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PART II

EVALUATION METHODOLOGY

WASHTENAW COUNTY ALCOHOL  
SAFETY ACTION PROGRAM

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## PREFACE

This report is submitted in accordance with Paragraph L, item 2, of the Agreement between the Washtenaw County Board of Commissioners and The University of Michigan dated 4 November, 1970. It has been prepared by the University's Highway Safety Research Institute and spells out the required countermeasure evaluation methodology to be employed in the Washtenaw County Alcohol Safety Action Program.

Efforts expended under the Agreement in the period from July 1, 1970 to January 15, 1971 have been devoted primarily to two subjects: The theoretical, planning, and data-gathering work leading to this report, and the writing and preparation of the report itself; and the collection and compilation of data contained in the companion document Part I, Community Description, Washtenaw Alcohol Safety Action Program, dated February 8, 1971.

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## 1.0 INTRODUCTION TO EVALUATION METHODOLOGY

This report contains the planned countermeasure evaluation methodology to be used with the Washtenaw County Alcohol Safety Action Program (WCASAP). To the extent possible this report is organized according to the framework presented in the U.S. Department of Transportation document Alcohol Safety Action Program Evaluation Requirements dated November 1, 1970; this will subsequently be cited as Requirements document. For the most part the given framework is appropriate and has been followed, but in some instances departures have been desirable in the interest of clarity in detailing the countermeasure (cm) evaluation methodology applicable to particular parts of the WCASAP; such departures are noted in the main text.

A relatively standard format has also been adopted within the overall NHTSA framework. Introductory material is presented dealing with the topic that follows, generally a specific countermeasure project or element within the total ASAP. Several objectives frequently pertain to each such cm. We have found it useful to develop the evaluation methodology in sequence for each objective. Therefore the first objective is stated, the measures of effectiveness to be employed with respect to that objective are described, the data sources are listed, the evaluation model to be employed is listed, and the method of application for the chosen model is then described. This sequence is then repeated for each of the postulated objectives.

The sequence of topics in this report also follows that given in the Requirements document: Part I - Community Description; Part II - Evaluation Measures; and Part III - Countermeasures Program Description. This order results in the evaluation methodology preceding the countermeasures program description. The reader will probably find it preferable to read the program description before reading this section describing how the program will be evaluated.

To some extent, however, this section is self contained in that an explicit statement of objective(s) accompanies each program element. This statement of objectives by the evaluators is indispensable in order to formulate the evaluation methodology appropriate to the associated program elements. Clearly our perception of these objectives is not intended to be operationally binding on the program administrators. It is most important to observe, however, that if the objectives as presented here differ significantly from those as perceived by the program administrators then the given evaluation methodology may not be appropriate. Therefore, all program administrators should review these objectives as stated here carefully and report any discrepancies to the evaluation team. Furthermore, any countermeasure program changes which occur as the program evolves should be accompanied by a revised statement of objectives, if necessary, and communicated to the HSRI evaluation team. Then any required adjustments in the evaluation methodology can be considered and incorporated if possible.

## 2.0 CRITERION MEASURES

Criterion measures are those measures of effectiveness which assess total program impact. Such measures are appropriate irrespective of the particular countermeasure projects making up the total program.

### OBJECTIVE

The total program has as its objective reduction in the number of alcohol-related crashes. Implicit in this objective is reduction of the consequences -- deaths, personal injuries, and economic losses -- of such crashes.

### MEASURES OF EFFECTIVENESS

1. BAC of driver, passenger, and pedestrian fatalities.
2. The extent of alcohol-involvement in all police-investigated crashes.

The Requirements document lists, in addition to item 1 above, the number of highway injuries as identified from hospital emergency room records. This source of data is not available for WCASAP. Key administrative personnel of the two largest emergency facilities serving Washtenaw County, University Hospital and St. Joseph Mercy Hospital, have unequivocally stated that blood specimens cannot be routinely collected from emergency cases for the sole purpose of determining BAC, nor may any part of the blood sample be used for this purpose if the sample was withdrawn for other reasons. Furthermore, the confidentiality of hospital records, including emergency room records, precludes their use as part of the evaluation methodology. These reasons may be summarized as

resulting from administrative policy; it should be noted, however, that this policy probably has its basis in the legal system, and in particular the lack of statutory authority in exempting the hospital administrations and physicians from liability with respect to disclosure of the desired data. A waiver on this requirement is therefore requested.

The Requirements document also calls for the number of problem drinkers in evidence, based on the categories in item A3, page 22. This measure does not fit the local definition of a criterion measure. Furthermore, the primary means by which problem drinkers enter the WCASAP system are the police patrol, court, and licensing agency projects. Therefore the local preference is to include the suggested data within the evaluation methodology devised for these projects.

The discussion of the data applicable to this topic is found in the Program Element Measures section of this report.

#### DATA SOURCES

The BAC of driver, passenger, and pedestrian fatalities is available from the following operating system. Blood specimens, when possible, are collected from all fatalities in the county by the attending Deputy Medical Examiners. Specimens are sent to the Crime Detection Laboratory of the Michigan Department of Health for analysis. Results are returned to the office of the Chief Medical Examiner for the county for subsequent transmittal to the evaluation team.

The extent of alcohol-involvement in all police-investigated crashes is available throughout the state. The State of

Michigan Offical Traffic Accident Report (UD-10,1/71) contains blocks ("HBD" - Had Been Drinking; "HN" - Had Not; and "Test") that the investigating officer must fill out for each driver in investigated crashes. This binary variable with respect to drinking involvement will be a useful criterion measure since it will be available for all crashes.

The UD-10 form also includes a block for recording a code for injuries sustained by occupants. This will permit correlation of drinking involvement with level of injuries sustained by the drivers.

A redundant source of essentially the same data is the driving record maintained for each Michigan driver by the Driver Services Division of the Department of State. The choice of which data source to use is largely a matter of technical convenience and economy dependent upon the detailed analyses to be performed and the structure of the analytical files. For example, if alcohol-involvement is to be correlated with crash variables, then the UD-10 source will be utilized; if alcohol-involvement is to be correlated with recidivism, then the driving record is the appropriate source.

#### EVALUATION MODEL

The evaluation model which will be utilized is that of the before and after controlled experiment. Three year baseline and program measurement periods are envisioned for both Washtenaw and Control counties subject to the considerations discussed below.

	Pre-Program	Program
	1968-70	1971-73
Washtenaw County	M	M
Control County	M	M

#### APPLICATION OF MODEL

As mentioned under data sources, the extent of alcohol involvement in crashes will be determined from two sources; one, actual BAC on driver, passenger, and pedestrian fatalities, and two, police estimation of alcohol involvement in non-fatal crashes where no DUIL or DWI arrest was made, or fatal crashes for which no BAC test was available.

An indication of a successful ASAP impact would be a decrease in the blood alcohol concentrations of fatally injured persons, either fewer with any alcohol in the blood stream and/or a smaller proportion of fatalities with BAC's in the higher concentrations, above 0.10% or 0.15% W/V.

A second successful indicator, particularly for non-fatal crashes, where fewer BAC results are available, is a decrease in the proportion of all crash-involved drivers checked by the police as having been drinking prior to their crash.

In both cases, fatal and non-fatal crashes, a decrease in alcohol-involvement indicating successful program impact, refers to the Washtenaw County program period decrease in BAC's over the level found in pre-program periods, subtracted from any concurrent decrease in the control county during the same time periods.

This can be illustrated in the following hypothetical way. Suppose that during 1971-1973 in Washtenaw County it was found that 20% fewer fatalities had BAC's above 0.10% W/V than in the pre-program time period. However a decrease of 10% was found in the control county at the same BAC levels. This gives a true decrease of alcohol involvement in Washtenaw County of 10%, assuming that the counties were actually good matched comparisons in their pre-program states.

A second type of true program impact might also be indicated for Washtenaw County if BAC's remained at the same levels or rose only slightly, when in the control county a sharp increase in the level of drinking or number of drinkers was found.

Blood alcohol concentrations have been used in this illustration, however the same type of analysis applies to police estimations of alcohol involvement.

Certain considerations regarding the status of historical data collection procedures are important in any subsequent interpretation of BAC results as a measure of program impact. In Washtenaw County, analysis of a blood specimen for the presence of alcohol has not been a routine procedure for all fatally injured crash victims, nor even for all fatally injured drivers. It could be hypothesized that BAC's were analysed only in cases where there was fair indication that a fatality had been drinking, although even this hypothesis may not reflect the ad hoc nature of the selection of cases for BAC testing. However if this hypothesis is at all reflective of past

practices, it may disguise somewhat the meaning derived from a comparison of incomplete historical BAC data with BAC data collected on all fatally injured persons during the life of the ASAP.

The second consideration on data interpretation is directly related to police practices in checking the box on the accident report (UD-10 Form) marked "Had been drinking". The program educational activities, with police patrolmen as one of the target groups, should mean that much greater emphasis will be placed on the role of the drinking driver in crashes than had heretofore been the case. These educational efforts could result in more frequent checking of the "Had been drinking" box than in the past even though the actual involvement of alcohol in crashes had not risen. This could be purely due to greater awareness and more careful scrutiny in accident investigation. Pre program and program questionnaires on police practices in checking these boxes may give some indication of any change in procedure but they may not uncover its full extent.



DISCUSSION OF PERTINENT ISSUES REGARDING  
SELECTION OF CONTROL COMMUNITIES

The Requirements document quite properly notes the importance of the selection of an appropriate control community for comparison with the ASAP Community. A discussion of this issue with respect to WCASAP is included here because it is central to both the theoretical and practical aspects of the overall evaluation methodology and to the planned evaluation strategies for the individual countermeasure projects.

The desired characteristics of the county selected for comparison to Washtenaw County may be summarized as follows:

1. Demographic similarity across a wide range of significant variables and operations.
2. Availability and comparability of those baseline and ongoing data that are pertinent to the selected measures of effectiveness.
3. Lack of special alcohol safety efforts, hopefully throughout the duration of WCASAP.

Ingham, Kalamazoo, and Oakland counties, in decreasing order of preference, had originally been selected to meet criterion one above. The collection of data has been carried out to the extent that the driving records of all drivers resident in these counties as of 1 February 1970 have been obtained.

The single most important set of data with respect to criterion two above is that of BAC on all traffic fatalities.

Preliminary investigations suggested that Berrien, Kent, Muskegon, and Wayne counties could most fully satisfy this requirement.

The availability of alcohol-related data on crashes, via the UD-10 form, again in reference to criterion two, is assured through the state-wide system by which all crash investigations are reported to and compiled by the Michigan Department of State Police. The comparability of this data is not necessarily assured, however, since the degree of uniformity in regard to investigating and reporting practices by the police agencies in the control counties under consideration has not been determined.

The selection of control counties to meet criterion three above is clearly a speculative process at best. We might reasonably postulate that demographically similar potential control counties, particularly with respect to community resources and the willingness to undertake special alcohol safety efforts, are most likely to undertake new programs sometime during the life of WCASAP. This has already happened to a considerably damaging extent (in the narrow context of proper evaluation of WCASAP) within the past months. The Michigan Department of Public Health, with financial support derived from Section 402 of the Traffic Safety Act of 1966 and in cooperation with the Michigan Office of Highway Safety Planning, has recently started special alcohol safety projects in the following counties: Kalamazoo, Kent, Macomb, Marquette, Muskegon, and Oakland. Genesee, Ingham, and Wayne counties, according to

state officials, are likely to follow shortly. The nature and extent of these programs, highly similar to key projects in WCASAP, is suggested by the material contained in Appendix B.

The result of the facts contained in the foregoing discussion is that the entire issue regarding the selection of control counties is presently unresolved. The importance of the theoretical and economic considerations inherent in the proper selection of the control county or counties demands that great care be exercised in the final choice. This is particularly true since, as noted in the Requirements document, project funds are not available for the collection of data in control counties. It is important, therefore, not to make a hasty choice which might later prove unwise. In consultation with the Program Director, the evaluation specialists will move to resolve this matter as expeditiously and as soundly as possible.

### 3.0 INTERMEDIATE MEASURES

#### 3.1 BAC ROADSIDE SURVEY

The ultimate objective of the Washtenaw County ASAP program is the reduction of the number and severity of alcohol related crashes. This objective-which we hypothesize will be influenced positively by the program-is also influenced by a large number of additional variables which are not controllable by the project. Therefore it is possible that a true improvement might be masked by other factors (e.g. the number of alcohol related crashes might increase due to a deterioration of the road system). Thus we believe that it is necessary to measure certain intermediate objectives - in addition to the ultimate objective - in order to determine whether or not there is a causal chain of events leading from the project to the ultimate objective. If there is such a chain then we hypothesize that an important intermediate variable in this chain is the percentage of drivers who are operating their vehicles while under the influence of alcohol. The following discussion describes the procedure for measuring this intermediate variable.

##### 3.1.1 OBJECTIVE

The evaluation of the Washtenaw County requires the measurement of several intermediate variables. If these variables do not change then it is hypothesized that the project has not attained its ultimate objective of reducing the number and severity of alcohol-related crashes. Among the

intermediate variables, we believe that a reduction must first occur in the number of drivers who are operating under the influence of alcohol.

### 3.1.2 MEASURES OF EFFECTIVENESS

Thus a major portion of the evaluation deals with the question of the number and percent of drivers operating under the influence of alcohol. Therefore a measure of the amount of alcohol-related driving is needed both before and after the program has taken effect. The following discussion presents a strategy for performing this measurement.

### 3.1.3 DATA SOURCE

The measurement will be performed using a probability sample designed to represent the drivers in Washtenaw County during the evening and early morning hours. This time period was chosen based upon the fact that a larger number of alcohol-related arrests and crashes occur during this time period. In order to increase our likelihood of detecting a change - if one occurs - it is best to work with the subpopulation in which a change has the greatest likelihood of occurring. In addition we can argue that it is during these hours that the largest amount of damage resulting from alcohol-related crashes has been observed.

