown below? (By drink we mean a glass of wine, bottle or can of beer, or a single shot of liquor)? Just read me the number of days of each line. (Hand respondent card E with the following answers).

8 OR MORE DRINKS?	<u>18-</u>	LINE 1
5-7 DRINKS ?	<u>19-</u>	LINE 2
3-4 DRINKS?	<u>20-</u>	LINE 3
1-2 DRINKS?	<u>21-</u>	LINE 4
NO DRINKS?	<u>22-</u>	LINE 5

INTERVIEWER: CHECK THAT DAYS TOTAL 7 DAYS

25. How often do you drive after having anything to drink? Would you say often? Would you say often, occasionally, hardly ever, or never?

23-1 OFTEN  
 2 OCCASIONALLY (if choice is 1 or 2 go on to following questions)  
 3 HARDLY EVER  
 4 NEVER  
 5 DON'T DRIVE (if choice is 3-5 skip to Question 30)

26. How much is the most you will drink and continue to drive?

24-1 ONE DRINK  
 2 TWO DRINKS  
 3 THREE DRINKS  
 4 FOUR DRINKS  
 5 FIVE DRINKS  
 6 SIX DRINKS  
 7 SEVEN DRINKS  
 8 EIGHT DRINKS  
 9 NINE DRINKS  
 0 TEN OR MORE DRINKS

27. How far do you usually drive after drinking?

25-1 LESS THAN ONE MILE  
 2 1-5 MILES  
 3 6-10 MILES  
 4 11-20 MILES  
 5 OVER 20 MILES

28. When you've driven after drinking have you ever thought you really shouldn't be on the road?

- 26-1 YES
- 2 NO

29. Have you ever refused to drive or decided not to drive because you thought you had had too much to drink?

- 27-1 YES
- 2 NO

29a. If the answer to Question 29 was YES, was the refusal to drive because of:

- 28-1 Knowledge of laws
- 2 Fear of arrest
- 3 Fear of accident

30. The next few questions are about the chances of certain things happening to you.

a. If you drive after drinking too much, what do you think the chances are of your committing a moving traffic violation?

- 29-1 VERY HIGH
- 2 HIGH
- 3 ABOUT EVEN (50-50)
- 4 LOW
- 5 VERY LOW
- 6 DON'T KNOW

b. If you drive after drinking too much, what are your chances of being stopped by the police?

- 30-1 VERY HIGH
- 2 HIGH
- 3 ABOUT EVEN (50-50)
- 4 LOW
- 5 VERY LOW
- 6 DON'T KNOW

c. If you drive after drinking too much, what are your chances of being involved in an automobile accident?

- 31-1 VERY HIGH
- 2 HIGH
- 3 ABOUT EVEN (50-50)
- 4 LOW
- 5 VERY LOW
- 6 DON'T KNOW

- d. If you drive after drinking too much, what are your chances of being involved in a serious or fatal automobile accident?

- 32-1 VERY HIGH
- 2 HIGH
- 3 ABOUT EVEN (50-50)
- 4 LOW
- 5 VERY LOW
- 6 DON'T KNOW

Hand respondent card F ("Activation" question).

31. Please read me the number opposite any of the things listed that you have done in the last two or three years.

- 33-1 Presented my views to a public officeholder or legislator
- 34-2 Written a letter to the editor
- 35-3 Urged someone out of my family to get out and vote
- 36-4 Urged someone to get in touch with a public officeholder or legislator
- 37-5 Made a speech before an organized group
- 38-6 Been elected an officer of an organization
- 39-7 Run for public office
- 40-8 Taken an active part in a political campaign
- 41-9 Helped on fund raising drives
- 42-0 Voted in the last two elections
- 43-X None

- 31a. Have you ever taken:

- |                                       |          |      |
|---------------------------------------|----------|------|
| a. In class driver education?         | 44-1 YES | 2 NO |
| b. Behind the wheel driver education? | 45-1 YES | 2 NO |

THESE NEXT QUESTIONS ARE FOR STATISTICAL PURPOSES ONLY

32. What is the highest grade in school you completed?

- 68-1 LESS THAN 8TH GRADE
- 2 8TH GRADE
- 3 HIGH SCHOOL — INCOMPLETE
- 4 HIGH SCHOOL COMPLETED
- 5 COLLEGE — INCOMPLETE
- 6 COLLEGE COMPLETED
- 7 GRADUATE WORK

Hand respondent card G.

33. Which of these best describes your status at the present time?

- 69-1 EMPLOYED FULL TIME
- 2 EMPLOYED PART TIME
- 3 UNEMPLOYED
- 4 HOUSEWIFE
- 5 STUDENT
- 6 RETIRED

34. Which occupation most nearly describes your present work?

- 70-1 PROFESSIONAL, TECHNICAL, MANAGERIAL
- 2 CLERICAL AND SALES
- 3 SERVICE OCCUPATION
- 4 FARMING, FISHERY, FORESTRY
- 5 PROCESSING OCCUPATION, MACHINE TRADE, BENCH WORK
- 6 MILITARY
- 7 STRUCTURE WORK
- 8 RETIRED
- 9 HOUSEWIFE
- 0 STUDENT

35. Within which of the following income groups do you fall?

- 71-1 0 - \$5,000
- 2 \$5,000 - \$10,000
- 3 \$10,000 - \$15,000
- 4 \$15,000 - \$20,000
- 5 \$20,000 AND UP

36. Are you married, single, divorced, or widowed?

- 72-1 MARRIED
- 2 SINGLE
- 3 DIVORCED
- 4 WIDOWED
- 5 OTHER (specify) \_\_\_\_\_

37. What is your religious preference?

- 73-1 PROTESTANT
- 2 ROMAN CATHOLIC
- 3 JEWISH
- 4 OTHER (specify) \_\_\_\_\_
- 5 NONE

38. Race (INTERVIEWER: OBSERVE AND RECORD)

74-1 WHITE

2 BLACK

3 ORIENTAL

4 LATIN

5 AMERICAN INDIAN

6 OTHER (specify) \_\_\_\_\_

Hand respondent card H.

39. Which of these comes closest to your weight? Just give the number. (INTERVIEWER: ESTIMATE IF NECESSARY)

75-1 LESS THAN 100 LBS.

2 100-119 LBS.

3 120-139 LBS.

4 140-159 LBS.

5 160-179 LBS.

6 180-199 LBS.

7 200-219 LBS.

8 220-239 LBS.

9 240 LBS. OR MORE

40. During the past four years, how many times have you moved from one address to another?

76-1 ONE MOVE

2 TWO MOVES

3 THREE MOVES OR MORE

4 NO MOVE -- AT SAME ADDRESS DURING PAST FOUR YEARS

40a. Which most nearly describes your place of residence?

77-1 RURAL

2 SUBURBAN

3 URBAN

41. If any moves in the past four years, how many of these moves were from one county to another?

78-1 ONE

2 TWO

3 THREE OR MORE

4 NONE

5 DON'T KNOW

42. In what 10-year age group do you fall?

- 79-1 UNDER 20
- 2 20-29
- 3 30-39
- 4 40-49
- 5 50-59
- 6 60 OR OVER

43. Sex (INTERVIEWER: OBSERVE AND RECORD)

- 80-1 MALE
- 2 FEMALE

44. How often do you dine out, other than routine work or school lunches?

- 46-1 At least once per week
- 2 Every two to four weeks
- 3 Every month or so
- 4 Seldom or never

45. How often do you entertain small groups of friends at home?

- 47-1 Often
- 2 Seldom or never

46. Please check the types of organizations of which you are a member:

	<u>YES:</u>	<u>NO:</u>
Golf, country, swim, or similar clubs	48-1	2
Lodges or fraternal organizations	49-1	2
Civic clubs (Lions, Rotary, etc.)	50-1	2

47. How many cars are owned in your household?

- 51-1 None
- 2 One
- 3 Two
- 4 Three or more

48. Please check each of the following that you own:

- 52-1 Boat
- 2 Airplane
- 3 Camper
- 4 Vacation home

49. How many nights per month, on the average, would you say that you are away from home for purposes other than work — include social engagements, lodge, civic, and religious activities.

- 56-1 None  
 2 One  
 3 Two  
 4 Three or Four  
 5 Five or six  
 6 Seven or eight  
 7 Nine or more

50. Do you ever smoke cigarettes?

- 57-1 Yes  
 2 No

IF YES: How many packs per day?

- 58-1 Less than one  
 2 One  
 3 Two  
 4 More than two

51. On an average day, how much time do you spend with each of these activities?

	<u>Less than one hour</u>	<u>1-2 hours</u>	<u>3-4 hours</u>	<u>More than four hours</u>
Watching television	59-1	2	3	4
Listening to radio	60-1	2	3	4
Reading newspapers	61-1	2	3	4

52. How many times have you been to a movie at an indoor or drive-in theater during the past three months?

- 62-1 None  
 2 Once  
 3 2 - 3 times  
 4 4 - 5 times  
 5 6 or more

ADDRESS: \_\_\_\_\_

CITY OR TOWN: \_\_\_\_\_

STATE: \_\_\_\_\_

INTERVIEWER'S SIGNATURE: \_\_\_\_\_

DATE: \_\_\_\_\_ LENGTH OF INTERVIEW: \_\_\_\_\_

THANK YOU!



APPENDIX D  
SURVEY RESULTS

1. a. Which one of these do you feel causes the greatest number of automobile accidents?

- (a) Unsafe highways or streets
- (b) Driving too fast
- (c) Driving under the influence of alcohol
- (d) Disregard for traffic regulations by drivers
- (e) Drivers who handle a car poorly
- (f) Other

Category \ Response	a	b	c	d	e	f
Total Sample	13 3%	107 21%	147 29%	142 28%	72 14%	19 5%
EDUCATION						
less than high school	0 0%	13 28%	16 35%	8 17%	6 13%	3 7%
high school graduate	3 2%	28 20%	34 24%	44 32%	21 15%	9 7%
some college	10 3%	66 21%	96 31%	90 29%	45 14%	7 2%
RACE						
white	13 3%	98 21%	140 30%	137 29%	68 14%	16 3%
nonwhite	0 0%	9 32%	7 25%	5 18%	4 14%	3 7%
SEX						
male	7 3%	48 19%	71 28%	74 30%	40 16%	10 4%
female	6 2%	59 24%	76 30%	68 27%	32 13%	9 4%
AGE						
under 20	0 0%	2 7%	12 44%	8 30%	4 15%	1 4%
20-39	4 2%	59 27%	60 27%	61 27%	29 13%	9 4%
40-59	8 3%	42 18%	66 29%	67 29%	38 17%	8 4%
60 or older	1 5%	3 14%	9 43%	6 29%	1 5%	1 5%

1. b. 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 Category	Social Drinkers	Problem Drinkers	Other
Total sample	285 57%	179 36%	36 8%
<b>EDUCATION</b>			
less than high school	27 59%	13 28%	6 13%
high school graduate	67 48%	58 42%	14 10%
some college	190 61%	108 34%	16 5%
<b>RACE</b>			
white	277 59%	167 35%	28 6%
nonwhite	8 29%	12 43%	8 29%
<b>SEX</b>			
male	133 53%	97 39%	20 8%
female	152 61%	82 33%	16 6%
<b>AGE</b>			
under 20	19 70%	7 26%	1 4%
20-39	142 64%	62 28%	18 8%
40-59	115 50%	101 44%	13 6%
60 or over	9 43%	8 38%	4 20%

1. c. Out of every 10 traffic deaths, how many would you say are caused by drinking drivers?