### 3.1.4 EVALUATION MODEL

The actual measurement points will consist of a number of roadside locations at which drivers will be stopped and asked to provide a breath sample and the answers to a few questions

that can be used to compare the sample to the county population and to perform supplemental evaluation. Only county residents will be asked to participate in the survey since they are the population that the program is directed toward. The survey will be conducted during the period from March 9 through April 3. An experimental design is being developed to identify subsets of the driving population, identified by particular variables. The variables used to identify the individual sites include; rural versus urban roads, traffic volume, proximity to bars, and weekday versus weekend traffic. Within the structure defined by these variables random selection procedures will be used to obtain individual drivers. The entire project is being developed in cooperation with the Michigan State Police, the Washtenaw County Sheriff's Department, the Ann Arbor City Police and the Ypsilanti City Police. In addition the three local departments will be directly involved in traffic control at individual survey sites. A minimum traffic volume of 3000 vehicles per day was established for all potential survey sites. This was done in order to insure that a large enough sample of drivers could be obtained at the site during the time that the crew was there.

The sample size of the survey is based upon two factors; the necessity of obtaining a sufficient number of subjects that will enable us to identify a change if in fact one occurs and the need to balance the assignment of subjects over the cells in the survey design. The representation of the county driving population will be accomplished by means of site selection

based upon factors influencing the distribution of drivers across the county and by random selection within each designated site-time cell in the survey design. As a first approximation the driving population can be treated as a binomially distributed random variable - drivers having positive blood alcohol and those not having positive blood alcohol. If we knew the probability (p) of a driver having positive blood alcohol it would then be possible to define (mathematically) the probability function of any sample we might take. In order to gain some insight we have considered the effect on the sample distribution for populations having a p in the range 0.10 to 0.20. It is well known (Hogg & Craig\*) that the sample drawn from a binomially distributed population (N\*p) can be approximated by a normally distributed random variable, for large N. The mean is the proportion of the sample having the characteristic of interest (e.g. positive blood alcohol). When this approximation holds it is possible to establish a confidence interval about the difference between two sample proportions such that the probability of the true difference lying within the interval is known. This confidence interval can be found from the following relationship;

$$C.I. = \hat{p}_1 - \hat{p}_2 \pm z_{\alpha} \sqrt{\frac{\hat{p}_1(1 - \hat{p}_1)}{N_1} + \frac{\hat{p}_2(1 - \hat{p}_2)}{N_2}} \quad (1)$$

\*R.V. Hogg and A.T. Craig, Introduction to Mathematical Statistics, 3rd Edition, 1970, The MacMillian Co., Toronto, p. 201.

$p_1$  - observed proportion in the sample from population 1  
(Before the program).

$p_2$  - Observed proportion in the sample from population 2  
(After the program).

$N_1$  - Sample size for population 1.

$N_2$  - Sample size for population 2.

$Z_{\alpha}$  - Normalized deviation for a  $1 - \alpha$  confidence interval.

If the assumption is made that both samples contain an equal number of observations, a Minimum Significant Difference (M.S.D.) can be obtained from the following relationship

$$\Delta p^2 = \frac{Z_{\alpha}^2 \hat{p}_1 (1 - \hat{p}_1) + (\hat{p}_1 - \Delta p)(1 - \hat{p}_1 + \Delta p)}{N} \quad (2)$$

$$N = N_1 = N_2$$

$$\Delta p = p_1 - p_2$$

$\Delta p$  - Minimum Significant Difference (M.S.D.)

By appropriate algebraic manipulations and the application of the Quadratic formula the MSD can be obtained from

$$\Delta p = \frac{\frac{Z_{\alpha}^2}{N + Z_{\alpha}^2} + \sqrt{\left(\frac{Z_{\alpha}^2}{N + Z_{\alpha}^2}\right)^2 + \frac{8\hat{p}_1(1 - \hat{p}_1)Z_{\alpha}^2}{N + Z_{\alpha}^2}}}{2} \quad (3)$$

Figure 1 indicates the relationship between sample size and the MSD. This figure assumes a one tailed significance test (e.g. the hypothesis that there is no change in alcohol-related



driving is tested against the hypothesis that there is a reduction in alcohol-related driving). Based on these assumptions a sample size of 720 will enable us to detect a change if the observed occurrence of alcohol-related driving drops from  $p = 0.20$  to 0.1635. By the same assumptions a doubling of the survey from 720 to 1440 observations would enable us to detect a change if the observed occurrence of alcohol-related driving drops from  $p = 0.20$  to 0.1745. These particular values assume an initial  $p$  of 0.20. But as can be seen from Figure 1, the relative magnitudes of the MSD given other  $p$ 's will be proportional. Thus it is concluded that the potential improvement resulting from a doubling of the survey would not be justified. Thus the survey is designed to obtain approximately 720 observations.

### 3.1.6 APPLICATION OF MODEL

The actual measurement of driver blood alcohol concentration (BAC) will be performed by a survey team consisting of HSRI research personnel. This team will be supported by local law enforcement agencies for the purpose of stopping randomly selected vehicles at the survey sites. Tentative plans at present indicate that the police officer will make a minimal contact with the drivers who have been selected-by a random procedure - and immediately direct them to a member of the research team who will explain the purpose of the survey and request the driver's cooperation. At a minimum the driver will be guaranteed complete confidentiality of all information -

including the blood alcohol measurement - and informed that the BAC measured in this particular survey is not admissible in any legal action. This is necessary in order to achieve maximum driver cooperation and thus minimize the sample bias. All information will be collected from the drivers by researchers located in a portable van or motor home. The exact details of the interview protocol and the role of the police officers are being developed.

The survey team will be located at each site for approximately two hours. Present estimates indicate that 24 persons could be processed within the time period, given that cars were always available for stopping whenever an interview was completed. Because of uneven traffic flows, sampling at lower traffic volume locations, and early morning sampling, the study is being designed with the assumption that an average of 15 BAC's will be obtained during each 2-hour time period spent at a survey location. Three locations will be surveyed during each 8 hour shift which establishes a requirement for 16 shifts of survey effort in order to obtain 720 observations. The possibility of adding some survey locations representing special situations is also being considered. For example it may be desirable to include locations which have high concentrations of factory workers on paydays. Survey crews will be assigned evenly to weekday and to weekend evenings. Present plans consist of surveying on each Tuesday, Wednesday, Friday, and Saturday for a period of four weeks. This will enable us to

normalize short-term time-related variations in driving and drinking. In case of severe weather which would seriously bias the survey or cause great risk for the survey team, a shift will be postponed until the next evening of the same type. Care will also be taken to avoid days on which a drastic change in the traffic and/or drinking patterns occurs. For example we have avoided scheduling the survey during the period when the University of Michigan students are on their spring vacation.

Measurement will be performed on randomly selected drivers within subsets of the driving population which have been blocked on the following variables; type of geographic area (rural versus urban), traffic volume, proximity to liquor dispensing establishments, type of day (weekend versus weekday), time of evening, and calendar time (over a four week period). The selection of specific survey sites is one of the major tasks remaining in the experimental design effort. This will be accomplished in cooperation with the law enforcement agencies in each of the three major local jurisdictions. The first step in this task will be the selection of general routes based upon observed traffic volumes. These roads or combinations of roads will be selected in a manner that will enable us to represent the population within each jurisdiction. This general location will be followed by specific site selection which will be based upon proximity to liquor dispensing establishments and upon traffic flow and safety considerations. These latter criteria will require close cooperation with law enforcement

officers. In no case will a site be used without approval from the law enforcement agency in the area.

### 3.1.7 ANALYSIS OF DATA

The data from the survey will be analyzed using two different models. In one case a binomial model - approximated by a normal model - will be used with the results indicating whether or not a change occurs in the percentage of persons driving with a positive blood alcohol reading. Changes in the proportion of drivers with blood alcohol will be tested by using equation (1) to determine whether or not the confidence interval on the difference includes zero. If the confidence interval does not include zero then it can be concluded that a significant change has resulted. The second analysis model will make use of the average driver BAC which occurred at each survey site. By the central limit theorem this statistic approaches a normally distributed random variable as the sample size per sites increases. The first step will then be to test the adequacy of a normal assumption for the distribution of this statistic. Given that the assumption is correct it will be possible to perform an analysis of variance using the various blocking factors as row variables. This analysis will enable us to determine whether or not drinking and driving is related to the variables used in the analysis. In addition, by using the average, those persons with high BAC's are given a higher weighting. Thus a decrease in high BAC's accompanied by an increase in lower BAC's will indicate an improvement.

Relationship Between Sample Size  
and Minimum Detectable Difference Between  
Sample Means

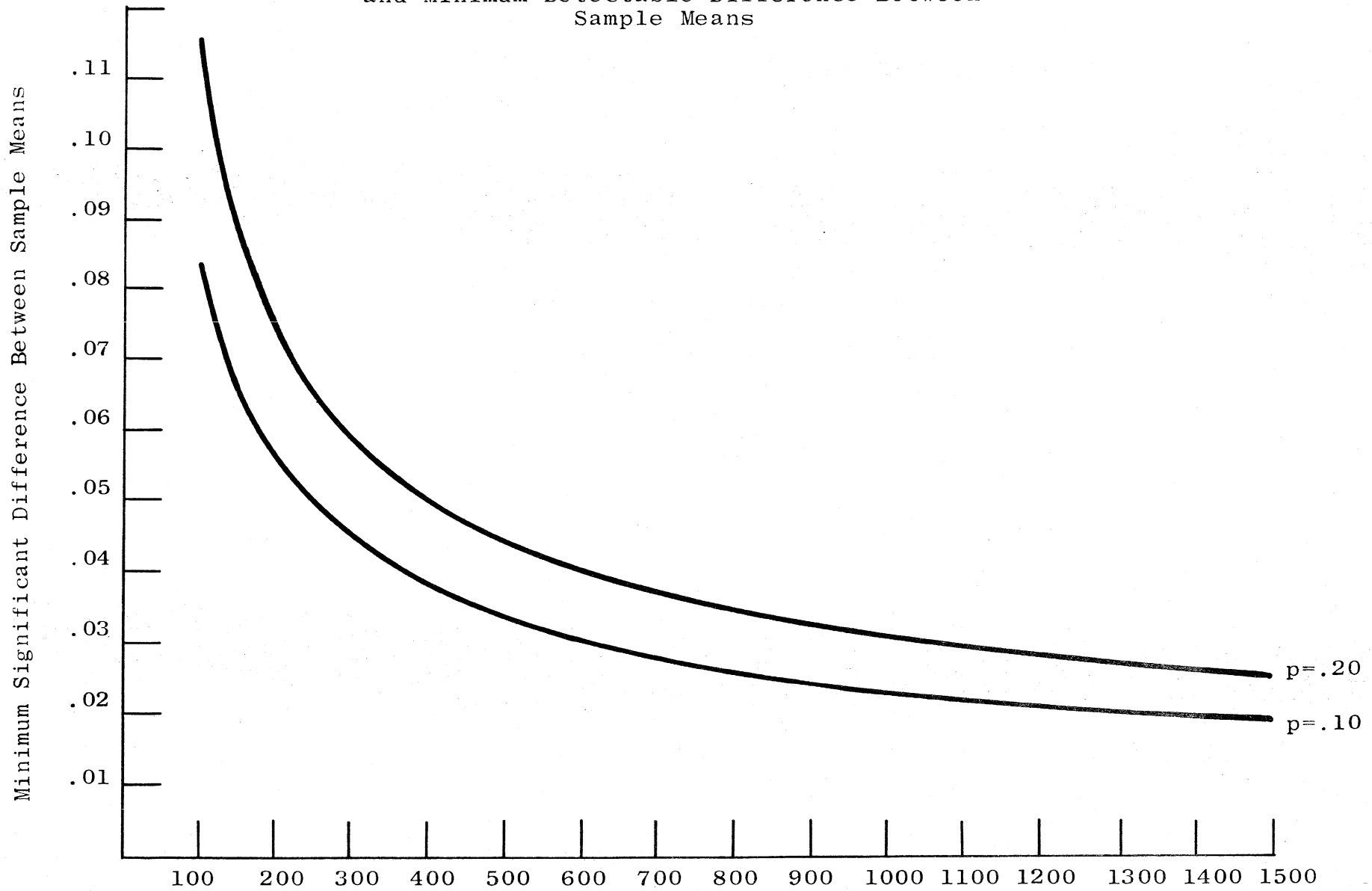


FIGURE 1

### 3.2 NUMBER OF ALCOHOL-RELATED TRAFFIC CONVICTIONS

The Requirements document lists the number of alcohol-related traffic convictions as an intermediate program measure. In the WCASAP we believe conviction data, and particularly the number of arrests from which it is derived, should be viewed in the context of the legal system. Therefore the number of alcohol-related arrests is listed as one of the measures of effectiveness in the evaluation of the legal system and police casefinding activities (Section 4.1). Conviction data is also discussed in the same section under Description of the Legal System. In both of these cases, a general increase in the total number of arrests and convictions is desirable, at least during the initial phases of the program. Any decrease which might be expected, is clearly dependent on the BAC levels in the driving population, which in turn are related to the effectiveness of the information and education program with social drinking drivers. who in the main part are problem drinkers in treatment for

Conviction data, as it relates to recidivism of individuals, is discussed in Sections 4.2 - 4.4. For such persons, in the main part problem drinkers in treatment for alcohol misuse, it is clearly desirable that project activities should result in a lower recidivism rate.

#### 4.0 PROGRAM ELEMENT MEASURES

##### 4.1 EVALUATION OF LEGAL SYSTEM AND RELATED POLICE CASEFINDING ACTIVITIES

The basic approach of the total demonstration program is a combination of the health-legal systems in handling problem-drinking drivers. Consequently there is a certain artificiality in breaking up the various components of the program in the presentation of the evaluation methodology. This is particularly true for the evaluation of police activity, which can be viewed as one segment of the total legal system, or can also be seen as a countermeasure in itself irrespective of whether or not there is any program activity in other segments of the legal realm.

These two perspectives on project activities, the broad and the specific, briefly outline the evaluation approach of the legal system. However it should be noted that if one looks at police or judicial activities and decisions as part of a broad system, or as an individual countermeasure activity, the effect of these actors is not limited to their immediate actions, i.e., arrest or finding of guilt. Rather each decision by the various actors has a cumulative effect on the drinking driver - this is the essence of the health-legal approach. However for purposes of clarity and presentation, the methodology in this section does not go beyond an evaluation of the first steps in the system. Sections 4.2 and 4.3 evaluate the special deterrence effects of the health-legal system on individuals (the effect of punishment or treatment on the person who experiences it) after the police

have performed the casefinding functions outlined in this section.

The legal system and particularly the police as a part of it, have two major goal-related functions to perform. The first is general deterrence in the effect of the legal system on the public. Roger Cramton\* defines this to be "the influence of the threatened consequence upon the population to whom the legal command is addressed. The term includes the moral, educative, and habituating influence of the legal norm and sanction." It implies that general deterrence operates on the public through their perception of the risks of apprehension or the fear of its consequences. The perception of these factors rather than the objective circumstance is the important element. In this sense our first model (the legal system as a totality) is appropriate, for perception is based on what the public believes to be the actions of police, judges, prosecutors, probation officers, and jailors as a whole.

The second model narrows the focus somewhat and views the police as performing a separate countermeasure activity, specifically in providing additional patrols. These patrols may change the public's perception of the risks of apprehension, or, patrols may have actual consequences for those individuals who are in fact apprehended. It is this latter action (apprehension of the drinking driver) which provides one of the links between the health and legal systems. This action also identifies the second objective of the legal system - Improving the

\* Driver Behavior; Cause and Effect, Insurance Institute for Highway safety, Washington, D. C., 1968, p.183.



casefinding function of the police in identifying problem drinking drivers and bringing them into both the legal and health realms. Specifically, greater numbers of drivers will be brought into the court system and thereby referred to rehabilitative agencies, and increased number of persons will be brought to the attention of the Michigan Department of State and subsequently brought under whatever educative influence they may be able to bring to bear.

A general perspective of the legal system, its deterrence on different segments of the driving population, and the sanctions which can be engendered as individuals go through it, are diagrammed in Figure 2. Measurements at the solid lines are the subject of this section of the report. Measures at the dotted lines are discussed in later sections (4.2 and 4.3).

#### OBJECTIVE

Increase general deterrent effect of legal sanctions on the driving public.

#### MEASURES OF EFFECTIVENESS

1. Increase in perceived risk of apprehension for drunk driving.
2. Increase in perceived threat of consequences for drunk driving.
3. Greater influence of drinking/driving legal norms on driving behavior by self-report.
4. Decrease in the extent of, or amount of drinking in the driving population.

Interaction of Problem Drinking Driver with Legal System

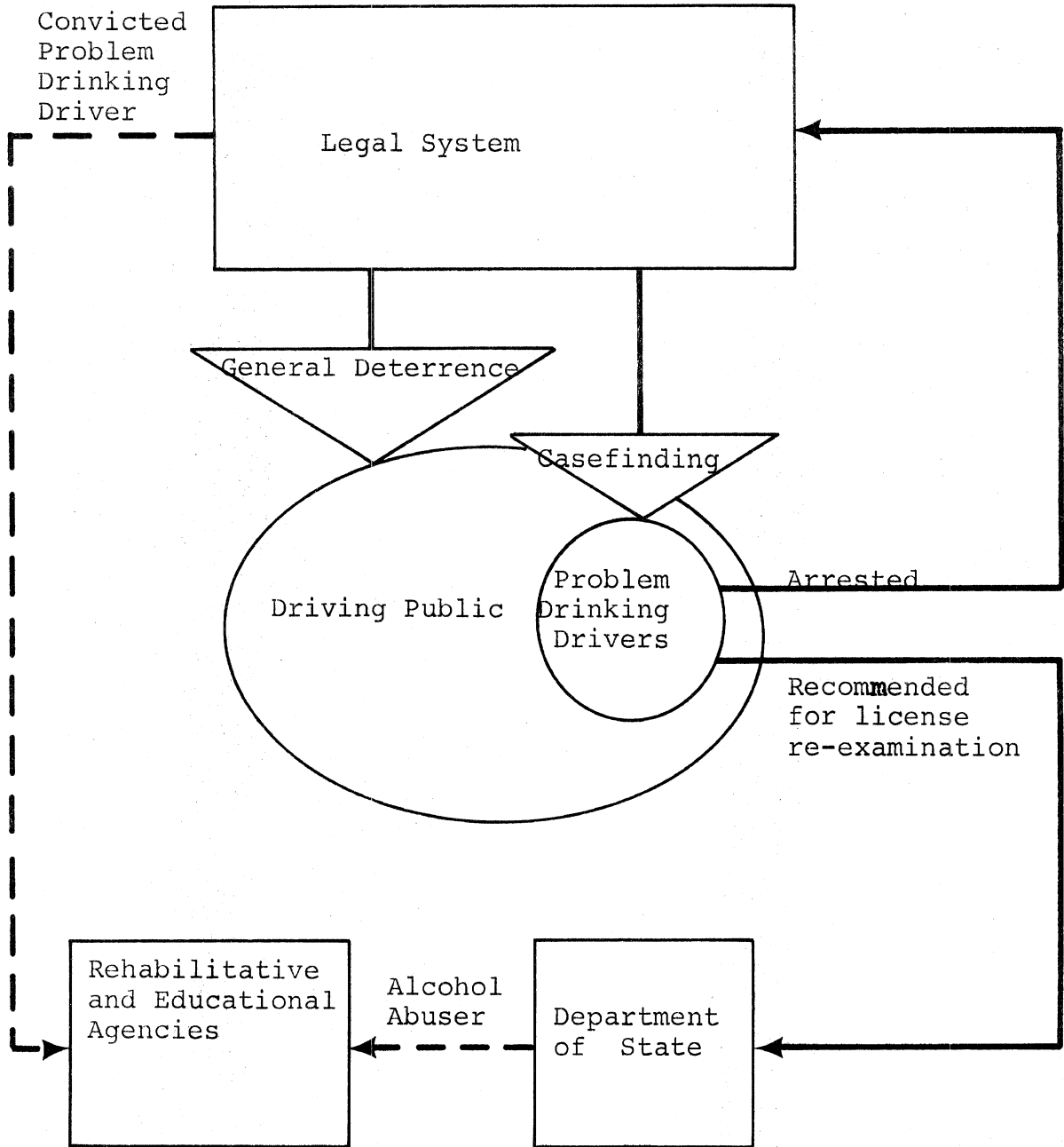


FIGURE 2

## DATA SOURCES

1. General driving public survey.
2. BAC roadside survey.

## EVALUATION MODEL

Before and after comparison of survey results.

Pre-program, program and post-program comparison of BAC distribution in driving stream.

## APPLICATION OF MODEL

The specific survey method which will be utilized for the general driving public is discussed extensively in the section of the report concerned with the public information campaign. The particular measures of effectiveness listed above comprise one segment of this survey.

The BAC survey has previously been discussed as an intermediate measure of total program impact.

## OBJECTIVE

Improve casefinding function of police in identifying potential problem-drinking drivers by, a) increased number of arrests for DUIL or DWI.

## CONCEPTUAL FRAMEWORK

In considering the evaluation of police patrol activities it is necessary to have both a clear-cut statement of the objectives of the activity (as described above) and some tentative (preliminary) ideas of the meaning of the results if the objectives are subsequently achieved. The following discussion is intended to develop some of these ideas.

An increase in the number (N) of DUIL's, DWI's, and D&D's will be required if the objective as stated is realized. We postulate that the number of such arrests are a function of two broad variables: The Q of law enforcement, and the amount (A) of drunk driving in the region under consideration.

#### THE Q OF LAW ENFORCEMENT

We hypothesize that the Q of law enforcement is a function of (1) the extensity of patrol activities in space and time (number of patrols in selected geographic areas and selected time periods), (2) the vigor of each patrol unit in effective utilization of assigned patrol time, and (3) intensity of spatial and temporal distribution of patrols with regard to the distribution of drinking/driving in the traffic stream.

The extensity of patrols will be known, generally it is an increase of 1-2 patrol units per night or weekend for each participating police department. The vigor of the patrols can be measured in certain senses (and are discussed below) but no quantitative data is available which would indicate how to distinguish results which are a function of increased vigor on the part of a patrol unit, from results which are a function of a change in the duties of various patrol units i.e. broad law enforcement duties or primarily drunk-driver apprehension duties. The intensity of the distribution of patrols with regard to drinking/driving in the traffic stream can be measured in the future through use of BAC roadside surveys. However patrol intensity in the past has not necessarily been assigned on this basis (the information was not available) and therefore comparison of

intensity levels is not possible to any great extent. Even with the differing levels of knowledge available on these variables, we do not know as yet the precise mathematical relationships they have to Q.

#### THE AMOUNT OF DRUNK DRIVING

Increased knowledge will be available with regard to the amount of drunk driving in the traffic stream as the roadside surveys are carried out, although all reasons for change may not be precisely understood. For instance levels might go up due to increased number of licensed drivers, increased number of vehicle registrations or a greater proportion of the driving public drinking. They might remain the same in absolute numbers due to the counteracting effect of the Public Information and Education (PIE) campaign on an upward trend. The PIE campaign might also have the effect, not of decreasing the proportion of drivers who drink, but of decreasing the amount they consume before driving i.e. the mean BAC for drinkers may decrease although the absolute N remains the same or higher. Or thirdly the PIE campaign or other factors may decrease the amount of drinking/driving. In addition none of these conditions are likely to be static through the program's life and the drinking levels are not known for the past.

#### METHODOLOGICAL PROBLEMS

Based on the above hypotheses, the difficulty of the evaluation task at hand is apparent. Clearly the quantitative functional relationship between N, Q, and A are unknown.

Further, the qualitative relationships between the three are not clear. For example, suppose Q increases 10% and due to the total ASAP countermeasure program, A decreased 10%. The question is whether the number of arrests, increases, decreases, or remains the same.

An attempt will be made during the course of the program to answer this and related questions. It is clear however that, lacking both a theoretical, validated model and the empirical data which describes the Washtenaw situation, the larger evaluation questions cannot immediately be answered. Therefore it will be necessary to rely on other measures to evaluate the effectiveness of police patrol activities. The measures and data under consideration are described below.

#### MEASURES OF EFFECTIVENESS

1. Number of DUIL arrests.
2. Number DWI arrests.
3. Number of Drunk and Disorderly arrests subsequent to a crash.
4. Number of DUIL, DWI arrests per monthly patrol miles.
5. Number of DUIL, DWI arrests per monthly patrol shift.
6. Number of DUIL, DWI, and D&D arrests per crash investigation.
7. Distribution of DUIL, DWI arrests by BAC results and results of roadside survey.

8. Distribution of arrests by; time of day, day of week, location of arrest, county of residence of arrestee, age, sex, race, and occupation of arrestee, year and make of vehicle.

#### DATA SOURCES

The police activity sheets which are routinely filled out in all participating police agencies contain information on mileage traveled and shift worked for each patrol car. Other information will be obtained from a summary of each DUIL, DWI arrest, filled out by both normal and special patrol forces. The remainder of the information will be derived from the BAC roadside survey.

#### EVALUATION MODEL

Two evaluation models will be used with the appropriate measures of effectiveness. In the first, pre-program patrol activities are the control to the combined activities of the normal and special patrols during the program. The second model compares normal patrols to special patrols, as both operate during the program.

##### Model A

Control: Normal Patrol Activity; pre-program

Exper.: Normal and Special Patrol Activity; program

##### Model B

Control: Normal Patrol Activity; 1971-73

Exper.: Special Patrol Activity; 1971-73

## APPLICATION OF MODEL

The number of DUIL, DWI and D&D arrests subsequent to a crash will be compared between pre-program time periods and comparable time periods during the program (Evaluation Model A). Where possible the number of arrests will also be adjusted to changes in police patrol manpower, or changes in the population of licensed drivers. Given the constraints mentioned earlier with regard to our knowledge of the factors influencing the number of arrests, we will consider an increase in arrests a successful movement toward the police casefinding objective. If there is good indication that the PIE campaign is building up impetus in changing the drinking/driving behavior of individuals, then an initial increase in arrests, followed in later program years by a decrease, might also be successful.

Evaluation Model B (comparison of normal and special patrol activities as both operate during the program) will be applied to those measures of effectiveness which deal with the vigor of special alcohol patrols over that which can be obtained by normal patrols, concentrating activity on broader areas of law enforcement. Insofar as it can be abstracted from police activity sheets, normal and special patrols working the same shifts, and/or areas will be compared on the number of arrests made. As mentioned earlier this does not account for the differing emphases in the special and normal patrol duties. However this model should give a certain amount of cost-effectiveness information. The cost of the special patrols will be known and this can be related to the benefit of the additional number of arrests they are able to make.



Comparison of pre-and program information on the distribution of arrests by BAC, demographic information, time and place, will be used to ascertain if the additional enforcement and police training efforts are causing arrests to be made more often with a different segment of the drinking/driving population than those arrested before the program began. One might hypothesize that there are biases in the class of persons arrested, for instance females or middle class persons might more often be let off with a warning than other classes of persons. Although this is only a tentative hypothesis the distribution of potentially arrestable persons in the driving stream (BAC roadside surveys) can be compared to those actually arrested.

#### OBJECTIVE

Improve casefinding function of police in identifying potential problem-drinking drivers through, b) increasing the number of drivers recommended for license re-examination due to alcohol abuse.

In order to increase the number of recommendations for license re-examination and expedite the process, the following will be done:

1. Expand use of OC88 form (recommendation for re-examination) to cover any driver suspected of alcohol misuse, rather than solely those drivers who have had three previous alcohol-related convictions.
2. Expedite review process by having police officers send OC88 form directly to the Department of State office

rather than going through the State Police in accident cases.

3. By-pass the discretionary review of recommendations made by the central Department of State office before names are submitted to local office for re-examination. All OC88 forms will automatically be sent to the local office.