Category	Response											
	1	2	3	4	5	6	7	8	9	10	No Opinion	
Total sample	16 3%	27 5%	72 14%	80 16%	128 26%	64 13%	41 8%	28 6%	4 1%	1 0%	39 8%	
EDUCATION												
less than high school	1 2%	3 7%	2 4%	10 22%	14 30%	5 11%	4 9%	1 2%	0 0%	0 0%	6 13%	
high school graduate	4 3%	4 3%	20 14%	28 20%	35 25%	14 10%	12 9%	7 5%	2 1%	0 0%	13 9%	
some college	11 4%	20 6%	49 16%	42 13%	79 25%	45 14%	25 8%	20 6%	2 1%	1 0%	20 6%	
RACE												
white	16 3%	26 6%	72 15%	70 15%	119 25%	61 13%	39 8%	27 6%	2 0%	1 0%	39 8%	
nonwhite	0 0%	1 4%	0 0%	10 36%	9 32%	3 11%	2 7%	1 4%	2 0%	0 0%	0 0%	
SEX												
male	7 3%	17 7%	41 16%	38 15%	68 27%	28 11%	21 8%	11 4%	4 2%	1 0%	14 6%	
female	9 4%	10 4%	31 12%	42 17%	60 24%	36 14%	20 8%	17 7%	0 0%	0 0%	25 10%	
AGE												
under 20	0 0%	1 4%	2 7%	8 30%	5 19%	6 22%	4 15%	1 4%	0 0%	0 0%	0 0%	
20-39	5 2%	13 6%	29 13%	39 18%	63 28%	25 11%	19 9%	13 6%	3 1%	0 0%	13 6%	
40-59	10 4%	12 5%	35 15%	31 14%	58 25%	30 13%	16 7%	12 5%	1 0%	1 0%	23 10%	
60 or older	1 5%	1 5%	5 24%	2 10%	2 10%	3 14%	2 10%	2 10%	0 0%	0 0%	32 14%	

2.a. What is the penalty in this state for first offense driving while intoxicated?

- (a) Penalty stated correctly
- (b) Penalty less severe
- (c) Penalty more severe than actual penalty
- (d) Don't know

Category	Response			
	a	b	c	d
Total Sample	41 8%	300 60%	53 11%	106 21%
EDUCATION				
less than high school	3 7%	24 52%	3 7%	16 35%
high school graduate	11 8%	81 58%	10 7%	37 27%
some college	27 9%	194 62%	40 13%	53 17%
RACE				
white	39 8%	284 60%	50 11%	99 21%
nonwhite	2 7%	16 57%	3 11%	7 25%
SEX				
male	19 8%	166 60%	25 10%	40 16%
female	22 9%	134 54%	28 11%	66 26%
AGE				
under 20	3 11%	14 52%	2 7%	8 30%
20-39	21 9%	123 55%	30 14%	48 22%
40-59	16 7%	151 66%	20 9%	42 18%
60 or older	1 5%	11 52%	1 5%	8 38%

2.b. What do you think occurs at present upon the first conviction of driving while intoxicated? (May check more than one.)

- (a) Discretionary jail up to 12 months
- (b) Discretionary fine up to \$200
- (c) Discretionary 12 month revocation
- (d) Mandatory 12 month revocation
- (e) Permanent license suspension

Category \ Response	a	b	c	d	e
Total Sample	57 11%	268 54%	189 38%	56 11%	15 3%
EDUCATION					
less than high school	4 9%	20 43%	18 39%	3 7%	1 2%
high school graduate	13 9%	80 58%	44 32%	14 10%	5 4%
some college	40 13%	167 53%	126 40%	39 12%	9 3%
RACE					
white	54 11%	256 54%	173 37%	54 11%	14 3%
nonwhite	3 11%	12 43%	16 57%	2 7%	1 4%
SEX					
male	23 9%	134 54%	115 46%	30 12%	2 1%
female	34 14%	134 54%	74 30%	26 10%	13 5%
AGE					
under 20	2 7%	16 59%	12 44%	1 4%	1 4%
20-39	28 13%	109 49%	87 39%	28 13%	8 4%
40-59	25 11%	135 59%	79 34%	24 10%	5 2%
60 or older	2 10%	8 38%	10 48%	3 14%	1 5%

2.c. Indicate which phrase accurately describes your knowledge of the offense of impaired driving?

- (a) I have never heard of it.
- (b) I have heard of it, but don't know anything about it.
- (c) I have some knowledge of it.
- (d) I have general knowledge of it.
- (e) I am well informed on the subject.

Response Category	a	b	c	d	e
Total Sample	137 27%	104 21%	137 27%	100 20%	21 4%
EDUCATION					
less than high school	20 43%	10 22%	10 22%	5 11%	1 2%
high school graduate	38 27%	30 22%	39 28%	24 17%	8 6%
some college	78 25%	39 28%	88 28%	71 23%	12 4%
RACE					
white	128 27%	97 21%	131 28%	97 21%	18 4%
nonwhite	9 32%	7 25%	6 21%	3 11%	3 11%
SEX					
male	23 9%	134 54%	115 46%	30 12%	2 1%
female	34 14%	134 54%	74 30%	26 10%	13 5%
AGE					
under 20	2 7%	16 59%	12 44%	1 4%	1 4%
20-39	28 13%	109 49%	87 39%	28 13%	8 4%
40-59	25 11%	135 59%	79 34%	24 10%	5 2%
60 or older	2 10%	8 38%	10 48%	3 14%	1 5%

2.d. What do you think should happen if a driver is convicted of driving while intoxicated? (May check more than one.)

(a) Temporary license suspension

(d) Jail sentence

(b) Permanent license suspension

(e) Require medical treatment

(c) Fine

Response Category	a	b	c	d	e
Total Sample	390 78%	27 5%	214 43%	36 7%	54 11%
EDUCATION					
less than high school	31 67%	3 7%	18 39%	4 9%	4 9%
high school graduate	106 76%	11 8%	63 45%	10 7%	13 9%
some college	252 80%	13 4%	132 42%	22 7%	37 12%
RACE					
white	369 78%	25 5%	202 43%	32 7%	52 11%
nonwhite	21 75%	2 7%	12 43%	4 14%	2 7%
AGE					
under 20	22 81%	0 0%	13 48%	0 0%	1 4%
20-39	173 78%	13 6%	96 43%	16 7%	26 12%
40-59	179 78%	10 4%	95 41%	19 8%	26 11%
60 or older	15 71%	4 19%	9 43%	1 5%	1 5%
OCCUPATION					
professional	140 79%	7 4%	69 39%	11 6%	18 10%
military	13 68%	5 26%	10 53%	2 11%	1 5%
other	237 78%	15 5%	135 45%	23 8%	35 12%



2.e. What do you think should happen to a person convicted of driving while intoxicated for the THIRD TIME? (May check more than one.)

- (a) Temporary license suspension  
 (b) Permanent license suspension  
 (c) Fine  
 (d) Jail sentence  
 (e) Require medical treatment

Category \ Response	a	b	c	d	e
Total Sample	93 19%	364 73%	167 33%	129 26%	133 27%
EDUCATION					
less than high school	12 26%	31 67%	15 33%	10 22%	87 15%
high school graduate	26 19%	98 71%	49 35%	37 27%	39 28%
some college	55 18%	234 75%	102 32%	82 26%	87 28%
RACE					
white	88 19%	341 72%	155 33%	117 25%	128 27%
nonwhite	5 18%	23 82%	12 43%	12 43%	5 18%
AGE					
under 20	9 33%	15 56%	11 41%	4 15%	7 26%
20-39	44 20%	160 72%	79 36%	61 27%	60 27%
40-59	38 17%	170 74%	67 29%	56 24%	61 27%
60-or older	2 10%	18 86%	10 48%	7 33%	4 19%
OCCUPATION					
professional	35 20%	128 72%	53 30%	43 24%	50 28%
military	1 5%	18 95%	9 47%	10 53%	4 21%
other	57 19%	218 72%	105 35%	76 25%	79 26%

3. a. What do you think the term Blood Alcohol Concentration or Blood Alcohol Level means?

- (a) Respondent's answer completely correct      (c) Respondent's answer wrong  
 (b) Respondent's answer correct                      (d) Don't know

Response Category	a	b	c	d
Total Sample	51 10%	381 76%	62 12%	6 1%
EDUCATION				
less than high school	3 7%	26 57%	15 33%	2 4%
high school graduate	12 9%	101 73%	24 17%	2 1%
some college	36 11%	253 81%	23 7%	2 1%
RACE				
white	51 11%	362 77%	54 11%	5 1%
nonwhite	0 0%	19 68%	8 29%	1 4%
AGE				
under 20	5 19%	21 78%	1 4%	0 0%
20-39	27 12%	168 76%	23 10%	4 2%
40-59	19 8%	178 78%	30 13%	2 1%
60-or older	0 0%	13 62%	8 38%	0 0%
OCCUPATION				
professional	28 16%	136 76%	14 8%	0 0%
military	1 5%	17 89%	1 5%	0 0%
other	22 7%	228 75%	47 16%	6 2%

3.b. 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 Category	Any Trace	.05%	.08%	.10%	.12%	.15%	.20%	Don't Know
Total sample	9 2%	83 17%	76 15%	69 14%	48 10%	58 12%	13 3%	144 29%
EDUCATION								
less than high school	3 7%	2 4%	7 15%	6 13%	7 15%	4 9%	2 4%	15 33%
high school graduate	2 1%	18 13%	23 17%	19 14%	14 10%	12 9%	5 4%	46 33%
some college	4 1%	63 20%	46 15%	43 14%	27 9%	42 13%	6 2%	83 26%
RACE								
white	7 1%	80 17%	73 15%	63 13%	45 10%	56 12%	12 3%	136 29%
nonwhite	2 7%	3 11%	3 11%	6 20%	3 11%	2 7%	1 4%	8 29%
SEX								
male	5 2%	51 20%	38 15%	37 15%	17 7%	40 16%	3 1%	59 24%
female	4 2%	32 13%	38 15%	32 13%	31 12%	18 7%	10 4%	85 34%
AGE								
under 20	0 0%	3 11%	6 22%	3 11%	4 15%	3 11%	0 0%	8 30
20-39	4 2%	35 16%	32 14%	29 13%	19 9%	28 13%	5 2%	70 32
40-59	5 2%	43 1%	34 15%	33 14%	24 10%	25 11%	7 3%	58 25
60 or older	0 0%	2 10%	4 19%	4 19%	1 5%	2 10%	1 5%	7 33%

3. c. How many drinks do you think you would have to have to reach the level where you would be considered legally drunk?