#### MEASURES OF EFFECTIVENESS

1. Increase in number of OC88 forms sent to Department of State by police recommending license re-examination for alcohol misuse.
2. Increase in number of re-examinations made for alcohol misuse per total number made for all reasons.
3. Decrease in length of time between incident initiating license re-examination action and re-examination interview.

#### METHODOLOGY

Because the criteria for re-examination due to alcohol misuse is being expanded solely in Washtenaw County, a controlled comparison with another county is not possible. Nor is a pre-program/program in-county comparison valid in an experimental sense, since criteria for the recommendation will have changed. However, to insure that the modifications which are to be implemented for purposes of this project are in fact carried out, counts will be made on those items listed under measures of effectiveness.

## DESCRIPTION OF LEGAL PROCESS

There is one other service that an evaluation of the legal system can provide, hitherto one which has not been mentioned. This is a description of the events which take place after an individual leaves the hands of the arresting police officer until the disposition of his case has been made by the court. This is also an area which is not totally under the countermeasure activities of this demonstration program. Prosecutors and defense lawyers will be informed of the existence of and rationale for this program and the hope is that they will utilize whatever sanctions they have in order to bring clients fully into it. The judges have also agreed to bring potential candidates (persons convicted of DUIL, DWI or other alcohol-related offenses) to the attention of the court counselor, who can then make a diagnosis on these individuals which will guide the court in its disposition of the case. The design of course, is to feed these persons into the rehabilitative and educational facilities which are set up for this purpose.

Studies of the legal system have often pointed out breakdowns in the process, such as trial delays engineered by defense lawyers, inequities based on class distinctions (not all persons can afford private lawyers) and so on. These areas are not presently under the countermeasure program. However the evaluators believe that by describing the order of events within the legal system we can at least ascertain if any of these problems exist in the participating courts and if so, they will be documented based on the best data available. After such documentation, any

description of breakdowns or inequities can be turned over to the appropriate agencies and they in turn can make any changes they feel are necessary. Therefore one of the program management objectives is to:

Collect information and describe the total processing of individuals through the legal system from arrest to case disposition.

The following delineates some of the specifics in this process which need documentation.

1. Number of DUIL arrests resulting in; DUIL conviction, DWI conviction, non-alcohol related conviction, acquitted, dismissed.
2. Number of DWI arrests resulting in; DWI conviction, non-alcohol related conviction, acquitted, dismissed.
3. Number of drunk and disorderly arrests subsequent to a crash resulting in; D&D conviction, DUIL conviction, DWI conviction, non-alcohol related conviction, acquitted, dismissed.
4. Distribution of arrest to conviction type by; BAC, arresting department, demographic variables, number of previous alcohol-related convictions, number of previous driving violations, trial type (plead guilty at arraignment, judge trial, jury trial), representation by a lawyer.
5. Distribution of conviction to probation terms, license suspension, and fines, by variables listed under 4.

6. Length of time between arraignment and trial dates by demographic variables, judge, prosecutor, arresting police department and representation by lawyer.
7. Length of time between conviction and sentencing.
8. Frequency with which pre-sentencing recommendations are followed in court's disposition of case.

#### DATA SOURCES

1. Police arrest records.
2. Court conviction records.
3. Court counselor pre-sentencing records.
4. Driving and criminal records.

Most of measures listed above are self-explanatory in those aspects of the legal system which they describe. However some clarification should be given to the arrest/conviction results which are desirable from a program standpoint. It is not desirable that an alcohol-related arrest should result in a non-alcohol-related conviction. And in fact this rarely happens. However it is desirable that any of the following should occur: A greater percent of DUIL arrests result in either a conviction for DUIL or DWI; greater percent of DWI arrests result in conviction for DWI; greater percent of D&D arrests subsequent to a crash result in conviction for either DUIL or DWI. DWI convictions are considered successful outcomes even though the penalties are less severe than convictions for DUIL or though they are often the result of a reduction from a DUIL arrest. The reasoning for this is the fact that, One) a conviction for

DUIL or DWI can provide the necessary sanction to bring the person into the ASAP program. Two) in either case a conviction for an DUIL or DWI goes on the individual's record as an alcohol-related offense, and can therefore be used at later periods for diagnostic purposes. Three) from a program point-of-view, the ability to keep the driver license with a DWI conviction (mandatorily suspended upon conviction for DUIL) is an asset in that it can be held out to the offender as a means of motivating him to participate in the Court Antabuse Program. Such motivation may be lacking if the offender knows his license will be suspended irrespective of what he does to satisfy the courts.

Although not one of the major emphases in the program, an increase in the number of D&D arrestees being convicted for DUIL or D&D would be desirable. Michigan has a requirement that there must be a witness to a violation. The police are generally hampered in crash situations by not having witnesses to the accident available or not having ones willing to testify that the crashee was driving in a drunken state. The PIE campaign may impress the public with their responsibility to volunteer for such duties, and therefore make more DUIL or DWI convictions possible in crash situations.

None of these results are listed as major program objectives although they are clearly desirable. The conviction finding is obviously dependent on the combined actions of defense lawyers, the perspective of juries, the responsibilities of police officers to provide prosecutors with the necessary evidence, and the courts

duty to dispense justice. Thus because the program is only oriented toward impacting certain of these personnel or agencies, it would be inappropriate to list a change in conviction rates as a measure of program success even though this is desirable.

## 4.2 EVALUATION OF COURT PROJECT

The figure presented below describes the general chain of events through which court project participants are expected to proceed. In addition it describes the five broad areas which comprise the objectives of the project; casefinding of potential problem drinking drivers, diagnosis, prescription, treatment, and evaluation of treatment.

This section of the evaluation will cover the last four objectives. (For a description of evaluation procedure for casefinding see Section 4.1.) For the purpose of clarity each function is treated as a separate topic. In reviewing the diagnostic, prescriptive, treatment and follow-up functions, however, it should be noted that each function, with its sub-objectives, has a cumulative effect on the project goal of increasing the special deterrent effect of the legal/health system on individuals who drink immoderately before driving.

Individuals, and groups of individuals receiving similar types of treatment, will be followed as they participate in the various aspects of the health/legal system.

Comprehensive data on these individuals will be collected as each of the diagnostic, prescriptive and treatment functions are performed.

The coordinated data collection procedures will supply information on their progress at any particular point in time as well as at the completion of their participation, generally at the termination of probation or two years subsequent to their conviction for DUIL or DWI. A final evaluation of the effect of



Flow Diagram of Problem Drinking Driver Through  
Washtenaw County ASAP Health/Legal System

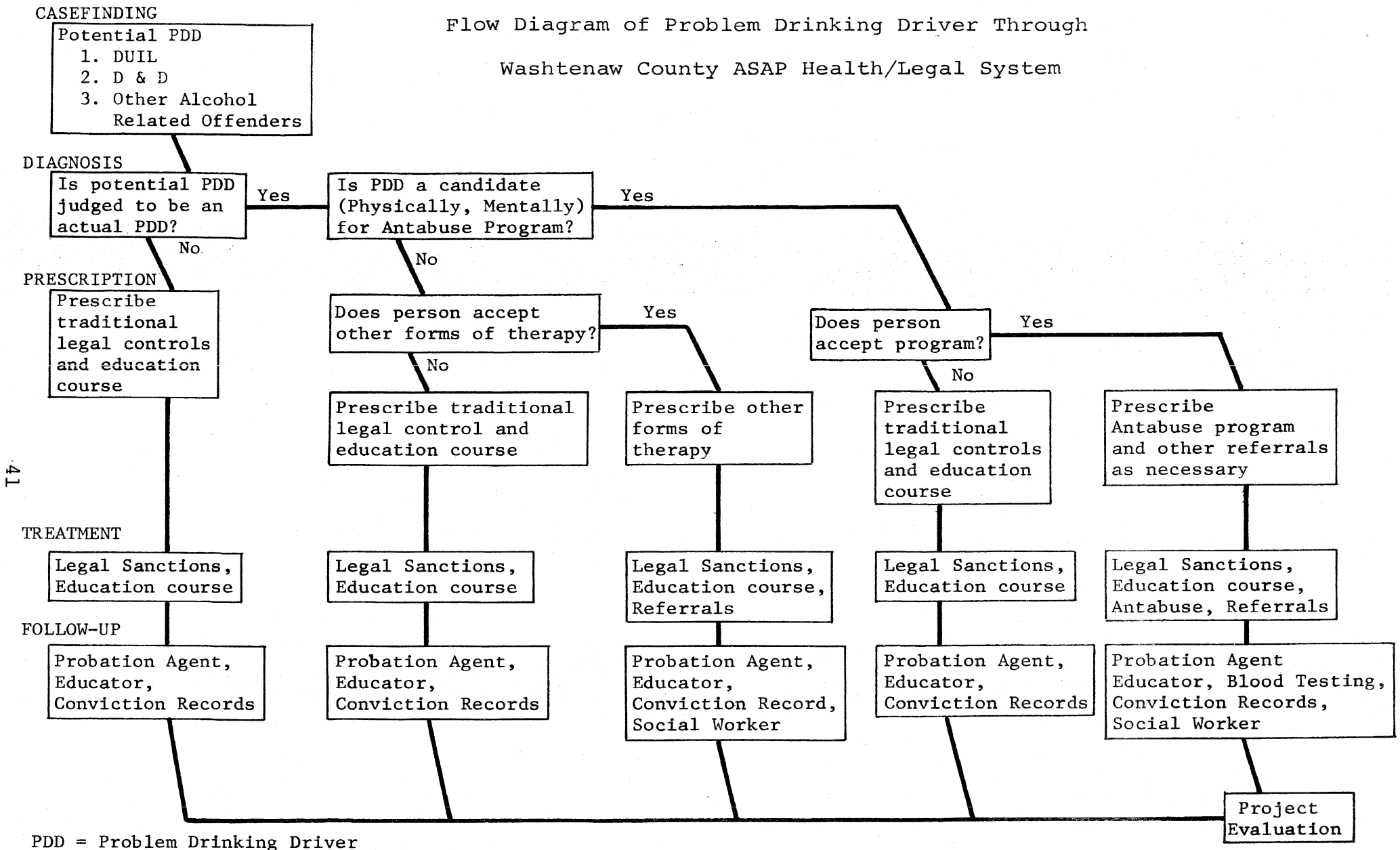


FIGURE 3

the program on these individuals will be made on the basis of data collected at all points in time.

Insofar as possible, the evaluation plan also reviews each of the activity functions as they are performed by project staff, particularly in the validity of the problem drinking diagnosis made by the Court-Counselor, and the treatment referral process which is an important element of that function.

The combined evaluation of both individual offenders and program functions, should then result in:

1. A measure of the success of the project with individuals and with sub-groups of the treatment population;
2. A preliminary evaluation of project activities on which the program director and other staff can base modifications in the program over the three year period;
3. A final evaluation and explanation of which project elements were most successful, and
4. A final recommendation of which project elements merit continuation in Washtenaw County or which might be implemented in other communities.

First in order of appearance in this section is the evaluation plan for the diagnostic and prescription functions. This is followed by the evaluation plan for the treatment process.

#### 4.2.1 DIAGNOSIS AND PRESCRIPTION

##### OBJECTIVES

Distinguish between non-problem drinking drivers and problem drinking drivers in total population of persons convicted for alcohol-related driving offenses.

Ascertain if problem drinking driver is candidate for Antabuse program and willing to participate in it.

Prescribe treatment appropriate for each diagnosis.

##### MEASURES OF EFFECTIVENESS

1. Comparison of initial problem drinker diagnoses made by Court-Counselor with subsequent diagnoses made by social workers and therapists for consistency. The latter result from more extensive client contact.
2. Comparison of initial non-problem drinker diagnoses made by Court-Counselor with subsequent data gathered by supervising Probation Agent for consistency. (Inconsistencies would be indicated by recidivism in drinking offenses, missing work due to drinking, other incidents indicating problems with control over alcohol use.)
3. Comparison of prescribed treatment recommendation (as probation term) for consistency with diagnosis.
4. Comparison of prescribed treatment recommendation with probation terms accepted by both court and client for high degree of acceptance.

## DATA SOURCES

1. Court case file records including convictions, sentence and probation terms.
2. Court-Counselor diagnostic tool results (includes criminal and police records).
3. Physican examination results on physical suitability for Antabuse.
4. Social worker diagnostic results, both in regard to psychiatric suitability for Antabuse and the second diagnostic procedure subsequent to counseling and treatment.
5. Probation Agent case file records.

## APPLICATION OF EVALUATION

As stated in the description of this project all persons convicted of DUIL or DWI will be sent to the Court-Counselor for diagnosis. The purpose of this procedure is the first stated objective of the diagnostic function - ascertain if the potential problem drinking driver is in fact a problem drinking driver. As a part of this pre-sentencing diagnostic procedure, the Court-Counselor will use a diagnostic tool which has been validated on similar populations of DUIL offenders in other studies.\* After combining the scored results of this tool with information from the driver and criminal records, the problem drinker - yes, no, diagnosis will be made.

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\*See Appendix C for diagnostic tool under study.

Those persons who are found to be problem drinkers through this procedure then go for a more extensive diagnostic and prescription session. It is also this group on which the initial Court-Counselor diagnosis can be evaluated with the best accuracy, for these people have a continuing contact with members of the diagnostic team, particularly with the psychiatric social worker. This social worker's function, in addition to ascertaining psychiatric suitability for participating in the Antabuse program, is to do an extensive intake history on which later treatment referrals will be based. Recommendations as to appropriateness for Antabuse go back to the court and may become a part of the probation terms. However, recommendations made by the social worker as to other appropriate treatment resources which the client may voluntarily utilize go directly to the client. These additional contacts such as family or individual counseling are covered in the treatment section. However, they may engender a second diagnosis by the social worker or one of the referral sources, and this diagnosis will be compared for validity with the one made by the Court-Counselor.