Response Category	1 or less	2	3	4	5	6	7	8	9	10 or more	Don't know
Total sample	44 9%	72 14%	114 23%	68 14%	44 9%	21 4%	9 2%	12 2%	4 1%	13 3%	99 20%
EDUCATION											
less than high school	2 4%	5 11%	11 24%	8 17%	3 7%	1 2%	1 2%	0 0%	0 0%	1 2%	14 30%
high school graduate	14 10%	19 14%	23 17%	20 14%	10 7%	9 6%	2 1%	3 2%	2 1%	5 6%	32 23%
some college	28 9%	48 15%	79 25%	40 13%	31 10%	11 4%	6 2%	9 3%	2 1%	7 2%	53 17%
RACE											
white	42 9%	71 15%	110 23%	68 14%	40 8%	17 4%	9 2%	12 3%	2 0%	11 2%	90 19%
nonwhite	2 7%	1 4%	4 14%	0 0%	4 14%	4 14%	0 0%	0 0%	2 7%	2 7%	9 32%
SEX											
male	15 6%	25 10%	77 31%	30 12%	25 10%	12 5%	7 3%	10 4%	4 2%	10 4%	35 14%
female	29 12%	47 11%	37 15%	38 15%	19 8%	9 4%	2 1%	2 1%	0 0%	3 1%	64 24%
AGE											
under 20	3 11%	4 15%	6 22%	8 30%	1 4%	2 7%	0 0%	0 0%	0 0%	1 4%	2 7%
20-39	19 9%	42 19%	46 21%	29 13%	23 10%	10 5%	5 2%	3 1%	2 1%	8 4%	35 16%
40-59	19 8%	26 11%	60 26%	28 12%	17 7%	7 3%	3 1%	1 4%	2 1%	4 2%	54 24%
60 or older	3 14%	0 0%	2 10%	3 14%	2 10%	2 10%	1 5%	0 0%	0 0%	0 0%	8 38%

4. a. A younger person just starting to drink will get drunk faster than an older person on the same amount of liquor.

Response Category	True	False	Don't Know
Total sample	340 68%	138 28%	22 4%
EDUCATION less than high school	33 72%	11 24%	2 4%
high school graduate	102 73%	30 22%	7 5%
some college	204 65%	97 31%	13 4%
RACE white	321 68%	132 28%	19 4%
nonwhite	19 68%	6 21%	3 11%
SEX male	184 74%	56 22%	10 4%
female	156 62%	82 33%	12 5%
AGE under 20	23 85%	4 15%	0 0%
20-39	144 65%	67 30%	11 5%
40-59	154 67%	65 28%	10 4%
60 or older	18 86%	2 10%	1 5%
OCCUPATION professional	118 66%	51 29%	9 5%
military	16 84%	3 16%	0 0%
other	206 68%	54 28%	13 4%

- 4.b. 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.

Category	Response		
	True	False	Don't Know
Total sample	468 94%	26 5%	6 1%
EDUCATION			
less than high school	44 96%	2 4%	0 0%
high school graduate	128 92%	10 7%	1 1%
some college	468 94%	14 4%	5 2%
RACE			
white	295 94%	23 5%	6 1%
nonwhite	25 89%	3 11%	0 0%
SEX			
male	237 95%	12 5%	1 0%
female	231 92%	14 6%	5 2%
AGE			
under 20	23 85%	4 14%	0 0%
20-39	205 92%	14 6%	3 1%
40-59	218 95%	8 3%	3 1%
60 or older	21 100%	0 0%	0 0%
OCCUPATION			
professional	118 66%	91 29%	9 5%
military	16 84%	3 16%	0 0%
other	206 68%	84 28%	13 4%

4. c. If a person uses a "mixer" like soda water with liquor, he can drink more without getting drunk than if he drinks the liquor straight.

Response Category	True	False	Don't Know
Total sample	204 41%	262 52%	34 7%
EDUCATION			
less than high school	20 43%	20 43%	6 13%
high school graduate	62 45%	61 44%	16 12%
some college	121 39%	181 58%	12 4%
RACE			
white	186 39%	257 54%	29 6%
nonwhite	18 64%	5 18%	5 18%
SEX			
male	90 36%	148 59%	12 5%
female	114 46%	114 46%	22 9%
AGE			
under 20	13 48%	9 33%	5 19%
20-39	89 40%	120 54%	13 6%
40-59	94 41%	121 53%	14 6%
60 or older	7 33%	12 57%	2 10%
OCCUPATION			
professional	62 35%	108 61%	8 4%
military	9 47%	8 42%	2 11%
other	133 44%	146 48%	24 8%

4.d. A small person will get drunk faster than a larger person on the same number of drinks.

Response Category	True	False	Don't Know
Total sample	220 44%	236 47%	44 9%
EDUCATION			
less than high school	13 28%	25 54%	8 17%
high school graduate	50 36%	75 54%	14 10%
some college	157 50%	135 43%	22 7%
RACE			
white	210 44%	220 47%	42 9%
nonwhite	10 36%	16 57%	2 7%
SEX			
male	124 50%	105 42%	21 8%
female	96 38%	131 52%	23 9%
AGE			
under 20	9 33%	14 52%	4 15%
20-39	101 45%	107 48%	14 6%
40-59	103 45%	103 45%	23 10%
60 or older	6 29%	12 57%	3 14%
OCCUPATION			
professional	93 52%	69 39%	16 9%
military	12 63%	6 32%	1 5%
other	115 38%	161 53%	27 9%



4.e. A person who has had one drink should not be allowed to drive an automobile.

Response Category	True	False	Don't Know
Total sample	99 20%	380 76%	21 4%
EDUCATION			
less than high school	11 24%	33 72%	2 4%
high school graduate	30 22%	106 76%	3 2%
some college	57 18%	241 77%	16 5%
RACE			
white	92 19%	361 76%	19 4%
nonwhite	7 25%	19 68%	2 7%
SEX			
male	41 16%	199 80%	10 4%
female	58 23%	181 72%	11 4%
AGE			
under 20	5 19%	21 78%	1 4%
20-39	43 19%	165 74%	14 6%
40-59	48 21%	176 77%	5 2%
60 or older	3 14%	19 81%	1 5%
OCCUPATION			
professional	26 15%	148 83%	2 4%
military	5 26%	12 63%	2 11%
other	68 22%	220 73%	15 5%

- 4.f. 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 Category	True	False	Don't Know
Total sample	243 49%	227 45%	30 5%
EDUCATION			
less than high school	28 61%	16 35%	2 4%
high school graduate	73 53%	52 37%	14 10%
some college	141 45%	159 51%	14 4%
RACE			
white	225 48%	218 46%	29 6%
nonwhite	18 64%	9 32%	1 4%
SEX			
male	109 44%	130 52%	11 4%
female	134 54%	97 39%	19 8%
AGE			
under 20	14 52%	11 41%	2 7%
20-39	109 49%	100 45%	13 6%
40-59	107 47%	109 48%	13 6%
60 or older	12 57%	7 33%	2 10%
OCCUPATION			
professional	68 38%	103 58%	7 4%
military	15 79%	3 16%	1 5%
other	160 53%	121 40%	22 7%

- 4.g. A person who is used to drinking can drink more and not become drunk than a person who drinks only once in a while.

Response Category	True	False	Don't Know
Total sample	320 64%	154 31%	26 5%
EDUCATION			
less than high school	34 74%	11 24%	1 2%
high school graduate	92 66%	40 29%	7 5%
some college	193 61%	103 33%	18 6%
RACE			
white	302 64%	146 31%	24 5%
nonwhite	16 64%	8 29%	2 7%
SEX			
male	163 65%	75 30%	12 5%
female	157 63%	79 32%	14 6%
AGE			
under 20	22 81%	4 15%	1 4%
20-39	140 63%	73 33%	9 4%
40-59	143 62%	75 33%	11 5%
60 or older	14 67%	2 10%	5 24%
OCCUPATION			
professional	108 61%	64 36%	6 3%
military	12 63%	4 21%	3 16%
other	200 66%	86 28%	17 6%

4.h. Alcohol will affect a person faster if he smokes marihuana before or while drinking.

Response Category	True	False	Don't Know
Total sample	188 38%	43 9%	269 54%
EDUCATION			
less than high school	16 35%	4 9%	26 57%
high school graduate	55 40%	8 6%	76 55%
some college	116 37%	31 10%	167 53%
RACE			
white	172 36%	39 8%	261 55%
nonwhite	16 57%	4 14%	8 29%
SEX			
male	95 38%	22 9%	133 53%
female	93 37%	21 8%	136 54%
AGE			
under 20	14 52%	7 26%	6 22%
20-39	89 40%	26 12%	107 48%
40-59	75 33%	10 4%	144 63%
60 or older	9 43%	0 0%	12 57%
OCCUPATION			
professional	61 34%	19 11%	96 55%
military	12 63%	1 5%	6 32%
other	115 38%	23 8%	165 54%

- 4.i. Alcohol will affect a person faster if he's under medication — like a tranquilizer or antidepressant.

Response Category	True	False	Don't Know
Total sample	460 92%	14 3%	26 5%
EDUCATION			
less than high school	39 85%	1 2%	6 13%
high school graduate	126 42%	4 3%	7 5%
some college	292 93%	9 3%	13 4%
RACE			
white	172 36%	39 8%	261 55%
nonwhite	26 93%	0 0%	2 7%
SEX			
male	228 91%	7 3%	15 6%
female	232 93%	7 3%	11 4%
AGE			
under 20	23 85%	2 7%	2 7%
20-39	210 95%	5 2%	7 3%
40-59	210 92%	5 2%	14 6%
60 or older	16 76%	2 10%	3 14%
OCCUPATION			
professional	165 93%	5 3%	8 4%
military	19 100%	0 0%	0 0%
other	276 91%	9 3%	18 6%

## 4.j. Strong black coffee is helpful in sobering a person up before he drives.

Response Category	True	False	Don't Know
Total sample	283 57%	198 40%	19 4%
EDUCATION			
less than high school	31 67%	13 28%	2 4%
high school graduate	83 60%	52 37%	4 3%
some college	169 54%	132 42%	13 4%
RACE			
white	261 55%	192 41%	19 4%
nonwhite	22 79%	6 21%	0 0%
SEX			
male	140 56%	106 42%	4 2%
female	143 57%	92 37%	15 6%
AGE			
under 20	19 70%	6 22%	2 7%
20-39	117 53%	100 45%	5 2%
40-59	134 59%	84 37%	11 5%
60 or older	12 57%	8 38%	1 5%
OCCUPATION			
professional	94 53%	78 44%	6 3%
military	11 58%	7 37%	1 5%
other	178 59%	113 37%	12 4%

4.k. Beer is pretty much like a soft drink as far as making a person drunk is involved.

Response Category	True	False	Don't Know
Total sample	16 3%	479 96%	5 1%
EDUCATION			
less than high school	3 7%	43 93%	0 0%
high school graduate	7 5%	130 94%	2 1%
some college	6 2%	305 97%	3 1%
RACE			
white	13 3%	454 96%	5 1%
nonwhite	3 11%	25 89%	0 0%
SEX			
male	4 2%	245 98%	1 0%
female	12 5%	234 94%	4 2%
AGE			
under 20	1 4%	25 93%	1 4%
20-39	6 3%	215 97%	1 0%
40-59	6 3%	220 96%	3 1%
60 or older	3 14%	18 86%	0 0%
OCCUPATION			
professional	3 2%	174 98%	1 1%
military	1 5%	18 95%	0 0%
other	12 4%	287 95%	4 1%

5. a. Have you read or heard of a campaign or program that would reduce alcohol-related traffic deaths?

Response Category	Yes	No	Don't Know
Total sample	236 47%	262 52%	2 0%
<b>EDUCATION</b>			
less than high school	15 33%	31 67%	0 0%
high school graduate	53 38%	86 62%	0 0%
some college	167 53%	145 46%	2 1%
<b>RACE</b>			
white	231 49%	239 51%	2 0%
nonwhite	5 18%	23 82%	0 0%
<b>SEX</b>			
male	120 48	128 51	2 1
female	116 46%	134 54%	0% 0%
<b>AGE</b>			
under 20	9 33%	18 67%	0 0%
20-39	106 48%	116 52%	0 0%
40-59	112 49%	115 50%	2 1%
60 or older	9 43%	12 57%	0 0%



5.b. Where did you read or hear about it?