For those persons ascertained not to be problem drinkers the validity of the Court-Counselor's diagnosis will be determined through the information gathered over a 1-2 year period by the individual's supervising Probation Agent. This information includes such things as the number of times the person violated non-drinking probation terms, recidivism in drinking offenses which might indicate an incorrect diagnosis, and a follow-up interview with the probationer at the completion of his term.

All information gained through testing the validity of the Court-Counselor diagnosis will also be turned over to the program management during the life of the program in order to satisfy their objective of feed-back on the accuracy of the diagnostic functions.

Prescription activities fall under two of the functions outlined in the combined legal/health approach. For purposes of clarity the term prescription will apply to those recommendations made to the court by the diagnostic team as to what the specific terms of probation should be for individual offenders. In most cases this term then applies to the prescription of Antabuse after it has been ascertained that the individual is suitable and willing to use it. (The one month trial period of Antabuse use applies to these factors.) The diagnostic team also prescribes the voluntary use of other community treatment resources. This is the first step in the treatment activity. In order to differentiate these activities, made in both cases by the diagnostic team, we will call the latter prescription referral and discuss it under treatment.

For a successful application of the prescription function, Antabuse should be recommended to the court as treatment for all suitable problem drinkers. Its use would be contraindicated for persons who are psychotic or who have physical conditions limiting its use. Program management also has the objective of ascertaining the number of times the court accepts the diagnostic team's recommendations as well as the number of clients who try out the Antabuse program and are willing to

continue it. If it is found that in a high percentage of cases, either the courts or the clients are not willing to accept the recommendation, this will give program staff data on which they can base changes in the program, either in prescription at the court level or in the approaches which are used with the client in order to motivate him toward accepting the program outlined for him.

#### 4.2.2 TREATMENT AND FOLLOW-UP

There are three major sub-groups of the treatment population (1) non-problem drinkers, (2) problem drinkers, not suitable for Antabuse or not willing (at least initially) to participate in any rehabilitative program, and (3) problem drinkers who are suitable for Antabuse and who are willing to participate, in varying degrees, in a rehabilitative program.

All these groups will attend the four week educational course and will therefore be exposed to material which is relevant to their situation, interests and attitudes. All groups will also have some degree of supervision by a Probation Agent as a deterrent to future episodes of drunk driving. The intensity of the supervision may vary however, being somewhat less for the non-problem drinker and greater for the problem drinker who is not a participant in the Antabuse program. Much of the probation supervision function is assumed by personnel other than the Probation Agent for persons on Antabuse. For instance results of blood testing for the presence of Antabuse are made by a personal contact with the medical technicians who withdraw the

blood. Although these results are sent to the probation office, the Agent may not make any personal contacts with the client unless it is brought to his attention that a violation of probation terms has occurred.

The Probation Agent working with persons not on the Antabuse program assists with both the treatment functions e.g. the monitoring of legal sanctions, and the performance of the follow-up function, both from the data he continually collects on the offender throughout the probation period as well as data gained in one final interview with the offender. This final follow-up interview is specifically designed to measure some of the broad changes which have taken place over the probationary period.

The social worker on the diagnostic team also performs these two functions for Antabuse users in the sense that he makes referrals to community treatment agencies and encourages the client to use them (treatment) but also checks to see if the contact with the agency was made and if so, what the results of that contact or a series of contacts were as far as increased control over drinking or resolution of other problems (follow-up).

The over-all treatment objective is to decrease the number of episodes of drunk driving. This implies that several sub-objectives must be accomplished with all groups of the program population before they have either the desire, the information, or the control over the use of alcohol to decrease the number of such episodes. The follow-up objective is to determine the



success in reducing the number of drunk driving episodes among the population under treatment, as well as to collect the data which is necessary to evaluate the over-all success of the health-legal approach in the broader field of alcoholism control and treatment. That is, do individuals continue to drink before driving and if not, what treatments work best for which types of offenders?

The following is a list of the various treatment/follow-up objectives and sub-objectives for the different sub-groups of the population. Notes in parentheses indicate the general treatment approaches for each group.

#### OBJECTIVE FOR ALL TREATMENT GROUPS

Reduce the number of episodes of drunk driving.

#### SUB-OBJECTIVES FOR EACH TREATMENT GROUP

- A. Non-problem drinker (Education).
  1. Increase knowledge related to the effect of alcohol on physiology and mental state.
  2. Improve attitudes toward immoderate use of alcohol prior to driving.
- B. Problem Drinker Not on Antabuse Program (Education and Probation Supervision).
  1. Increase information on the symptoms of and detrimental effects of problem drinking or alcoholism.
  2. Improve attitudes toward immoderate use of alcohol prior to driving.

3. Apply sufficient level of probation supervision to act as a deterrent to future drunk driving episodes or other violations of probation terms, particularly no drinking clauses.
- C. Problem Drinker on Antabuse Program (Education, Probation Supervision, Antabuse Medication and Referral to Community Treatment Agencies).
1. Increase information on the symptoms of and detrimental effect of problem drinking or alcoholism.
  2. Improve attitudes toward immoderate use of alcohol prior to driving.
  3. Apply sufficient level of probation supervision to act as a deterrent to future drunk driving episodes or other violations of probation terms.
  4. Increase the frequency of sobriety or moderate drinking patterns through the utilization of Antabuse.
  5. Identify individual treatment goals for each client in addition to that of sobriety.
  6. Select appropriate referral agencies in the community with the particular aim of assisting clients to (a) develop inner resources they can draw upon without resorting to the use of alcohol as a coping mechanism (b) improve marital or family stability (c) improve economic functioning (d) decrease frequency of illegal behavior (e) improve health and physical well-being (f) improve self-appraisal.

7. Motivate clients to make use of referral agencies which have been selected as appropriate for their needs.

#### MEASURES OF EFFECTIVENESS

1. Pre and post treatment number of arrests for alcohol-related driving offenses, alcohol-related non-driving offenses, criminal offenses, traffic violation convictions and crashes.
2. Pre and post education course questionnaire score on knowledge related to effect of alcohol on physiology, mental state and driving performance.
3. Pre and post course score on knowledge related to the symptoms and detrimental effects of problem drinking or alcoholism.
4. Pre and post treatment attitude of client toward alcohol use prior to a driving situation.
5. Number of contacts with each referral agency that client actually makes compared to number estimated by agency that he should make in order to realize treatment goals.
6. Probation Agent's evaluation of success with which terms of probation were followed, particularly the no-drinking or no-drinking prior to driving clauses, based on data from employers, family, and probationer as applicable.
7. Psychiatric social worker's evaluation of success in realizing treatment goals, based on data supplied by treatment agencies and by interviews with individual clients.

8. Client's self-evaluation of improvement at end of probationary period.
9. Results of blood-testing for presence of adequate level of Antabuse.
10. Evaluation of referral process, (initiated by social worker) by agencies receiving the referral, i.e., appropriateness of sending the client to a particular agency, other referrals which should have been made.

#### DATA SOURCES

Due to the nature of the treatment program, data needed to evaluate each member of the program population and the various subgroups of it must come from many agencies in the community. Already listed in an earlier section of this report are the diagnostic tool results made by the court counselor, the probation terms recommended by the diagnostic team at the WCCA, and actual conviction, sentencing and probation terms set by the court and agreed upon by all relevant parties. The following are the additional data sources which will be relied upon for the treatment process evaluation. Notes in parentheses indicate the agency or person who is responsible for collecting or coordinating the data before it is made available to the program evaluators.

1. Intake history on each Antabuse program participant including social, economic, family, medical and drinking history (Diagnostic Team).

2. Individual treatment goals, initial and current status regarding goals (Psychiatric Social Worker).
3. Probation office case file including blood-testing results, intake history and summary of contacts made with the probationer or persons relevant to him i.e. spouse, employer (Probation Agent).
4. List of agencies each client was referred to, and that agency's evaluation as to the appropriateness of the referral (Psychiatric Social Worker coordinates).
5. Summary of each contact with referral agency e.g. concurrence with initial diagnosis, new definition of treatment goals, progress regarding goals (Psychiatric Social Worker coordinates - depends on cooperation of treatment agencies and time they have available for reporting requirements).
6. Post-probationary treatment evaluation questionnaire (Social Worker and Probation Agent interview client, client gives his own appraisal of treatment).
7. Education course questionnaire and attitude survey (Course instructor administers).
8. Pre-treatment, treatment, and post-treatment criminal and traffic conviction records (Evaluators).

#### EVALUATION MODEL

Pre and post education course comparison of knowledge and attitudes.

Pre and post comparison of treatment variables and driving behavior for individuals.

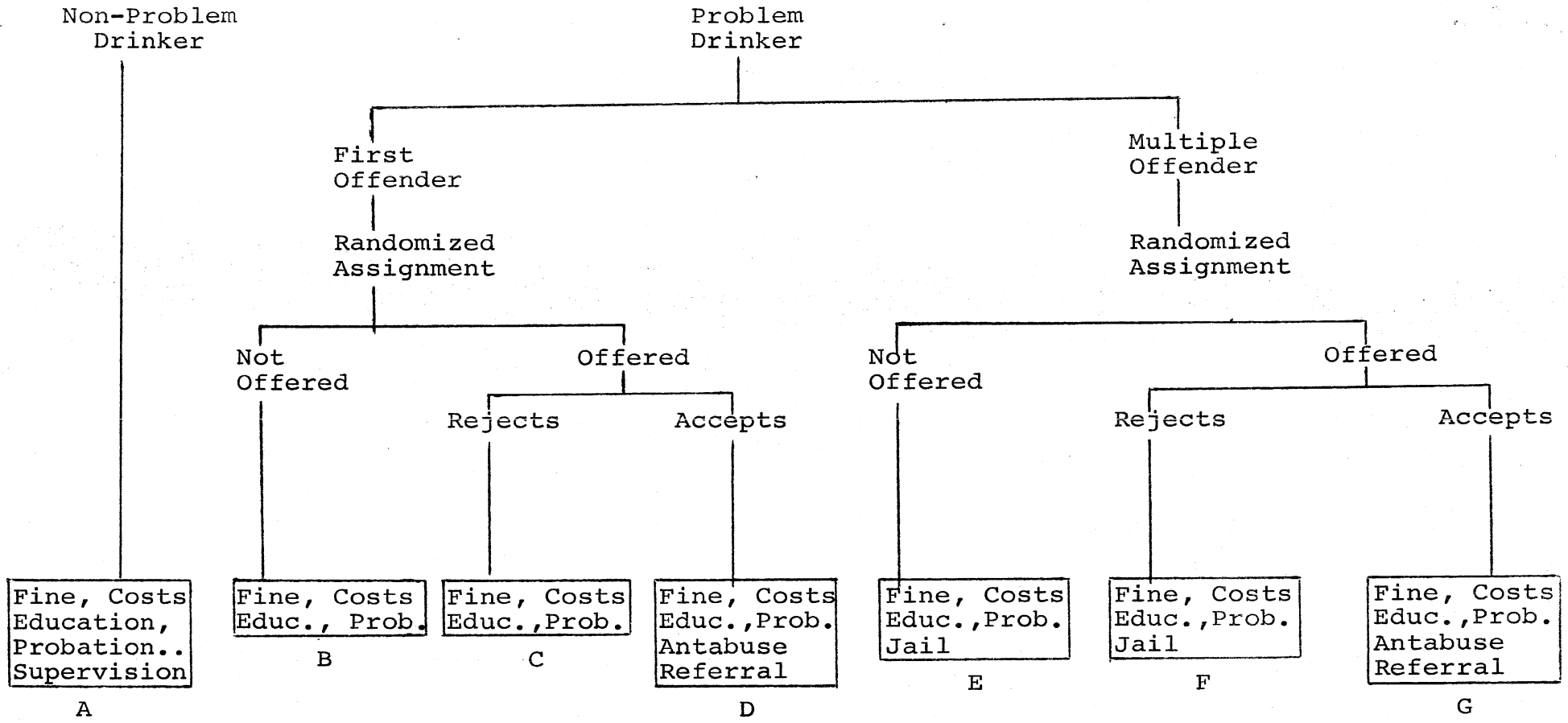
Comparison of control groups with various treatment groups on all relevant variables, pre and post program.

#### APPLICATION OF MODEL

The ideal evaluation procedure is to draw off a control group from among the treatment population rather than to try to match control groups from other populations. This procedure will be implemented for one year in the following way.

All persons convicted of an alcohol-related driving offense will be interviewed by the Court-Counselor for a diagnosis to be made. At this point the population will be split into two groups - Non-problem drinkers and Problem drinkers. All non-problem drinkers will receive the same type of treatment, e.g., fine and costs, education, and probation supervision. Problem drinkers will be split into two groups initially: First Offenders who would not normally be sent to jail, and Multiple Offenders who would normally have a jail term as a part of their sentence. Members of these two groups each will be randomly assigned to "Treatment Offered" and "Treatment Not Offered" Groups by the Court-Counselor. The First Offender who is not offered Antabuse treatment would then receive fine and costs, education and probation supervision. The same applies for the Multiple Offender, with the addition of the jail term.

The individuals who are offered treatment then have the opportunity to either accept or reject it as a part of their probation term. Those who reject receive the same treatment as those in their respective Not Offered groups. Those who



Control and Experimental Groups for Court Project Participants

FIGURE 4

accept receive the Antabuse (after a one month trial period), are offered use of the voluntary referral system, and in the case of Multiple Offenders, have their jail sentence stayed.

Figure 4 shows the various control and experimental groups among the population under study.

All groups will be evaluated on the degree of change in knowledge, attitudes and behavior. The latter, particularly as evidenced in the driving record, will cover a measurement period of at least two years, both for pre and post treatment periods. Additional attitude and behavioral evaluation data will come from Probation Agent reports and education course essays. Knowledge in those areas listed under Measures of Effectiveness will be measured at the first and last sessions of the course.

As can be seen in Figure 4, the non-problem drinker group acts as its own control, that is all such persons are offered the same treatment and are evaluated on a pre and post basis. Where the court has more alternatives available in sentencing terms, as in the case of problem drinkers, it is more feasible to split these individuals into control and experimental groups, at least until a control sample of sufficient size has been developed over the first year. In this case, group B is the control for groups C and D; group E is the control for F and G.