- (a) TV
- (b) Newspaper
- (c) Radio
- (d) Magazine
- (e) Another person
- (f) All others

Category \ Response	a	b	c	d	e	f
Total sample	125 25%	83 17%	45 9%	28 6%	21 4%	29 5%
EDUCATION						
less than high school	9 20%	5 11%	1 2%	0 0%	2 4%	1 2%
high school graduate	32 23%	20 14%	10 7%	7 5%	8 6%	6 4%
some college	84 27%	57 18%	34 11%	21 7%	11 4%	22 9%
RACE						
white	122 26%	81 17%	45 10%	28 6%	21 4%	29 5%
nonwhite	3 11%	2 7%	0 0%	0 0%	0 0%	0 0%
SEX						
male	68 27%	37 15%	24 10%	18 7%	11 4%	18 7%
female	57 23%	46 18%	21 8%	10 4%	10 4%	11 4%
AGE						
Under 20	6 22%	1 4%	3 11%	1 4%	1 4%	3 11%
20-39	64 29%	11 5%	16 7%	11 5%	11 5%	9 3%
40-59	52 23%	15 7%	24 10%	15 7%	8 3%	16 6%
60- or older	3 14%	1 5%	2 10%	1 5%	1 5%	1 5%

## 5.c. What did the campaign or program say?

(a) If you drink, don't drive

(b) Effects of drinking and driving

(c) Police should have more testing equipment

(d) Effects of alcohol on drivers

(e) All others

Category \ Response	a	b	c	d	e
Total sample	95 19%	18 4%	14 3%	11 2%	48 10%
EDUCATION					
less than high school	9 20%	1 2%	1 2%	0 0%	2 4%
high school graduate	22 16%	5 4%	1 1%	4 3%	10 8%
some college	64 20%	12 4%	12 4%	6 2%	36 12%
RACE					
white	94 20%	18 4%	14 3%	10 2%	47 10%
nonwhite	1 4%	0 0%	0 0%	1 4%	1 4%
SEX					
male	51 20%	9 4%	5 2%	4 2%	30 13%
female	44 18%	9 4%	9 4%	7 3%	18 5%
AGE					
under 20	5 19%	3 11%	0 0%	0 0%	0 0%
20-39	43 19%	6 3%	9 4%	6 3%	18 5%
40-59	45 20%	9 4%	5 2%	4 2%	27 11%
60 or older	2 10%	0 0%	0 0%	1 5%	3 15%

5.d. Do you recall what agency or organization is sponsoring the program?

Response Category	ASAP	Other	Can't Recall
Total sample	15 3%	77 15%	109 22%
<b>EDUCATION</b>			
less than high school	0 0%	7 15%	6 13%
high school graduate	4 3%	17 12%	25 18%
some college	11 4%	53 17%	77 25%
<b>RACE</b>			
white	15 3%	76 16%	106 22%
nonwhite	0 0%	1 4%	3 11%
<b>SEX</b>			
male	8 3%	44 18%	47 19%
female	7 3%	33 13%	62 25%
<b>AGE</b>			
under 20	0 0%	3 11%	3 11%
20-39	6 3%	36 16%	47 21%
40-59	9 4%	36 16%	54 24%
60 or older	0 0%	2 10%	5 24%

## 6. a. Greater police enforcement of drunk driving laws.

Category \ Response	Very Effective	Fairly Effective	Not Effective
Total sample	257 51%	200 40%	41 8%
EDUCATION			
less than high school	20 43%	24 52%	2 4%
high school graduate	76 55%	47 34%	15 11%
some college	160 51%	129 41%	24 8%
RACE			
white	244 52%	187 40%	39 8%
nonwhite	13 46%	13 46%	2 7%
SEX			
male	121 48%	102 41%	25 10%
female	136 54%	98 39%	16 6%
AGE			
under 20	8 30%	15 56%	4 13%
20-39	104 47%	95 43%	22 10%
40-59	129 56%	86 38%	13 6%
60 or older	15 71%	4 19%	2 10%
OCCUPATION			
professional	77 43%	77 43%	23 13%
military	5 26%	12 63%	2 11%
other	175 58%	111 37%	16 5%

## 6. b. A large-scale public information and education campaign.

Response Category	Very Effective	Fairly Effective	Not Effective
Total sample	184 37%	224 45%	90 18%
<b>EDUCATION</b>			
less than high school	23 50%	19 41%	4 9%
high school graduate	54 39%	55 40%	29 21%
some college	107 34%	149 37%	57 18%
<b>RACE</b>			
white	169 36%	214 45%	87 18%
nonwhite	15 54%	10 36%	3 11%
<b>SEX</b>			
male	87 35%	114 46%	47 19%
female	97 39%	110 44%	43 17%
<b>AGE</b>			
under 20	10 37%	13 48%	4 15%
20-39	75 34%	99 45%	47 21%
40-59	93 41%	98 43%	37 16%
60 or older	5 24%	14 67%	2 10%
<b>OCCUPATION</b>			
professional	50 28%	93 52%	34 19%
military	8 42%	7 37%	4 21%
other	126 42%	124 41%	52 17%

## 6.c. Improved treatment services for problem drinkers.

Response Category	Very Effective	Fairly Effective	Not Effective
Total sample	207 41%	202 40%	89 18%
EDUCATION			
less than high school	20 43%	18 39%	8 17%
high school graduate	69 50%	43 31%	26 19%
some college	118 38%	140 45%	55 18%
RACE			
white	195 41%	191 40%	54 18%
nonwhite	12 43%	11 39%	5 18%
SEX			
male	85 34%	103 41%	60 24%
female	122 49%	99 40%	29 12%
AGE			
under 20	10 37%	13 48%	4 15%
20-39	87 39%	92 41%	42 19%
40-59	101 44%	91 40%	36 16%
60 or older	8 38%	6 29%	7 33%
OCCUPATION			
professional	64 36%	76 43%	37 21%
military	1 5%	10 53%	8 42%
other	142 47%	116 38%	44 15%

## 6.d. More severe penalties for convicted drunken drivers.

Category \ Response	Very Effective	Fairly Effective	Not Effective
Total sample	287 57%	149 30%	62 12%
<b>EDUCATION</b>			
less than high school	24 52%	18 39%	4 9%
high school graduate	89 64%	32 23%	17 12%
some college	174 55%	99 32%	40 13%
<b>RACE</b>			
white	209 57%	141 30%	60 13%
nonwhite	18 64%	8 29%	2 7%
<b>SEX</b>			
male	130 52%	83 33%	35 14%
female	157 63%	66 26%	27 11%
<b>AGE</b>			
under 20	13 48%	11 41%	3 11%
20-39	120 54%	69 31%	32 14%
40-59	139 61%	66 29%	23 10%
60 or older	15 71%	2 10%	4 19%
<b>OCCUPATION</b>			
professional	89 50%	60 34%	28 18%
military	8 42%	11 58%	0 0%
other	190 63%	78 26%	34 11%

- 6.e. Having convicted drunken drivers use a pill which causes them to be sick if they drink alcohol.

Response Category	Very Effective	Fairly Effective	Not Effective
Total sample	296 19%	92 18%	310 62%
<b>EDUCATION</b>			
less than high school	19 41%	7 15%	20 43%
high school graduate	33 24%	23 17%	82 59%
some college	44 14%	62 20%	207 66%
<b>RACE</b>			
white	84 18%	87 18%	299 63%
nonwhite	12 43%	5 18%	11 39%
<b>SEX</b>			
male	45 18%	44 18%	159 64%
female	51 20%	48 19%	151 60%
<b>AGE</b>			
under 20	4 15%	6 22%	17 63%
20-39	36 16%	38 17%	147 66%
40-59	51 22%	43 19%	134 59%
60 or older	5 24%	5 24%	11 52%
<b>OCCUPATION</b>			
professional	33 19%	22 12%	122 69%
military	5 26%	2 11%	12 63%
other	58 19%	68 22%	176 58%



## 6.f. Special alcohol-education courses for convicted drunken drivers.

Category \ Response	Very Effective	Fairly Effective	Not Effective
Total sample	152 30%	254 51%	92 18%
EDUCATION			
less than high school	20 43%	17 37%	9 20%
high school graduate	51 37%	67 48%	20 14%
some college	81 26%	169 54%	63 20%
RACE			
white	142 30%	240 51%	88 19%
nonwhite	10 36%	14 50%	4 14%
SEX			
male	61 24%	133 53%	54 22%
female	91 36%	121 48%	38 15%
AGE			
under 20	6 22%	14 52%	7 26%
20-39	60 27%	118 53%	43 19%
40-59	79 34%	113 49%	36 16%
60 or older	7 33%	8 38%	6 29%
OCCUPATION			
professional	43 24%	95 53%	39 22%
military	1 5%	13 68%	5 26%
other	108 36%	146 48%	48 16%

## 6.g. Police using random road checks to find drivers who have been drinking.

Category \ Response	Very Effective	Fairly Effective	Not Effective
Total sample	145 29%	221 44%	132 26%
<b>EDUCATION</b>			
less than high school	17 15%	22 48%	17 37%
high school graduate	54 39%	53 38%	31 22
some college	83 26%	146 46%	84 27%
<b>RACE</b>			
white	133 28%	208 44%	129 27%
nonwhite	12 43%	13 46%	3 11%
<b>SEX</b>			
male	58 23%	121 48%	69 28%
female	87 35%	100 40%	63 25%
<b>AGE</b>			
under 20	4 15%	12 44%	11 41%
20-39	68 31%	88 40%	65 29%
40-59	65 28%	112 49%	51 22%
60 or older	8 38%	9 43%	4 19%
<b>OCCUPATION</b>			
professional	34 19%	88 49%	55 31%
military	5 26%	17 58%	3 16%
other	106 35%	122 40%	74 24%

## 6.h. A device that would prevent a drunken driver from starting the car.

Response Category	Very Effective	Fairly Effective	Not Effective
Total sample	258 52%	111 22%	126 29%
EDUCATION			
less than high school	25 54%	9 20%	12 26%
high school graduate	88 63%	23 17%	27 19%
some college	144 46%	79 25%	90 29%
RACE			
white	238 50%	107 23%	125 26%
nonwhite	20 71%	4 14%	4 14%
SEX			
male	117 47%	67 27%	64 26%
female	114 56%	44 18%	65 26%
AGE			
under 20	16 59%	4 15%	7 26%
20-39	116 52%	47 21%	58 26%
40-59	115 50%	49 21%	64 28%
60 or older	10 48%	11 52%	0 0%
OCCUPATION			
professional	87 49%	47 26%	43 24%
military	12 63%	4 21%	3 16%
other	159 52%	60 20%	83 27%

## 7.a. About how many miles do you yourself drive in a year?

- (a) Don't drive  
 (b) Less than 10,000 miles  
 (c) 10,000-19,999 miles  
 (d) 20,000-29,999 miles  
 (e) 30,000 miles or more

Response Category	a	b	c	d	e
Total Sample	36 7%	188 38%	202 40%	49 10%	24 5%
EDUCATION					
less than high school	8 17%	21 46%	12 26%	4 9%	1 2%
high school graduate	10 7%	65 47%	47 34%	9 6%	8 6%
some college	18 6%	102 32%	142 45%	36 11%	15 5%
RACE					
white	31 7%	176 37%	194 41%	48 10%	22 5%
nonwhite	5 18%	12 43%	8 29%	1 4%	2 7%
SEX					
male	7 3%	38 15%	142 57%	42 17%	21 8%
female	29 12%	150 60%	60 24%	7 3%	3 1%
AGE					
under 20	2 7%	14 52%	6 22%	2 7%	3 11%
20-39	18 8%	84 38%	82 37%	26 12%	12 5%
40-59	10 4%	86 38%	102 45%	21 9%	9 4%
60 or older	6 29%	4 19%	11 52%	0 0%	0 0%
OCCUPATION					
professional	2 1%	30 17%	104 58%	27 15%	15 8%
military	0 0%	9 47%	7 37%	3 16%	0 0%
other	34 11%	149 49%	91 30%	19 6%	9 3%

7.b. For which one of the following reasons do you do most of your driving?

- (a) Personal or family affairs
- (b) To and from work
- (c) For work
- (d) Vacations
- (e) Other

Response Category	a	b	c	d	e
Total Sample	250 50%	153 31%	47 9%	8 2%	7 1%
EDUCATION					
less than high school	24 52%	11 24%	3 7%	0 0%	0 0%
high school graduate	72 52%	36 26%	18 13%	1 1%	2 1%
some college	154 49%	106 34%	26 8%	7 2%	4 1%
RACE					
white	241 51%	140 30%	46 10%	8 2%	7 1%
nonwhite	9 32%	13 46%	1 4%	0 0%	0 0%
SEX					
male	72 29%	118 47%	44 18%	5 2%	5 2%
female	178 71%	35 14%	3 1%	3 1%	2 1%
AGE					
under 20	18 67%	4 15%	1 4%	1 4%	1 4%
20-39	109 49%	67 30%	25 11%	2 1%	2 1%
40-59	114 50%	79 34%	18 8%	5 2%	3 1%
60 or older	9 43%	2 10%	3 14%	0 0%	1 5%
OCCUPATION					
professional	46 26%	98 55%	28 16%	2 1%	2 1%
military	0 0%	14 74%	4 21%	1 5%	0 0%
other	204 67%	41 14%	15 5%	5 2%	5 2%

7.c. In a typical week how many days do you drive?

- (a) One day
- (b) Two days
- (c) Three days
- (d) Four days
- (e) Five Days
- (f) Six days
- (g) Every day
- (h) None

Response	a	b	c	d	e	f	g	h
<b>Category</b>								
<b>Total Sample</b>	7 1%	14 3%	26 5%	24 5%	58 12%	72 14%	260 56%	4 1%
<b>EDUCATION</b>								
less than high school	0 0%	3 7%	5 11%	3 7%	6 13%	5 11%	15 33%	1 2%
high school graduate	3 2%	3 2%	8 6%	9 6%	24 17%	13 9%	68 49%	1 1%
some college	4 1%	5 3%	13 4%	12 4%	28 9%	54 17%	176 56%	2 1%
<b>RACE</b>								
white	7 1%	13 3%	24 5%	22 5%	51 11%	70 15%	252 53%	4 1%
nonwhite	0 0%	1 4%	2 7%	2 7%	7 25%	2 7%	8 29%	0 0%
<b>SEX</b>								
male	3 1%	7 3%	10 4%	6 2%	14 6%	35 14%	168 67%	0 0%
female	4 2%	7 3%	16 6%	18 7%	44 18%	37 15%	92 37%	4 2%
<b>AGE</b>								
under 20	1 4%	1 4%	1 4%	1 4%	1 4%	2 7%	17 63%	1 4%
20-39	2 1%	5 2%	13 6%	12 5%	29 13%	35 16%	107 48%	1 0%
40-59	3 1%	7 3%	11 5%	11 5%	28 12%	34 15%	124 54%	2 1%
60 or older	1 5%	1 5%	1 5%	0 0%	0 0%	1 5%	11 52%	0 0%
<b>OCCUPATION</b>								
professional	2 1%	5 3%	8 4%	2 1%	13 7%	28 16%	117 66%	0 0%
military	0 0%	0 0%	0 0%	1 5%	1 5%	3 16%	14 74%	0 0%
other	6 2%	9 3%	18 6%	21 7%	44 15%	41 14%	129 43%	4 1%

7.d. How many tickets for driving violations have you had in the last 3 years, not counting parking violations?

Category \ Response	0	1	2	3	4 or more
Total sample	366 73%	69 14%	20 4%	4 1%	3 0%
EDUCATION					
less than high school	30 65%	7 15%	1 2%	0 0%	0 0%
high school graduate	106 76%	13 9%	6 4%	3 2%	0 0%
some college	229 73%	49 16%	13 4%	1 0%	3 1%
RACE					
white	352 75%	62 13%	19 4%	3 1%	3 1%
nonwhite	14 50%	7 25%	1 4%	1 4%	0 0%
SEX					
male	175 70%	43 17%	17 7%	3 1%	3 1%
female	191 76%	26 10%	3 1%	1 0%	0 0%
AGE					
under 20	18 67%	4 15%	3 11%	0 0%	0 0%
20-39	149 67%	34 15%	13 6%	4 2%	3 1%
40-59	186 81%	29 13%	3 1%	0 0%	0 0%
60 or older	12 57%	2 10%	1 5%	0 0%	0 0%
OCCUPATION					
professional	129 72%	31 17%	12 7%	1 1%	2 1%
military	12 63%	5 26%	1 5%	0 0%	0 0%
other	225 74%	33 11%	7 2%	3 1%	1 0%

- 7.e. In the past 3 years, how many traffic accidents, no matter how minor, have you been involved in when you were driving a car?

Response Category	0	1	2	3	4 or more
Total sample	340 68%	91 18%	20 4%	10 2%	2 0%
EDUCATION					
less than high school	28 61%	8 17%	1 2%	0 0%	0 0%
high school graduate	96 29%	23 17%	5 4%	3 2%	1 1%
some college	215 68%	60 19%	14 4%	7 2%	1 0%
RACE					
white	323 68%	86 18%	20 4%	10 2%	1 0%
nonwhite	17 61%	5 18%	0 0%	0 0%	0 0%
SEX					
male	172 69%	47 19%	14 6%	7 3%	2 0%
female	168 67%	44 18%	6 2%	3 1%	0 0%
AGE					
under 20	15 56%	4 15%	2 7%	3 11%	1 4%
20-39	146 66%	41 18%	11 5%	5 2%	1 0%
40-59	168 73%	41 18%	7 3%	2 1%	0 0%
60 or older	11 52%	4 19%	0 0%	0 0%	0 0%
OCCUPATION					
professional	127 71%	34 19%	8 4%	5 3%	1 1%
military	13 68%	5 26%	0 0%	0 0%	0 0%
other	200 66%	52 17%	12 4%	5 2%	1 0%



7.f. In the past 3 years, how many times has your driver's license been suspended, for any reason?

Category \ Response	Response			
	0	1	2	3
Total sample	452 98%	5 0%	2 0.5%	1 0%
EDUCATION				
less than high school	37 80%	0 0%	0 0%	0 0%
high school graduate	126 11%	0 0%	0 0%	0 0%
some college	288 92%	5 1%	2 0%	1 0%
RACE				
white	431 91%	4 1%	2 0%	1 0%
nonwhite	21 75%	1 4%	0 0%	0 0%
SEX				
male	232 93%	5 2%	2 1%	1 0%
female	220 88%	0 0%	0 0%	0 0%
AGE				
under 20	24 89%	1 4%	0 0%	0 0%
20-39	196 88%	3 1%	2 1%	1 0%
40-59	217 95%	1 0%	0 0%	0 0%
60 or older	14 67%	0 0%	0 0%	0 0%
OCCUPATION				
professional	168 94%	4 2%	1 1%	0 0%
military	18 95%	0 0%	0 0%	0 0%
other	266 88%	1 0%	1 0%	1 0%

1270  
S.A.

Drinking is an accepted part of business and social activity for many people.  
Do you ever drink beer, wine or liquor such as whiskey, gin, or vodka?

Response Category	Yes	No
Total sample	416 83%	82 16%
EDUCATION		
less than high school	30 65%	16 35%
high school graduate	111 80%	28 20%
some college	275 88%	37 12%
RACE		
white	395 84%	75 16%
nonwhite	21 75%	7 25%
SEX		
male	217 87%	31 12%
female	199 80%	51 20%
AGE		
under 20	22 81%	5 19%
20-39	192 86%	30 14%
40-59	190 83%	37 16%
60 or older	11 52%	10 48%
OCCUPATION		
professional	160 90%	16 9%
military	15 79%	4 21%
other	241 80%	82 20%

## 8.b. Have you ever drunk beer, wine, or liquor?

Response Category	Yes	No
Total sample	112 22%	32 6%
<b>EDUCATION</b>		
less than high school	16 35%	3 7%
high school graduate	27 19%	17 12%
some college	68 22%	12 4%
<b>RACE</b>		
white	104 22%	27 6%
nonwhite	8 29%	5 18%
<b>SEX</b>		
male	56 22%	56 22%
female	9 4%	23 9%
<b>AGE</b>		
under 20	6 22%	1 4%
20-39	45 20%	11 5%
40-59	51 22%	17 7%
60 or older	10 48%	3 14%
<b>OCCUPATION</b>		
professional	34 19%	6 3%
military	7 37%	1 5%
other	71 23%	25 8%

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8.c. How long ago did you last drink beer, wine, or liquor?

- (a) Less than one month  
 (b) 1-2 months  
 (c) 3 months to 1 year  
 (d) More than 1 year ago

Category \ Response	a	b	c	d
<b>Total Sample</b>	62 12%	5 1%	12 2%	34 7%
<b>EDUCATION</b>				
less than high school	5 11%	2 4%	1 2%	9 20%
high school graduate	16 12%	0 0%	5 4%	5 4%
some college	41 13%	3 1%	6 2%	19 6%
<b>RACE</b>				
white	55 12%	4 1%	12 3%	34 7%
nonwhite	7 25%	1 4%	0 0%	0 0%
<b>SEX</b>				
male	32 13%	1 0%	6 2%	18 7%
female	30 12%	4 2%	6 2%	16 6%
<b>AGE</b>				
under 20	2 7%	0 0%	1 4%	2 7%
20-39	23 10%	2 1%	6 3%	12 5%
40-59	34 15%	3 1%	3 1%	15 7%
60 or older	3 14%	0 0%	2 10%	5 24%
<b>OCCUPATION</b>				
professional	24 13%	0 0%	4 2%	9 5%
military	4 21%	1 5%	0 0%	2 11%
other	34 11%	4 1%	8 3%	23 8%

## 8.d. Which of these do you drink most often — beer, wine, or liquor?

Response Category	Beer	Wine	Liquor
Total sample	134 27%	105 21%	204 41%
<b>EDUCATION</b>			
less than high school	15 33%	7 15%	16 35%
high school graduate	45 32%	27 19%	25 32%
some college	74 24%	71 23%	143 46%
<b>RACE</b>			
white	123 26%	102 22%	196 42%
nonwhite	11 39%	3 11%	8 29%
<b>SEX</b>			
male	98 39%	31 12%	99 40%
female	36 14%	74 30%	105 42%
<b>AGE</b>			
under 20	17 63%	5 19%	3 11%
20-39	67 30%	51 23%	85 38%
40-59	45 20%	47 21%	107 47%
60 or older	4 19%	2 10%	9 43%
<b>OCCUPATION</b>			
professional	49 28%	3 17%	86 48%
military	8 42%	2 11%	6 32%
other	77 25%	73 24%	112 37%