If groups C and D, when combined, show greater improvement than B (which conceivably should include both persons who would have accepted and rejected the program had it been offered to them) then the total program will have been a success. However if a large proportion of persons reject the program, show no



improvement and therefore lower the total improvement rate for the combined accept/reject groups, (assuming the accept group alone shows great improvement over the no treatment group) this would indicate that the program must be modified so as to permit fewer people to reject it. To a large part this rejection rate depends on both the client and the program staff. Due to the traumatic experience of the arrest or other events in the client's life, some individuals may be motivated to accept rehabilitative treatment when they first appear before the court. For others, whose first reaction might be to reject the treatment offer, the program staff must develop their persuasive skills to a high degree. The ASAP treatment program has as its population all those who are convicted of alcohol-related driving charges, and therefore much depends on having a high enough proportion of this population actively participate in it.

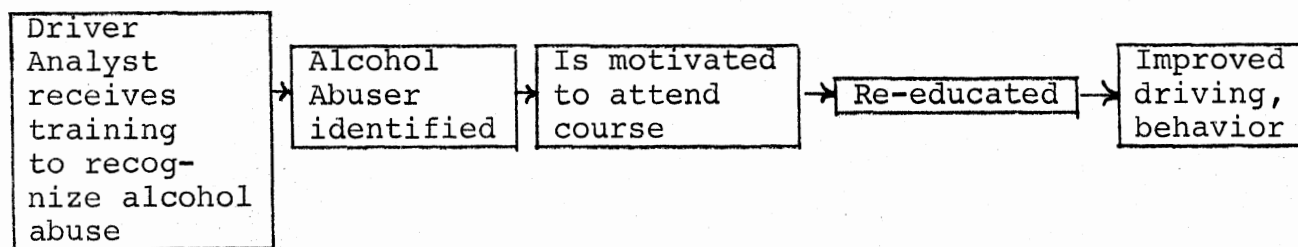
Hitherto we have spoken in general terms of an "improvement" evaluation over a two year post treatment period. The most important measure of improvement is reduction in the number of alcohol-related crashes and convictions or recidivism rate. Others which are of secondary importance, but still crucial to the success of a program dealing with alcoholics and problem drinkers, concern those measures of effectiveness which deal with the broad topic of control over drinking and other related therapeutic goals.

### 4.3 EVALUATION OF DEPARTMENT OF STATE PROJECT

The activity areas delineated below form the major components of a causal chain leading up to the improved driving behavior of the participant individuals.

The objectives of each activity will be evaluated as to how well the function was performed and as to the final effect on the individual participating in the project. Much of the activity function evaluation is designed to produce immediate feedback which can then be used by program management staff for data on which to base project modifications.

#### CAUSAL CHAIN



#### OBJECTIVE

Train Driver Analysts in recognition of alcohol abusers through exposure to, assimilation of, and application of pertinent information.

#### MEASURES OF EFFECTIVENESS

1. Number of sessions attended by Driver Analysts.
2. Accuracy with which Driver Analyst can identify the major characteristics of different types of alcohol abusers.

3. Ability to relate knowledge gained in training to actual job situation and real-world contacts with alcohol abusers.
4. Satisfaction of Driver Analyst that training course has met his need in adequately teaching on the topic of alcohol abuse, especially as relating to delinquent drivers.

#### DATA SOURCES

1. Attendance reports.
2. Tests on theoretical information presented.
3. Results of review by instructor supervising on-site instruction.
4. Post course survey of Driver Analysts.

#### EVALUATION APPLICATION

These training sessions for Driver Analysts have a two-fold function: To teach in a general classroom setting the theoretical concepts relating to alcohol abuse and alcoholism; To provide on-the-job supervision and guidance for driver analysts in their interviewing procedure.

At the final session of the general training course the instructor will ask participants to characterize alcohol abusers, based on material presented in the course. This is primarily designed to give immediate feedback on this aspect of the educational effort. If the questioning session reveals topics which have not been adequately covered or understood by the participants, the final hours of the course will be devoted to

remedying these aspects. This measure (accuracy of characterization) primarily is designed to satisfy the instructor that no project staff member actually begins casefinding work with an inadequate theoretical background.

Ability of the Driver Analyst to relate theory to actual job practice during on-site training sessions will be measured in a more subjective manner (the trainer's impressions) than most of the other effectiveness criteria. This measure is also designed to provide an immediate mechanism for evaluation of the training sessions, which then can be used to modify it if there is general inability to apply information learned.

Satisfaction of the Driver Analysts with the training sessions will be measured in a survey subsequent to the course. Prime areas to be covered include (1) was the training believed to be adequate?; (2) if inadequate (a) in what areas?, (b) what modifications are recommended?

#### OBJECTIVE

Identify greater proportion of alcohol abusers from among the population of delinquent drivers routinely interviewed.

#### MEASURES OF EFFECTIVENESS

1. Number of persons identified having alcohol as their primary problem on the report of re-examination form filled out by Driver Analysts.

#### DATA SOURCE

Re-examination report of Driver Analyst.

## EVALUATION MODEL

Pre-program and program comparison of number of drivers identified as having an alcohol-related problem.

## APPLICATION OF MODEL

Since the beginning of 1970, Department of State Driver Analysts have had the specific option of noting alcohol as being associated with a driving problem in their summary report of re-examination interviews. Therefore 1970 will be the base-line period for measuring the objective of identifying alcohol abusers from this re-examination report. Yearly totals of the number of drivers re-examined will be made prior to and during the program, as will the number of alcohol abusers identified from this total.

## OBJECTIVE

Motivate a high proportion of alcohol abusing drivers to attend education course.

## MEASURES OF EFFECTIVENESS

1. Number of persons referred to the course, where no license suspension was applied.
2. Number of persons referred to the course, by length of license suspension where applicable.
3. Number of persons who agree to attend course from referrals in the two above groups (no license suspension and license suspension of various periods).

## DATA SOURCES

1. Report of re-examination.
2. Referral to Driver Safety School form.

## EVALUATION MODEL

Comparison of total number referred with number who attend.

## APPLICATION OF MODEL

The comparison of number who attend with the total number referred will be made between two groups; those for whom license suspension was mandatory and those for whom it was not. Because the program will be offered to persons whose license must be suspended as well as those for whom the requirement can be waived, a high percentage of attendance by the suspended group would indicate very successful motivating techniques.

## OBJECTIVE

Increase knowledge related to the effect of alcohol on physiology and mental state.

Increase information on the symptoms of and detrimental effects of problem drinking or alcoholism.

Improve attitudes toward immoderate use of alcohol prior to driving.

## MEASURES OF EFFECTIVENESS

1. Pre and post score for each section of the alcohol and driving questionnaire.
2. Pre and post treatment attitude toward alcohol use prior to driving.

#### DATA SOURCE

Questionnaire and essay written during education course.

#### EVALUATION MODEL

Pre-course and post-course comparison.

#### APPLICATION OF MODEL

A pre-course and post-course questionnaire will be administered to participants in order to measure the extent of re-education which has taken place. Basically, the questionnaire covers knowledge related to alcohol and driving which can be scored. An essay on what the participant intends to do about future driving practices, to be written at the end of the course, will also be an indication of how the individual plans to modify his driving habits or drinking before driving patterns. These essays will be graded by the instructor on the basis of the amount of constructive change indicated.

#### OBJECTIVE

Improve driving behavior of alcohol abusers who participate in course.

#### MEASURES OF EFFECTIVENESS

1. Number of driving violations.
2. Number of accidents.
3. Number of driving violations involving alcohol.
4. Number of accidents where alcohol involvement is checked by police officer or where arrest for alcohol-related violation followed accident.

5. Questionnaire score compared to driving record.

DATA SOURCE

Driving record.

EVALUATION MODEL

Pre and post controlled experiment.

1		1968-1970	1971	1972-1974
Exper.	Accepts (Washtenaw County)	M	X	M
	Rejects (Washtenaw County)	M	X	M
Control	Not Offered (Wash. County)	M	NX	M
	Not Offered (Jackson County)	M	NX	M
2		1971	1972	1973
Exper.	Accepts (Washtenaw County)	M	X	M
	Rejects (Washtenaw County)	M	X	M
Control	Not Offered (Wash. County)	M	NX	M
	Not Offered (Jackson County)	M	NX	M

M = measurement

X = program exposure

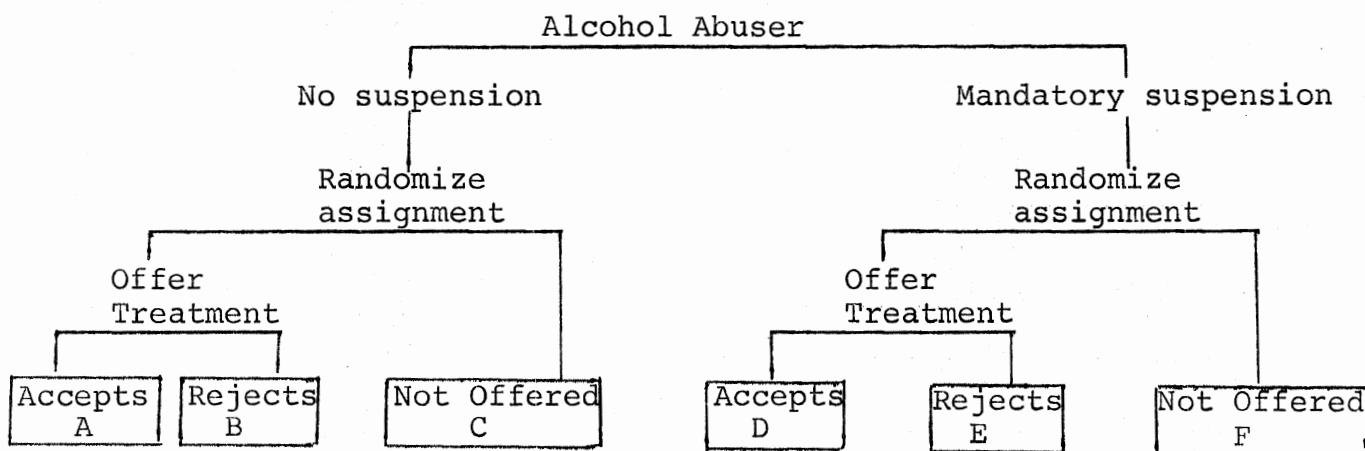
NX = no exposure

APPLICATION OF MODEL

The percentage change in number of accidents, violations, or accidents and violations involving alcohol, will be taken from the individual's driver record for both control and experimental groups. Once identified as an alcohol abuser, the



subjects will be split into two main groups: Those for whom suspension is mandatory; and those for whom it is not. (In general suspension is mandatory for persons who have accumulated 17 or more points in two years and have been re-examined once previously, or who have 12 or more points and have been re-examined twice prior to the interview.) By a random process, persons in each of the two groups (no license suspension, and license suspension) will be assigned to two further groups: Treatment offered; No treatment offered. Persons to whom the education course is offered have the choice of rejecting it and taking a license suspension in its place. The following diagram shows the general process.



MODEL 1

Groups A/B and D/E (those who accept and reject treatment) will be the experimental groups. Group C will be the control group for comparison to groups A/B, as will F be the control for D/E. The random assignment to treatment and no treatment

groups will continue until a large enough control sample has been developed to adequately evaluate these groups using analysis of the driver record. The rationale for combining the group which rejects treatment with that which accepts it, is the following. In order for the treatment program to be considered a success, the program must take cognizance of persons who are unwilling to participate. Greater benefits must therefore be shown in the combined 'accepts/rejects' group than in the 'not offered' group, for continued operation of the program to be worthwhile.

For example, either one of the following hypothetical outcomes might be observed, using a simple 'improvement - no improvement categorization for the subsequent performance of each individual.

Project Successful			Project Not Successful or Needing Modification		
	A <sub>1</sub>	No Improve- ment		B <sub>1</sub>	No Improve- ment
N=100	Accepts	70%		Accepts	70%
N=100	Rejects	20%		Rejects	20%
N=100	Not Offered	30%		Not Offered	60%
					40%

	A <sub>2</sub>	No Improve- ment		B <sub>2</sub>	No Improve- ment
	Accepts/ Rejects	45%		Accepts/ Rejects	45%
	Not Offered	30%		Not Offered	60%
					40%

In example A, 70% of the "Accepts" and 20% of the "Rejects" drivers were evaluated as improved compared to 30% of the "Not Offered" group. This gives improvement in 45% of the "Accepts/Rejects" cases compared to 30% of the "Not Offered" cases. Therefore, one could conclude that the program produced better results than no program. If, however, something similar to Type B results, even though the "Accepts" group had 10% more improved persons than the "Not Offered" group, the total treatment was not successful in showing greater improvement than no new program and therefore should be modified to allow fewer persons to reject it.

There also is a possibility of developing a second type of control group in addition to the one previously described from Washtenaw County. If the Michigan Department of State decides that it will be necessary to train driver analysts from other near-by counties as replacements for Washtenaw County analysts on vacation or sick leave, such additional persons will be a source of identifying alcohol abusers, by similar criteria, in their local counties. The question then arises as to whether or not drivers brought in for re-examination in other counties are similar to those in Washtenaw County. The list of drivers to be re-examined is initially compiled centrally in the Lansing Office of the Department of State. These lists are then sent to the local branch offices for scheduling. Therefore the criteria for re-examinations are consistent throughout the state. If police enforcement is more vigorous in certain localities, it is possible that the drivers may be

cited more often, and therefore re-examined earlier in their driving history. However, even if there is some unevenness in enforcement in various counties, it is felt that persons identified as alcohol abusers by trained Driver Analysts in other counties will provide a valuable additional control group. Because treatment programs are not being offered in these other counties, such drivers can then be compared to the Washtenaw drivers who are offered the treatment program.

The first method is to use a three-year baseline driving period and compare it to a post-treatment period of similar length. Thus a person re-examined in 1971 would have a baseline driving period of 1968-70. The post-treatment driving period would begin after completion of the education course, or in the case of those persons who do not participate, after their license suspension is lifted. One of the contaminating factors inherent in this procedure is that a certain amount of improvement in post-treatment driving may be off-set by the added police enforcement which will begin in Washtenaw County in 1971.

#### MODEL 2

The second method deals with the problem of the differential police enforcement effect but it has the disadvantage that comparison of the driving record is possible only for a rather short period of time.

Persons who are re-examined in 1972 (the second year of program operation) will have as their baseline period the year

1971, a time in which added police enforcement is in effect. 1973 will be the post-treatment time period for these second-year program participants. Although a shorter baseline and evaluation period is used for these persons, we may have a better idea of the change in driving behavior, holding enforcement constant for both pre- and post-treatment record periods.

For both time periods, Models 1 and 2, the driver acts as his own control (pre treatment, post treatment comparisons), and the experimental groups are also compared to control groups not offered treatment. This latter comparison is particularly important as a measure of the expected regression to the mean, i.e., bad drivers will improve toward the mean of all drivers.

In the case of all treatment-accepting groups, correlation will be made between results of the driver education course questionnaire, and improvement in actual driving behavior as measured through the driver record. This should give additional information on the increase of driver knowledge related to change in driving performance.

#### 4.4 THE PUBLIC INFORMATION AND EDUCATION CAMPAIGN

A significant component of the Washtenaw County Alcohol Safety Action Program (WCASAP) is the Public Information and Education Campaign (PIEC) to be conducted by the Washtenaw County Council on Alcoholism. This campaign will make use of the various mass media and other channels of communication (meetings of voluntary organizations, employee's safety meetings, etc.) to try to change the knowledge, attitudes, and behavior of Washtenaw County residents in regard to alcoholism and to drinking and driving. The campaign will aim not only at the broad general public but also at a number of relevant target groups (physicians, lawyers, high school students, etc.) as detailed below.

It should be noted that the over criterion of effectiveness for the information and education campaign, as for the other components of the Washtenaw County ASAP, is reduction in the number of alcohol-related crashes and fatalities in Washtenaw County. However, it will also be evaluated on the basis of its achievement of three general intermediate objectives: An increase in knowledge of the nature and extent of the drinking and driving problem; an increase in attitudes and behavior favorable to the health-legal approach of the WCASAP; and a decrease in the number of persons who drive after drinking too much. A mass media campaign will focus on the general public; special materials will be produced for presentation to smaller specific target groups. Specific objectives pertaining to

knowledge, attitudes, and behavior for both the general public and the smaller target audiences have been identified according to each group's function in the WCASAP operations. An outline of the specific objectives by target groups follows this introduction.

#### ELEMENTS OF THE CAMPAIGN

In general the mass media campaign will include content concerning the extent of the drinking-driving problem in Washtenaw County, the importance of responsible drinking-driving attitudes and behavior, and the activities of the county program to apprehend and rehabilitate drunk drivers. It is recognized that this approach can be expected to modify the drinking-driving behavior of only that portion of the public who are social drinkers, not that of problem drinkers who are so involved with alcohol that it is very difficult for them to change their behavior rationally on the basis of new risk information. Research has demonstrated that it is this latter group which causes most of the alcohol-related fatalities.

The general mass media campaign may still be of value in regard to problem drinking drivers (PDD) by encouraging them or their friends and relatives to recognize and to seek help for their drinking problems. However, the main thrust of the PIEC in regard to the PDDs is the more indirect one of educating specific target groups who are most likely to have contact with and to be able to influence PDDs. These include physicians, social workers, clergymen, lawyers, police, bartenders, liquor

store operators, and families of the PDDs. Two other relevant target groups are hospital boards, judges and prosecutors, since their policies affect the ability of the health-legal system to offer rehabilitation to PDDs. A direct approach to changing the behavior of PDD's will also be made by means of the required attendance of all persons convicted of alcohol-related offenses, as well as of persons identified in the Secretary of State project, at a WCCA initiated alcohol and driving safety course.

The PIEC will also be concerned with some larger target groups among the general public, namely high school students, employees of certain large firms, and members of voluntary organizations and service clubs. These are segments of the general public which can be approached in other ways than through the mass media (meetings, speakers, films, etc.). Finally there are three small target groups whose support as mediators of information to the larger groups is essential: Namely news managers, high school teachers and curriculum advisors, and employers.

The specific nature of the PIEC's information program content, including the particular themes and appeals to be used, will be determined on the basis of knowledge obtained in pre-program surveys of designated target groups. The information obtained in these surveys will also be used in selecting the most appropriate message sources (e.g., physicians, law enforcement officials, civic leaders, members of Alcoholic



Anonymous) to be used in the campaign. To the maximum extent possible, the selection of message sources, content, and media will be tailored specifically to the needs and interests of each designated target group.

#### EVALUATION STRATEGY

Evaluation of the Public Information and Education Campaign's effectiveness in achieving an adequate response to the drinking/driving problem will be based on before-after surveys of the general public and of each target group as well as comparison of data collected from appropriate records before and after the campaign.

The experimental design of pretest-posttest measurement of each target group has been selected for both scientific and pragmatic reasons. Such a design establishes a baseline period against which changes over time can be determined. The effect of relevant events occurring between the measurement periods will be determined in part by questions relating to such known events at the time of the posttest measurement. Data collected from driver and arrest records in control areas outside Washtenaw County will be used to further delineate the effect of relevant events uncontrolled by the WCPIEC.

Campaign materials will be introduced to the target groups on a non-randomized basis. The limited size of the populations under study as well as ethical considerations militate against randomized treatment. The exclusion of particular voluntary organizations, for example, from exposure to campaign materials

would present a fundamental obstacle to the achievement of ASAP goals. The operation of ASAP activities will not be disturbed by the evaluation methodology.

Ideally for control purposes similar types of pre-post surveys of each target group would be carried out in a non-ASAP control county with characteristics somewhat similar to Washtenaw County. A modified form of control for the Washtenaw project will be provided by the collection of data by self-administered questionnaires in matched voluntary organizations in a county similar to Washtenaw.

If the Office of Alcohol Countermeasures (OAC) plans to carry out more national surveys in connection with its national media campaign, this could also be useful in evaluating the effects of the local program on the general public. If comparable questions are employed both nationally and locally on both pre and post surveys; then changes found in the national surveys could be subtracted from similar types of changes found in the local surveys to estimate the net effect of the local public information and education campaign.

The Washtenaw County experience will be described as it unfolds during the ASAP period. The mass media elements of the campaign will be phased and measures will be made of the knowledge, attitudes and behavior of target groups after the introduction of particular phases. The effect of particular messages and combinations of messages will be determined as they are introduced. A close yet flexible relationship

between the evaluators and the campaign managers will enable the campaign to proceed independently and rationally.

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

The effect of increased law enforcement on the general public's driving after drinking behavior can be separated in broad terms from the effect of general information concerning the driving after drinking problem. The PIEC general public survey and the BAC Roadside Survey will include questions regarding knowledge about police activity and direct contact with police for drinking-related offenses as well as questions

concerning general knowledge about the driving after drinking problem. Self-reported driving after drinking behavior will be analyzed for its relation to particular knowledge inputs in order to obtain the specific effects of law enforcement activities and general information relating to driving after drinking.

Sections 4.4.1 and 4.4.2 deal specifically with two target groups: The general public and high school students. The design and measurement plans for those two target groups are prototypes for the remaining target groups. An outline for each of the remaining target groups is contained in Section 4.4.3.

#### 4.4.1 THE GENERAL PUBLIC

The largest target group of the public information and education campaign is the general public residing in Washtenaw County. This includes not only drivers but also persons who do not drive who also face potential involvement in alcohol-related crashes, either as passengers or pedestrians. Since high school age youth are defined as a special target group, the general public will be operationally defined as the residents of Washtenaw County 18 years and over. Of course one hopes that some of the general campaign effects will filter down to all youth and children in the county, but no direct attempt will be made to assess the effectiveness of the general campaign among those under 15.

#### OBJECTIVES

The basic objectives of the public information and education campaign are to improve the knowledge, attitudes, and behavior of the residents of Washtenaw County, specifically in regard to driving under the influence of alcoholic beverages and more generally in regard to alcoholism as a major public health problem.

Among the changes sought are the following:

1. Increased awareness of the role of alcohol as a leading factor in highway crashes.
2. Increased awareness of the amount and conditions of drinking which will impair driving ability.

3. Increased awareness of the laws on drinking and driving and of the risk involved in disobeying them.
4. Increased awareness and acceptance of the court-imposed penalties on convicted drunk drivers.
5. Decreased driving after too much drinking.
6. Decreased riding with a driver who has drunk too much.
7. Increased support for responsible drinking behavior (host setting limits at parties, etc.).
8. Increased support (including willingness to spend more tax money) for more stringent drunk driving laws and more thorough law enforcement (including compulsory breath tests).
9. Increased understanding and acceptance of alcoholism as a disease.
10. Increased support for public and private efforts in the early treatment and rehabilitation of alcoholics and problem drinkers.

#### MEASURES OF EFFECTIVENESS

1. Comparison of general public response to similar questions concerning knowledge, attitudes, and behavior in regard to drinking and driving asked before, during, and after the campaign.
2. Relating changes found in these responses to specific Public Information and Education Campaign activities and to other WCASAP activities.

3. Checking self-reported changes in behavior to actual driving record data for these respondents.
4. Comparison of the amount of time and money contributed to the Washtenaw County Council on Alcoholism before and after the campaign.

#### DATA SOURCES

1. A probability sample household survey will be conducted with 700 members of the general public 18 and over in January-February 1971 (including a supplementary sample of EMU and U of M students living in group quarters). Persons residing at these same addresses will be reinterviewed in 1973, along with a small additional sample to take into account new construction.
2. The actual accident and violation records of the interviewed respondents who are registered in Washtenaw County will be matched with their interview information.
3. The Washtenaw County Council on Alcoholism will keep records of referrals and of contributions of time and money by source.

OUTLINE OF WASHTENAW COUNTY GENERAL PUBLIC  
QUESTIONNAIRE \*

1. Highway Safety - general attitudes as to importance and solutions.
2. Drinking and Highway Safety - attitudes and knowledge of problem.
3. Effects of Alcohol on Driving Behavior - attitudes and knowledge.
4. Preferred Solutions to Drinking Driving Problem.
5. Media Use and Awareness of Media Campaign Concerning Drinking and Driving.
6. Knowledge of Washtenaw County ASAP.
7. Support for Involvement in ASAP idea, nationally and locally.
8. Attitudes toward Drinking Behavior and Alcoholism as a Disease.
9. Own Drinking Behavior.
10. Own Driving and Driving after Drinking Behavior.
11. Accident and Alcohol-related Accident Experience.
12. Knowledge of Legal System - BAL limits, implied consent, breath tests, penalties.
13. Violations Record.
14. Background Factors - age, sex, race, religion and church attendance, education, occupation, social class, marital status.

\*See Appendix A for complete questionnaire.



#### 4.4.2 HIGH SCHOOL STUDENTS

##### OBJECTIVES

1. Increased knowledge of:
  - a. Individual differences regarding the physiological and psychological effects of drinking alcoholic beverages.
  - b. The relationship between weight, the quantity of alcohol consumed, and the resulting BAC.
  - c. The relationship between high BAC and high risk driving.
  - d. The implied consent law in Michigan.
  - e. The legal sanctions against driving after drinking and the presumptive legal limits at which a driver is considered impaired and under the influence of liquor.
2. Decreased willingness to ride as a passenger in a car when the driver has been drinking excessively.
3. Decreased incidence of driving after drinking.
4. Decreased incidence of alcohol-related highway crashes involving high school students as drivers.

##### MEASURES OF EFFECTIVENESS

1. Responses to survey instruments - self-administered questionnaires and personal interviews - on knowledge, attitude, and behavior items regarding drinking, driving, and driving after drinking.
  - a. Questionnaire and interview schedule are located in Appendix A.

## DATA SOURCES

1. Survey Instruments: The questionnaire elicits quantitative data for the purpose of providing both baseline data and information for use in developing the public information campaign. The interviews are primarily a source of qualitative data, specifically for preparing campaign materials. The interview schedule contains questions similar to those in the questionnaire but is structured in an open-ended form.
2. Washtenaw County driver records for 15-17 year old age range.
3. Out-county control driver records for 15-17 year old age range.

## EVALUATION MODEL

1970	1973	pre-test - post-test uncontrolled
M	X	field experiment

M = Measurement

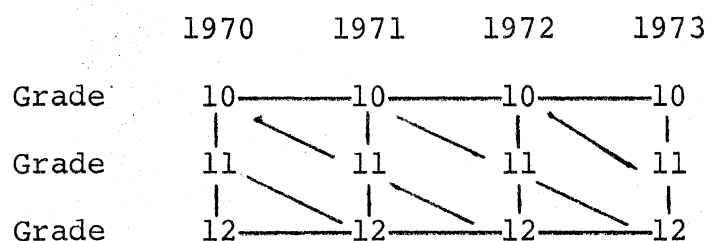
X = Treatment

## APPLICATION OF MODEL

In 1970, a random sample of 500 high school students (grade 10, 11, and 12) in Washtenaw County was selected for a survey of knowledge, attitude, and behavior with regard to drinking, driving, and driving after drinking. Most students completed

a self-administered questionnaire; a subsample of 60 students were interviewed individually.

Students were surveyed during school hours with the consent and cooperation of both parents and school personnel. Depending upon subsequent approval by parents and school personnel, repeat measurements will be taken during each interviewing year in order that group responses may be compared, as shown in the connecting lines:



Thus, both historical and maturational effects may be controlled in the evaluation of the effectiveness of the public information campaign on high school students. Questionnaires and interviews were anonymous, eliminating panel type interviews.

A post-campaign survey will be made in 1973.

Analysis of data from the survey will consist of the following:

1. Construct indexes of various aspects of knowledge, opinion, behavior.
2. Compare students at three age-grade levels.
3. Compare those with no, minor, or substantial driving experience.