8.e. At the present time do you consider yourself to be a:

- (a) Very light drinker
- (b) Fairly light drinker
- (c) Moderate drinker
- (d) Fairly heavy drinker
- (e) Heavy drinker

Response Category	a	b	c	d	e
<b>Total Sample</b>	215 43%	130 26%	94 19%	7 1%	1 0%
<b>EDUCATION</b>					
less than high school	23 50%	6 13%	6 13%	2 4%	0 0%
high school graduate	61 44%	32 23%	21 15%	3 2%	1 1%
some college	131 42%	92 29%	67 21%	2 1%	0 0%
<b>RACE</b>					
white	206 44%	124 26%	87 18%	7 1%	1 0%
nonwhite	9 32%	6 21%	7 25%	0 0%	0 0%
<b>SEX</b>					
male	87 35%	74 30%	65 26%	5 2%	0 0%
female	128 51%	56 22%	29 12%	2 1%	1 0%
<b>AGE</b>					
under 20	15 56%	5 19%	5 19%	0 0%	0 0%
20-39	97 44%	56 25%	47 21%	4 2%	1 0%
40-59	94 41%	64 28%	41 18%	3 1%	0 0%
60 or older	9 43%	4 19%	1 5%	0 0%	0 0%
<b>OCCUPATION</b>					
professional	61 34%	59 33%	46 26%	4 2%	0 0%
military	7 37%	4 27%	5 26%	0 0%	0 0%
other	147 49%	67 22%	43 14%	3 1%	1 0%

## 8.f.1. How many days during this past week did you drink 8 or more drinks?

Response Category	1 day	2	3	4	5	6	7	No days
<b>Total sample</b>	13 3%	9 2%	1 0%	1 0%	0 0%	0 0%	1 0%	475 95%
<b>EDUCATION</b>								
less than high school	1 2%	2 4%	0 0%	—————→			0 0%	43 93%
high school graduate	4 3%	2 1%	0 0%	1 1%	0 0%	0 0%	1 1%	131 94%
some college	8 3%	5 2%	1 0%	0 0%	—————→			0 0%
<b>RACE</b>								
white	13 3%	9 2%	1 0%	1 0%	0 0%	0 0%	1 0%	447 95%
nonwhite	0 0%	—————→					0 0%	28 100%
<b>SEX</b>								
male	11 4%	7 3%	1 0%	1 0%	0 0%	—————→		0 0%
female	2 1%	2 1%	0 0%	—————→			0 0%	246 98%
<b>AGE</b>								
under 20	2 7%	1 4%	0 0%	—————→			0 0%	1 4%
20-39	7 3%	3 1%	1 0%	1 0%	0 0%	—————→		0 0%
40-59	4 2%	5 2%	0 0%	—————→			0 0%	220 96%
60 or older	0 0%	—————→					0 0%	21 100%
<b>OCCUPATION</b>								
professional	7 4%	5 3%	0 0%	1 1%	0 0%	—————→		0 0%
military	1 5%	0 0%	—————→				0 0%	18 95%
other	5 2%	4 1%	1 0%	0 0%	—————→			0 0%

## 8.f.2. How many days during this past week did you drink 5-7 drinks?

Response Category	1 day	2	3	4	5	6	7	No days		
<b>Total sample</b>	34 7%	9 2%	4 1%	1 0%	2 0%	0 0%	2 0%	448 90%		
<b>EDUCATION</b>										
less than high school	1 2%	1 2%	1 2%	0 0%	1 2%	0 0%	0 0%	42 91%		
high school graduate	13 9%	1 1%	1 1%	1 1%	1 1%	0 0%	2 1%	120 86%		
some college	20 6%	7 2%	2 1%	0 0%	—————→			0 0%	285 91%	
<b>RACE</b>										
white	32 7%	9 2%	3 1%	1 0%	2 0%	0 0%	2 0%	423 90%		
nonwhite	2 7%	0 0%	1 4%	0 0%	—————→			0 0%	25 89%	
<b>SEX</b>										
male	19 8%	8 3%	3 1%	1 0%	2 1%	0 0%	1 0%	216 86%		
female	15 6%	1 0%	1 0%	0 0%	—————→		0 0%	1 0%	232 93%	
<b>AGE</b>										
under 20	1 4%	1 4%	1 4%	0 0%	—————→			0 0%	24 89%	
20-39	18 8%	4 2%	3 1%	0 0%	1 0%	0 0%	0 0%	196 88%		
40-59	15 7%	3 1%	0 0%	1 0%	1 0%	0 0%	2 1%	207 90%		
60 or older	0 0%	1 5%	0 0%	—————→				0 0%	20 95%	
<b>OCCUPATION</b>										
professional	15 8%	5 3%	2 1%	0 0%	2 1%	0 0%	1 1%	153 86%		
military	0 0%	—————→					—————→		0 0%	19 100%
other	19 6%	4 1%	2 1%	1 0%	0 0%	0 0%	1 0%	276 91%		



## 8.f.3. How many days during this past week did you drink 3-4 drinks?

Response Category	1 day	2	3	4	5	6	7	No days	
<b>Total sample</b>	45 9%	24 5%	24 5%	11 2%	4 1%	2 0%	9 2%	381 76%	
<b>EDUCATION</b>									
less than high school	4 9%	1 2%	0 0%	—————→				2 4%	39 85%
high school graduate	9 6%	5 4%	4 3%	0 0%	0 0%	2 1%	2 1%	117 84%	
some college	32 10%	18 6%	20 6%	11 4%	4 1%	0 0%	5 2%	224 71%	
<b>RACE</b>									
white	39 8%	22 5%	24 5%	10 2%	4 1%	2 0%	9 2%	362 77%	
nonwhite	6 21%	2 7%	0 0%	1 4%	0 0%	—————→		0 0%	19 68%
<b>SEX</b>									
male	26 10%	18 7%	13 5%	8 3%	4 2%	2 1%	7 3%	172 69%	
female	19 8%	6 2%	11 4%	3 1%	0 0%	0 0%	2 1%	209 84%	
<b>AGE</b>									
under 20	2 7%	1 4%	0 0%	—————→				0 0%	24 89%
20-39	27 12%	11 5%	13 6%	7 3%	1 0%	1 0%	4 2%	158 71%	
40-59	14 6%	12 5%	11 5%	3 1%	3 1%	1 0%	4 2%	181 79%	
60 or older	1 5%	0 0%	0 0%	1 5%	0 0%	0 0%	1 5%	18 86%	
<b>OCCUPATION</b>									
professional	22 12%	10 6%	9 5%	6 3%	3 2%	1 1%	4 2%	123 69%	
military	6 32%	2 11%	0 0%	—————→				0 0%	11 58%
other	17 6%	12 4%	15 5%	5 2%	1 0%	1 0%	5 2%	247 82%	

## 8.f.4. How many days during this past week did you drink 1-2 drinks?

Response Category	1 day	2	3	4	5	6	7	No days	
Total sample	77 15%	71 14%	41 8%	29 6%	13 4%	8 2%	26 7%	115 44%	
EDUCATION									
less than high school	5 11%	2 4%	2 4%	1 2%	2 4%	0 0%	1 2%	33 72%	
high school graduate	20 14%	20 14%	8 6%	8 6%	4 3%	1 1%	6 4%	72 52%	
some college	52 17%	49 16%	31 10%	20 6%	13 4%	8 3%	26 8%	115 37%	
RACE									
white	71 15%	64 14%	38 8%	28 6%	18 4%	9 2%	32 7%	212 45%	
nonwhite	6 21%	7 25%	3 11%	1 4%	1 4%	0 0%	1 4%	9 32%	
SEX									
male	35 14%	36 14%	19 8%	15 6%	14 6%	6 2%	18 7%	107 43%	
female	42 17%	35 14%	22 9%	14 6%	5 2%	3 1%	15 6%	114 46%	
AGE									
under 20	8 30%	1 4%	2 7%	0 0%	—————→			0 0%	16 59%
20-33	34 15%	32 14%	16 7%	16 7%	11 5%	6 3%	9 4%	98 44%	
40-59	34 15%	36 16%	22 10%	13 6%	7 3%	3 1%	22 10%	92 40%	
60 or older	1 5%	1 5%	1 5%	0 0%	1 5%	0 0%	2 10%	15 71%	
OCCUPATION									
professional	30 17%	30 17%	14 8%	11 6%	9 5%	4 2%	17 10%	63 35%	
military	0 0%	3 16%	2 11%	1 5%	3 16%	1 5%	1 5%	8 42%	
other	47 16%	33 13%	25 8%	17 6%	7 2%	4 1%	15 5%	150 50%	

## 8.f.5. How many days during this past week did you drink no drinks?

Response Category	1 day	2	3	4	5	6	7	No days
Total sample	21 4%	31 6%	24 5%	40 8%	58 12%	77 15%	109 22%	140 28%
EDUCATION								
less than high school	3 7%	1 2%	0 0%	3 7%	3 7%	6 13%	17 37%	13 28%
high school graduate	3 2%	4 3%	7 5%	11 8%	17 12%	21 15%	33 24%	43 31%
some college	15 5%	26 8%	17 5%	26 8%	38 12%	50 16%	59 19%	83 26%
RACE								
white	21 4%	30 6%	23 5%	34 7%	52 11%	73 15%	108 23%	131 28%
nonwhite	0 0%	1 4%	1 4%	6 21%	6 21%	4 14%	1 4%	9 32%
SEX								
male	15 6%	18 7%	12 5%	19 8%	29 12%	36 14%	47 19%	74 30%
female	6 2%	13 5%	12 5%	21 8%	29 12%	41 16%	62 25%	66 26%
AGE								
under 20	0 0%	1 4%	0 0%	2 7%	3 11%	6 22%	7 26%	8 30%
20-39	10 5%	17 8%	14 6%	18 8%	23 10%	38 17%	53 24%	49 22%
40-59	11 5%	11 5%	10 4%	19 8%	32 14%	32 14%	41 18%	73 32%
60 or older	0 0%	2 10%	0 0%	0 0%	0 0%	1 5%	8 38%	10 48%
OCCUPATION								
professional	8 4%	13 7%	10 6%	14 8%	24 13%	31 17%	26 15%	52 29%
military	2 11%	1 5%	2 11%	1 5%	2 11%	2 11%	4 21%	5 26%
other	11 4%	17 6%	12 4%	25 8%	32 11%	44 15%	79 26%	83 27%

9.a. How often do you drive after having anything to drink? Would you say often, occasionally, hardly ever, or never?

- (a) Often (d) Never  
 (b) Occasionally (e) Don't drive  
 (c) Hardly ever

Category \ Response	a	b	c	d	e
Total Sample	25 5%	99 20%	176 35%	131 26%	29 6%
EDUCATION					
less than high school	3 7%	3 7%	14 30%	16 35%	5 11%
high school graduate	10 7%	18 13%	44 32%	40 29%	8 6%
some college	12 4%	78 25%	118 30%	75 24%	16 5%
RACE					
white	25 5%	95 20%	169 36%	126 27%	25 5%
nonwhite	3 11%	4 14%	7 25%	5 18%	4 14%
SEX					
male	22 9%	71 28%	99 40%	42 17%	5 2%
female	3 1%	28 11%	77 31%	89 36%	24 10%
AGE					
under 20	5 19%	4 15%	8 30%	7 26%	1 4%
20-39	14 6%	46 21%	74 33%	61 27%	15 7%
40-59	6 3%	45 20%	90 39%	58 25%	8 3%
60 or older	0 0%	3 14%	4 19%	5 24%	5 24%
OCCUPATION					
professional	14 8%	57 32%	67 38%	31 17%	3 2%
military	0 0%	6 32%	9 47%	2 11%	0 0%
other	11 4%	36 12%	100 33%	98 32%	26 9%

9. b. How much is the most you will drink and continue to drive (by number of drinks)?

Response Category	1	2	3	4	5	6	7	8	9	10 or more
Total sample	31 6%	49 10%	50 10%	28 6%	24 5%	10 2%	2 0%	3 1%	2 0%	9 2%
EDUCATION										
less than high school	2 4%	5 11%	1 2%	3 7%	1 2%	0 0%	0 0%	1 2%	1 2%	1 2%
high school graduate	9 6%	13 9%	13 9%	5 4%	3 2%	3 2%	1 1%	1 1%	0 0%	4 3%
some college	20 6%	31 10%	36 11%	20 6%	20 6%	7 2%	1 0%	1 0%	1 0%	4 1%
RACE										
white	31 7%	42 9%	47 10%	25 5%	24 5%	10 2%	2 0%	3 1%	2 0%	9 2%
nonwhite	0 0%	7 25%	3 11%	3 11%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%
SEX										
male	12 5%	22 9%	27 11%	22 9%	16 6%	9 4%	1 0%	3 1%	2 1%	9 4%
female	19 8%	27 11%	23 9%	6 2%	8 3%	1 0%	1 0%	0 0%	0 0%	0 0%
AGE										
under 20	2 7%	1 4%	1 4%	3 11%	0 0%	3 11%	0 0%	0 0%	1 4%	2 7%
20-39	10 5%	20 9%	27 12%	15 7%	19 9%	5 2%	2 1%	3 1%	1 0%	4 2%
40-59	19 8%	25 11%	20 9%	10 4%	5 2%	1 0%	0 0%	0 0%	0 0%	3 1%
60 or older	0 0%	3 14%	1 5%	0 0%	0 0%	1 5%	0 0%	0 0%	0 0%	0 0%

## 9.c. How far do you usually drive after drinking?

Response Category	less than 1 mi.	1-5 mi.	6-10 mi.	11-20 mi.	over 20 mi.
Total sample	40 8%	82 16%	49 10%	25 5%	13 3%
<b>EDUCATION</b>					
less than high school	4 9%	6 13%	3 7%	0 0%	1 2%
high school graduate	13 9%	19 14%	11 8%	6 4%	5 4%
some college	23 7%	57 18%	35 11%	19 6%	7 2%
<b>RACE</b>					
white	37 8%	86 17%	46 10%	23 5%	11 2%
nonwhite	3 11%	2 7%	3 11%	2 7%	2 7%
<b>SEX</b>					
male	17 7%	54 22%	29 12%	16 6%	11 4%
female	23 9%	28 11%	20 8%	9 4%	2 1%
<b>AGE</b>					
under 20	1 4%	5 19%	2 7%	2 7%	2 7%
20-39	14 6%	44 20%	25 11%	14 6%	8 4%
40-59	23 10%	32 14%	20 9%	8 3%	3 1%
60 or older	2 10%	1 5%	2 10%	0 0%	0 0%
<b>OCCUPATION</b>					
professional	14 8%	38 21%	25 14%	10 6%	8 4%
military	2 11%	2 11%	1 5%	3 16%	0 0%
other	24 8%	42 14%	23 8%	12 4%	5 2%

9.d. When you've driven after drinking, have you ever thought you really shouldn't be on the road?

Response Category	Yes	No
Total sample	103 21%	112 22%
EDUCATION		
less than high school	7 15%	8 17%
high school graduate	26 19%	28 20%
some college	70 22%	76 24%
RACE		
white	99 21%	104 22%
nonwhite	4 14%	8 29%
SEX		
male	79 32%	49 20%
female	24 10%	63 25%
AGE		
under 20	8 30%	4 15%
20-39	59 27%	52 23%
40-59	34 15%	52 23%
60 or older	2 10%	3 14%
OCCUPATION		
professional	52 29%	45 25%
military	5 26%	3 16%
other	46 15%	64 21%

9.e. Have you ever refused to drive or decided not to drive because you thought you had had too much to drink?

Response Category	Yes	No
Total sample	126 25%	95 19%
EDUCATION		
less than high school	10 22%	17 15%
high school graduate	32 23%	24 17%
some college	84 27%	64 20%
RACE		
white	120 25%	89 19%
nonwhite	6 21%	6 21%
SEX		
male	89 36%	40 16%
female	37 15%	55 22%
AGE		
under 20	7 26%	5 19%
20-39	67 30%	45 20%
40-59	47 21%	44 19%
60 or older	4 19%	1 5%
OCCUPATION		
professional	55 31%	44 25%
military	7 37%	1 5%
other	64 21%	50 17%



9.f. If the answer to question (9.e) was YES, was the refusal to drive because of knowledge of laws, fear of arrest or fear of accident?

Response Category	Knowledge of Laws	Fear of Arrest	Fear of Accident
Total sample	10 2%	6 1%	111 22%
EDUCATION			
less than high school	0 0%	0 0%	10 22%
high school graduate	3 2%	2 1%	27 19%
some college	7 2%	4 1%	74 24%
RACE			
white	8 2%	6 1%	108 23%
nonwhite	2 7%	0 0%	3 11%
SEX			
male	9 4%	6 2%	75 30%
female	1 0%	0 0%	36 14%
AGE			
under 20	0 0%	0 0%	7 26%
20-39	5 2%	5 2%	56 25%
40-59	5 2%	1 0%	43 19%
60 or older	0 0%	0 0%	4 19%
OCCUPATION			
professional	5 3%	1 1%	49 28%
military	0 0%	0 0%	7 37%
other	5 2%	5 2%	55 18%

9.g. If you drive after drinking too much, what do you think the chances are of your committing a moving traffic violation?

Response Category	Very high	High	About Even	Low	Very Low	Don't Know
<b>Total sample</b>	156 31%	168 34%	83 17%	33 7%	18 4%	42 8%
<b>EDUCATION</b>						
less than high school	13 28%	14 30%	9 20%	1 2%	4 9%	5 11%
high school graduate	49 35%	38 27%	15 19%	14 10%	6 4%	17 12%
some college	94 30%	115 37%	59 17%	18 7%	8 4%	20 8%
<b>RACE</b>						
white	146 31%	162 34%	79 17%	31 7%	16 3%	35 8%
nonwhite	10 36%	6 21%	4 14%	2 7%	2 7%	4 14%
<b>SEX</b>						
male	67 27%	86 34%	44 18%	26 10%	12 5%	15 6%
female	89 36%	82 33%	39 16%	7 3%	6 2%	27 11%
<b>AGE</b>						
under 20	8 30%	10 37%	4 15%	4 15%	0 0%	1 4%
20-39	73 33%	64 29%	40 18%	18 8%	9 4%	18 8%
40-59	70 31%	87 38%	35 15%	11 5%	8 3%	18 8%
60 or older	5 24%	6 29%	4 19%	0 0%	1 5%	5 24%
<b>OCCUPATION</b>						
professional	53 30%	63 35%	26 15%	16 9%	9 5%	11 6%
military	3 16%	4 21%	4 21%	3 16%	0 0%	5 26%
other	100 33%	101 33%	53 17%	14 5%	9 3%	26 9%

9.h. If you drive after drinking too much, what are your chances of being stopped by the police?

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Response Category	Response					
	Very high	High	About Even	Low	Very Low	Don't Know
<b>Total sample</b>	42 8%	101 20%	166 33%	94 19%	63 13%	34 7%
<b>EDUCATION</b>						
less than high school	5 11%	9 20%	12 26%	7 15%	7 15%	6 13%
high school graduate	19 14%	29 21%	40 29%	26 19%	14 10%	11 8%
some college	18 6%	63 20%	114 36%	61 19%	41 13%	17 5%
<b>RACE</b>						
white	35 7%	93 20%	161 34%	91 19%	61 13%	31 7%
nonwhite	7 25%	8 29%	5 18%	3 11%	2 7%	3 11%
<b>SEX</b>						
male	20 8%	55 22%	82 33%	45 18%	39 16%	9 4%
female	22 9%	46 18%	84 34%	49 20%	24 10%	25 10%
<b>AGE</b>						
under 20	3 11%	2 7%	10 37%	9 33%	3 11%	0 0%
20-39	20 9%	42 19%	86 39%	43 19%	17 8%	14 6%
40-59	18 8%	54 24%	54 28%	38 16%	39 10%	16 7%
60 or older	1 5%	3 14%	6 29%	3 14%	4 19%	4 19%
<b>OCCUPATION</b>						
professional	13 7%	34 19%	61 34%	31 17%	31 17%	8 4%
military	1 5%	4 21%	5 26%	7 37%	0 0%	2 11%
other	28 9%	63 21%	100 33%	56 18%	32 11%	24 8%

9.i. If you drive after drinking too much, what are your chances of being involved in an automobile accident?

Response Category	Very high	High	About Even	Low	Very Low	Don't Know
<b>Total sample</b>	109 22%	182 36%	101 20%	42 8%	24 5%	24 8%
<b>EDUCATION</b>						
less than high school	7 15%	16 35%	6 13%	4 9%	3 7%	10 22%
high school graduate	37 27%	43 31%	26 19%	9 6%	6 6%	16 12%
some college	64 20%	123 39%	69 22%	29 9%	13 4%	16 5%
<b>RACE</b>						
white	98 21%	175 37%	100 21%	40 8%	24 5%	35 7%
nonwhite	11 39%	7 25%	1 4%	2 7%	0 0%	7 25%
<b>SEX</b>						
male	45 18%	95 38%	46 18%	32 13%	17 7%	15 6%
female	64 26%	87 35%	55 22%	10 4%	7 3%	27 11%
<b>AGE</b>						
under 20	3 11%	11 41%	6 22%	5 19%	1 4%	1 4%
20-39	50 23%	79 36%	46 21%	20 9%	8 4%	19 9%
40-59	51 22%	87 38%	45 20%	16 7%	13 6%	17 7%
60 or older	5 24%	5 24%	4 19%	0 0%	2 10%	5 24%
<b>OCCUPATION</b>						
professional	38 21%	58 33%	40 22%	19 11%	12 7%	11 6%
military	0 0%	7 37%	1 5%	7 37%	1 5%	3 16%
other	71 23%	117 39%	60 20%	16 5%	11 4%	28 9%

9. j. If you drive after drinking too much, what are your chances of being involved in a serious or fatal automobile accident?

Response Category	Very high	High	About Even	Low	Very Low	Don't Know
Total sample	81 16%	164 33%	92 18%	58 12%	52 10%	53 11%
<b>EDUCATION</b>						
less than high school	8 17%	12 26%	7 15%	3 7%	7 15%	9 20%
high school graduate	27 19%	48 35%	19 14%	10 7%	13 9%	22 16%
some college	45 14%	104 33%	66 21%	45 14%	32 10%	22 7%
<b>RACE</b>						
white	71 15%	157 33%	90 19%	58 12%	50 11%	46 10%
nonwhite	10 36%	7 25%	2 7%	0 0%	2 7%	7 25%
<b>SEX</b>						
male	36 14%	76 30%	45 18%	34 14%	38 15%	21 8%
female	45 18%	88 35%	47 19%	24 10%	14 6%	32 13%
<b>AGE</b>						
under 20	2 7%	9 35%	8 30%	1 4%	6 22%	1 4%
20-39	32 14%	66 30%	41 18%	32 14%	22 10%	23 10%
40-59	39 17%	85 37%	41 18%	22 10%	20 9%	22 10%
60 or older	2 10%	4 19%	2 10%	3 14%	3 14%	7 33%
<b>OCCUPATION</b>						
professional	29 16%	54 30%	31 17%	26 15%	23 13%	15 8%
military	0 0%	6 32%	1 5%	4 21%	4 21%	4 21%
other	52 17%	104 34%	60 20%	28 9%	25 8%	34 11%

10. a. How often do you drive after having anything to drink, by heaviness of drinking?

- (a) Often
- (b) Occasionally
- (c) Hardly ever
- (d) Never
- (e) Don't drive

Response Category	a	b	c	d	e
<b>heavy (3 + drinks — each of 4 + days last week)</b>	<b>10</b> 26%	<b>12</b> 31%	<b>12</b> 31%	<b>2</b> 5%	<b>3</b> 8%
<b>moderate drinker</b>	<b>13</b> 4%	<b>84</b> 25%	<b>128</b> 38%	<b>74</b> 22%	<b>15</b> 5%
<b>no drinks</b>	<b>2</b> 2%	<b>3</b> 2%	<b>36</b> 28%	<b>55</b> 43%	<b>11</b> 9%

10. b. If you drive after drinking too much, what are your chances of having a serious or fatal crash, by heaviness of drinking and tendency to drive after drinking?

- (a) Very high                      (d) Low  
 (b) High                            (e) Very low  
 (c) About even                    (f) Don't know

Response Category	a	b	c	d	e	f
heavy drinker	3 8%	12 31%	7 18%	8 21%	7 18%	2 5%
moderate drinker	53 16%	110 33%	62 19%	37 11%	36 11%	35 11%
no drinks past week	25 20%	42 33%	23 18%	13 10%	9 7%	16 13%
drive often after drinking	4 16%	3 12%	3 12%	4 16%	10 40%	1 4%
drive occasionally after drinking	6 6%	39 39%	21 21%	12 12%	15 15%	6 6%
drive hardly ever after drinking	31 18%	60 34%	34 19%	23 13%	13 7%	15 9%
never drive after drinking	20 15%	41 31%	25 19%	13 10%	13 10%	19 15%
doesn't drive at all	5 17%	9 31%	5 17%	3 10%	0 0%	7 24%

## 10. c. Things you have done in the last two or three years:

- (a) Presented my views to a public office holder or legislator
- (b) Written a letter to the editor
- (c) Urged someone out of my family to get out and vote
- (d) Urged someone to get in touch with a public office holder or legislator
- (e) Made a speech before an organized group
- (f) Been elected an officer of an organization
- (g) Run for public office
- (h) Taken an active part in a political campaign
- (i) Helped on fund raising drives
- (j) Voted in the last two elections
- (k) None

Response Category	a	b	c	d	e	f	g	h	i	j	k
Total sample	125 25%	48 10%	225 45%	121 24%	100 20%	86 17%	4 1%	65 13%	154 31%	306 61%	99 20%
EDUCATION											
less than high school	4 9%	2 4%	12 26%	5 11%	8 17%	7 15%	0 0%	3 7%	13 28%	19 41%	16 35%
high school graduate	19 14%	5 4%	58 42%	23 17%	16 12%	16 12%	2 1%	14 10%	34 24%	68 49%	41 29%
some college	101 32%	41 13%	154 49%	92 29%	76 24%	63 20%	2 1%	47 15%	106 34%	218 69%	42 13%
RACE											
white	125 26%	47 10%	216 46%	118 25%	95 20%	83 18%	4 1%	63 13%	146 31%	299 63%	63 18%
nonwhite	0 0%	1 4%	9 32%	3 11%	5 18%	3 11%	0 0%	2 7%	8 29%	7 25%	13 46%
SEX											
male	71 28%	27 11%	108 43%	61 24%	67 27%	40 16%	4 2%	31 12%	65 26%	151 60%	57 23%
female	54 22%	21 8%	117 47%	60 24%	33 13%	46 18%	0 0%	34 14%	89 36%	155 62%	42 17%
AGE											
under 20	7 26%	0 0%	10 37%	4 15%	7 26%	7 26%	0 0%	5 19%	11 41%	1 4%	9 33%
20-39	52 23%	26 12%	82 37%	54 24%	41 18%	46 21%	2 1%	30 14%	66 30%	107 48%	64 29%
40-59	61 27%	21 9%	118 52%	57 25%	49 21%	29 13%	1 0%	3 12%	6 31%	18 78%	3 14%
60 or older	5 24%	1 5%	14 67%	6 29%	3 14%	4 19%	1 5%	3 14%	6 29%	18 86%	3 14%
OCCUPATION											
professional	68 38%	23 13%	86 48%	56 31%	59 33%	37 21%	4 2%	30 17%	57 32%	126 71%	24 13%
military	2 11%	2 11%	5 26%	4 21%	5 26%	4 21%	0 0%	0 0%	7 37%	6 32%	8 42%
other	55 18%	23 8%	134 44%	61 20%	36 12%	45 15%	0 0%	35 12%	90 30%	174 57%	67 22%



## 10.d.1. Have you ever taken in-class driver education?

Response Category	Yes	No	No Response
Total sample	146 29%	363 71%	1 0%
<b>EDUCATION</b>			
less than high school	12 26%	34 74%	0 0%
high school graduate	52 37%	87 63%	0 0%
some college	82 26%	231 74%	1 0%
<b>RACE</b>			
white	134 28%	337 71%	1 0%
nonwhite	12 43%	16 57%	0 0%
<b>SEX</b>			
male	79 32%	170 68%	1 0%
female	67 27%	183 73%	0 0%
<b>AGE</b>			
under 20	25 93%	2 7%	0 0%
20-39	99 45%	122 55%	1 0%
40-59	19 8%	210 92%	0 0%
60 or older	3 14%	18 86%	0 0%
<b>OCCUPATION</b>			
professional	48 27%	129 72%	1 1%
military	5 26%	14 74%	0 0%
other	93 31%	210 69%	0 0%

## 10.d.2. Have you ever taken behind-the-wheel driver education?

Response Category	Yes	No	No Response
<b>Total sample</b>	134 27%	362 72%	4 1%
<b>EDUCATION</b>			
less than high school	16 35%	30 65%	0 0%
high school graduate	51 37%	88 63%	0 0%
some college	67 21%	243 77%	4 1%
<b>RACE</b>			
white	120 25%	348 74%	4 1%
nonwhite	14 50%	14 50%	0 0%
<b>SEX</b>			
male	66 26%	181 72%	3 1%
female	68 27%	181 72%	1 0%
<b>AGE</b>			
under 20	21 78%	6 22%	0 0%
20-39	86 39%	134 60%	2 1%
40-59	26 11%	207 88%	2 1%
60 or older	1 5%	20 95%	0 0%
<b>OCCUPATION</b>			
professional	39 22%	136 76%	3 2%
military	3 16%	16 84%	0 0%
other	92 30%	210 69%	0 0%

## 10.e. Heaviness of drinking, by analytical definition.

Response Category	Heavy Drinker	Moderate Drinker	Light or Non-Drinker
Total sample	39 8%	333 67%	128 25%
EDUCATION			
less than high school	4 9%	20 43%	22 48%
high school graduate	11 8%	86 62%	42 30%
some college	24 8%	226 72%	64 20%
RACE			
white	38 8%	310 66%	124 26%
nonwhite	1 4%	23 82%	4 14%
SEX			
male	30 12%	170 68%	50 20%
female	9 6%	163 65%	78 31%
AGE			
under 20	2 7%	18 67%	7 26%
20-39	20 9%	142 64%	60 27%
40-59	16 7%	162 71%	52 22%
60 or older	1 5%	10 48%	10 48%
OCCUPATION			
professional	16 9%	135 76%	27 15%
military	0 0%	14 74%	5 26%
other	23 8%	184 61%	96 32%



APPENDIX E  
STATISTICAL BREAKDOWN OF RESPONDENTS

Statistical breakdown of the sample respondents (unknowns may also include questions not answered by respondents).

1. Highest grade in school completed	
less than 8th grade	8
8th grade	3
high school — incomplete	35
high school — completed	139
college — incomplete	121
college — completed	116
graduate work	77
unknown	1
2. Work status	
employed full-time	237
employed part-time	146
unemployed	8
housewife	161
student	27
retired	20
unknown	1
3. Occupation	
professional, technical, managerial	178
clerical and sales	53
service occupation	13
farming, fishery, forestry	2
processing occupation (machine trade, benchwork)	16
military	19
structure work	7
retired	19
housewife	158
student	31
unknown	4
4. Income	
\$0 - 5,000	77
\$5,000 - 10,000	90
\$10,000 - 15,000	97
\$15,000 - 20,000	81
\$20,000 and above	126
unknown	29

5. Marital status	
married	411
single	67
divorced	8
widowed	10
other	3
unknown	1
6. Religion	
Protestant	313
Roman Catholic	115
Jewish	9
Other	9
None	51
Unknown	3
7. Race	
White	472
Black	24
Oriental	0
Latin	2
American Indian	1
Unknown	1
8. Weight	
less than 100 lb.	4
100-119 lb.	71
120-139 lb.	130
140-159 lb.	84
160-179 lb.	95
180-199 lb.	83
200-219 lb.	21
220-239 lb.	3
240 lb. or more	3
9. Move during past four years	
One move	124
Two moves	58
Three moves	65
No move	251
Unknown	2
10. Moves in past four years from one county to another	
One	104
Two	31
Three or more	27
None	224
Don't know	2

11. Place of residence		
rural	29	
suburban	447	
urban	22	
unknown	2	
12. Age group		
under 20	27	
20-29	88	
30-39	134	
40-49	147	
50-59	82	
60 or over	21	
unknown	1	
13. Sex		
male	250	
female	250	
14. Dining out, other than routine work or school lunches		
at least once per week	147	
every two to four weeks	122	
every month or so	117	
seldom or never	113	
15. Entertain small groups of friends at home		
often	227	
seldom or never	272	
unknown	1	
16. Types of organizations of which you are a member		
	<u>yes</u>	<u>no</u>
golf, country, swim clubs	207	293
lodge, or fraternal organizations	99	401
civic clubs (Lions, Rotary, etc.)	117	383
17. Cars owned in household		
none	12	
one	127	
two	278	
three or more	82	
unknown	1	



## 18. Check each of the following that you own:

boat	39
airplane	0
camper	40
vacation home	27

## On the Average —

## 19. Nights per month you are away from home for purposes other than work

none	67	three or four	109
one	52	five or six	65
two	81	seven or eight	48
		nine or more	72

## 20. Smoke cigarettes

yes	209	no	291
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## 21. If yes, how many packs per day?

less than one	76
one	81
two	42
more than two	7
unknown	3

## 22. Time spent with each activity on an average day

	<u>less than one hour</u>	<u>1-2 hours</u>	<u>3-4 hours</u>	<u>more than 4 hours</u>	<u>unknown</u>
watching television	140	217	99	40	4
listening to radio	179	153	78	84	6
reading newspapers	252	232	13	14	2

## 23. Times been to a movie (indoor-outdoor) during the past three months

none	232
once	104
2-3 times	99
4-5 times	35
6 or more	26
unknown	4



APPENDIX F

BLOOD-ALCOHOL CHART