4. Cross-tabulate knowledge items (or indexes against opinion items and drinking-driving behavior.
5. Cross-tabulate knowledge, attitude, and drinking-driving behavior against self-reported crashes and violations.
6. Examine relationships of knowledge/opinions/behavior to other measures, such as socio-economic status.

A random sample of driver records in Washtenaw County will be selected from the records of drivers 15-17 years of age in 1970. The incidence of DUIL convictions and alcohol-related highway crashes for that group will be compared with the incidence of the same events in a random sample of 15-17 year old Washtenaw County drivers drawn in 1973. Random samples of records of 15-17 year old drivers in the control populations outside the county will be compared with Washtenaw County young drivers in 1970 and 1973. Thus, it will be possible to measure not only change across time in the behavior of Washtenaw County's young drivers, but also to estimate the effectiveness of the public information campaign in Washtenaw County in producing those behavioral changes relative to changes in an untreated population.

#### 4.4.3 SPECIFIC TARGET GROUPS

The objectives, measures of effectiveness, and data sources for PIEC activities with specific target groups are given in the following outline.

<u>Target Group</u>	<u>Objectives</u>	<u>Measures of Effectiveness</u>	<u>Data Sources</u>
1. Physicians	<ol style="list-style-type: none"> <li>1. Increased awareness of the incidence of problem drinking</li> <li>2. Increased willingness to treat problem drinkers</li> <li>3. Increased awareness of available treatment resources</li> <li>4. Increased use of the WCCA as a referral center &amp; source of other help for patients</li> <li>5. Decreased class bias in diagnosing problem drinkers</li> </ol>	<ol style="list-style-type: none"> <li>1. comparison of knowledge, attitude, &amp; behavior items on survey instruments before &amp; after the campaign</li> <li>2. Comparison of the number &amp; characteristics of problem drinkers referred to the WCCA by physicians during 2 month period before &amp; after the campaign</li> </ol>	<ol style="list-style-type: none"> <li>1. Personal Interview (N=50)</li> <li>2. WCCA records indicating source of referral &amp; client's socio-economic status: occupation, income, education</li> </ol>
2. Social Workers	<ol style="list-style-type: none"> <li>1. Increased knowledge of: <ol style="list-style-type: none"> <li>a. predisposing factors of abusive drinking</li> <li>b. court procedures</li> <li>c. treatment resources</li> </ol> </li> <li>2. Appropriate handling of abusive drinkers so as to support &amp; facilitate treatment</li> </ol>	<ol style="list-style-type: none"> <li>1. Comparison of responses to survey instruments before &amp; after the campaign</li> </ol>	<ol style="list-style-type: none"> <li>Self-administered questionnaire (N=25)</li> </ol>
3. Clergy	<ol style="list-style-type: none"> <li>1. Increased knowledge of: <ol style="list-style-type: none"> <li>a. predisposing factors of abusive drinking</li> <li>b. court procedures</li> <li>c. treatment resources</li> </ol> </li> <li>2. Appropriate handling of abusive drinkers so as to support &amp; facilitate treatment</li> </ol>	<ol style="list-style-type: none"> <li>1. Comparison of responses to survey instruments before &amp; after the campaign</li> </ol>	<ol style="list-style-type: none"> <li>Self-administered questionnaire (N=25)</li> </ol>
4. Police	<ol style="list-style-type: none"> <li>1. Increased knowledge of: <ol style="list-style-type: none"> <li>a. predisposing factors of abusive drinking</li> <li>b. court procedures</li> <li>c. treatment resources</li> </ol> </li> </ol>	<ol style="list-style-type: none"> <li>1. Comparison of responses to survey instruments before &amp; after the campaign</li> </ol>	<ol style="list-style-type: none"> <li>Self-administered questionnaire (N=25)</li> </ol>

2. Appropriate handling of abusive drinkers so as to support & facilitate treatment
  - a. Increased understanding of what arrest information is needed by prosecutor to present case in court.

5. Lawyers

- |                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                     |                                                                                                                                                         |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ol style="list-style-type: none"> <li>1. Increased knowledge of the incidence of problem drinking</li> <li>2. Increased awareness of the value of treatment</li> <li>3. Increased willingness to cooperate with ASAP by encouraging clients arrested for drinking-related offenses to accept option of treatment offered by the court</li> </ol> | <ol style="list-style-type: none"> <li>1. Comparison of responses to knowledge, attitude, &amp; behavior items on survey instruments</li> <li>2. Comparison of the number of drinking-related court cases in which defense council argues for acquittal of the defendant</li> </ol> | <ol style="list-style-type: none"> <li>1. Personal interview (N=60)</li> <li>2. Arrest &amp; conviction records on drinking-related offenses</li> </ol> |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|

6. Bartenders

- |                                                                 |                                                                                                                                                                                                                                                                                           |                             |
|-----------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|
| <p>meetings, personal visits by WCCA officials &amp; others</p> | <p>Increase in: awareness of extent &amp; consequences of abusive drinking/driving; acceptance of partial responsibility for consequences; willingness to discourage excessive purchases by customers, &amp; to seek transportation help for customers who would drive while impaired</p> | <p>Before-after surveys</p> |
|-----------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|

7. Liquor store operators

- |                                                                 |                                                                                                                                                                                                                                                                                           |                             |
|-----------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|
| <p>meetings, personal visits by WCCA officials &amp; others</p> | <p>Increase in: awareness of extent &amp; consequences of abusive drinking/driving; acceptance of partial responsibility for consequences; willingness to discourage excessive purchases by customers, &amp; to seek transportation help for customers who would drive while impaired</p> | <p>Before-after surveys</p> |
|-----------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|

8. Families of Problem
1. Increased knowledge of:
    - a. predisposing factors of abusive drinking
    - b. court procedures
    - c. treatment resources
  2. Appropriate handling of abusive drinkers so as to support & facilitate treatment
1. Comparison of responses to survey instruments before & after the campaign
- Self-administered questionnaire (N=25)
9. Hospital Boards
1. Increased awareness of possibilities for treatment success
  2. Acceptance of policy of admitting problem drinkers for treatment
  3. Acceptance of after-care policy of referral to WCCA or other agency when indicated upon discharge from hospital
1. Comparison of hospital board policies on admission of problem drinkers for treatment
2. Comparison of the number of patients with diagnosis of alcoholism for 1-month period before & after the campaign
3. Comparison of the number of referrals to WCCA or other agency by hospital physicians & hospital social workers
1. Personal interview (N=10)
10. Judges
- Similar to criminal lawyer & prosecuting attorney objectives, but with emphasis on use of legal sanctions at time of conviction to promote treatment rather than incarceration of problem drinkers
1. Increased awareness of incidence of problem drinking
  2. Increased willingness to use legal sanctions to promote treatment of problem drinkers
  3. Decreased reduction of DWIL charges to DWI at the time of arraignment except when reduction is concurrent with admission of offender to ASAP treatment
1. Comparison of survey responses before & after the campaign
2. Comparison of number of convictions which provide for treatment
1. Personal interview (N=5)
2. Conviction records indicating disposition of court in drinking related cases
11. Prosecutors
1. Increased awareness of incidence of problem drinking
  2. Increased willingness to use legal sanctions to promote treatment of problem drinkers
  3. Decreased reduction of DWIL charges to DWI at the time of arraignment except when reduction is concurrent with admission of offender to ASAP treatment
1. Comparison of responses of knowledge, attitude & behavior items on survey instruments
2. Comparison of the number of DWIL charges reduced to DWI & the number of times treatment is a factor in the reduction of charge
1. Personal interview (N=5)
2. Arrest & conviction records on drinking-related offenses



4. Comittment to continuing effective elements of WCASAP
- Physicians, spouses, clergy employers, social workers, friends, bar operators, liquor store operators
- Increase in: awareness of symptoms & risks of excessive drinking; awareness of own symptoms; awareness of treatment resources; seeking of help
- Before-after surveys of identified problem drinkers; before-after comparison of records of treatment facilities & of police
12. Problem Drinkers
- Decrease in: drinking episodes frequency of driving after drinking; police contacts
13. Employees
- newspaper, radio (features news, interviews, paid advertising)
- Increase in percentage of persons who: know amount of drinking that impairs their own driving; know (& accept legitimacy of) court & police procedures; know risk to self & family (number of impaired drivers & relationship between BAC levels & crash probability) know symptoms & effects of abusive drinking; know value of various treatment methods; are willing to support use of public funds for treatment facilities; support & use WCCA as appropriate (e.g., give money, give time as volunteer, refer problem drinkers for help
- Comparison at beginning & end of campaign of: responses on surveys; number of referrals to WCCA; number of volunteers contributing time; amount of money contributed; incidence of vehicle crashes involving alcohol
14. Voluntary Organizations (service clubs)
- Similar to general public objectives, but with emphasis on contribution of time on an organizational basis
- Decrease in number of persons who: drive after drinking; are charged by police with impaired driving; are involved in vehicle crashes
1. Comparison of responses to knowledge & attitude items on pre-post survey instruments
  2. Comparison of the number of referrals
1. Self-administered questionnaire (N=750)
  2. WCCA records on referrals

3. WCCA records of time contributed by voluntary organizational

- referrals to the WCCA before & after the campaign
- 3. Comparison of the amount of time contributed to the WCCA before & after campaign
- 4. Comparison of self-reported incidence of driving after drinking before & after campaign

Personal interview (N=20)

- Increase in: awareness of extent of problem; acceptance of responsibility of news media to inform public about the problem & means of ameliorating it; use of informational materials supplied by WCCA; mention of evidence of drinking in reports of vehicle crashes

Personal interview (N=20)

- 1. Comparison of before-after survey data
- 2. Comparison of before-after incidence of alcohol used in high schools

1. Personal interview (N=50)

- 1. Comparison of survey responses before & after the campaign
- 2. Comparison of employee education programs offered before & after the campaign

referrals to the WCCA

- before & after the campaign
- 3. Comparison of the amount of time contributed to the WCCA before & after campaign
- 4. Comparison of self-reported incidence of driving after drinking before & after campaign

letters & personal visits from WCCA officials

15. News managers (radio, news-

- 1. Increased knowledge about extent, effects, & predisposing factors regarding abusive drinking
- 2. Increased quantity & quality of alcohol & driver education curriculum
- 3. Increased use of effective methods in teaching about alcohol

16. High School teachers & curriculum advisors

- 1. Increased knowledge of
  - a. symptoms of abusive drinking
  - b. own business losses attributable to problem drinking
  - c. availability of treatment resources
- 2. Increased support for alcohol education programs for employees

17. Businessmen, employers

1. Personal interview (N=50)

- 1. Comparison of survey responses before & after the campaign
- 2. Comparison of employee education programs offered before & after the campaign

## 5.0 COMMUNITY SUPPORT MEASURES

For the treatment of individual clients to be a success, much depends on the willingness and cooperativeness of community treatment agencies in handling the clients. To this effect the following inter-agency objectives should be realized.

Inform treatment agencies of the existence, objectives and modus operandi of the Washtenaw County ASAP program.

Solicit their cooperation in accepting referrals from the ASAP program both at the policy and operational levels.

Obtain their agreement to provide the Washtenaw County Council on Alcoholism with data on individual clients which is necessary for an evaluation of the success of the treatment procedures.

## MEASURES OF EFFECTIVENESS

1. Number of treatment agencies informed of Washtenaw County ASAP per total of all relevant community treatment agencies.
2. Statement of pre program policy in handling problem drinkers and alcoholics compared to statement of policy after program explanation.
3. Operational policy in accepting problem drinkers during the program i.e. number actually accepted for treatment per total referred.
4. Proportion of data returned to Psychiatric Social Worker on individual referrals per amount requested.

## EVALUATION MODEL

The measures of effectiveness indicate the rather straightforward types of comparisons which will be made (1) comparison of what occurred in the past with what is stated will occur in the future; (2) comparison of desired level of cooperation with what it actually is. Information on these topics will be collected through survey questionnaires and during the referral process.

Further community support objectives are outlined in the section on the Public Information and Education project where appeals to the community will encompass a wider population than just that part of the community concerned with providing rehabilitative treatment. The support measures discussed above are generally related to the acceptance of referrals which the ASAP feeds into the community. In the Public Information and Education section (4.4) support measures basically cover those contributions the community makes to the ASAP in financial assistance, time, and voluntary referrals to the program. Particular attention should be directed to the evaluation methodology for the following target groups; general public, voluntary organizations employers, and news managers.

Appendix A

SURVEY INSTRUMENTS

Contents: High School Student Survey  
Questionnaire and Interview

Washtenaw County General  
Public Questionnaire

Washtenaw County  
BAC Roadside Survey

HIGH SCHOOL STUDENT QUESTIONNAIRE



UNIVERSITY OF  
MICHIGAN

HIGHWAY SAFETY RESEARCH INSTITUTE  
SCHOOL OF PUBLIC HEALTH

October, 1970

Dear Student:

This questionnaire is part of a three-year program being conducted in Washtenaw County to reduce the number of alcohol-related highway crashes. One phase of the program is to find out what high school students know about the subject of drinking and driving, how they feel about it, and what they are doing about it. Your answers will help us decide what information on drinking and driving to give to other high school students.

Your school and class were picked at random from all those in Washtenaw County. This questionnaire is completely confidential. Please do not write your name on it.

Please answer all questions as honestly as you can. When you finish, this questionnaire will be collected by a staff member of the program.

Thank you very much.

HIGHWAY SAFETY  
RESEARCH INSTITUTE

A handwritten signature in cursive script, appearing to read 'Lyle Filkins'.

Lyle Filkins,  
Coordinator

SCHOOL OF  
PUBLIC HEALTH

A handwritten signature in cursive script, appearing to read 'James W. Swinehart'.

James W. Swinehart, Ph.D.  
Consultant

UNIVERSITY OF MICHIGAN

Highway Safety Research Institute  
School of Public Health

October, 1970

(01: 1-5)  
00234

SURVEY ON DRINKING AND DRIVING

On most questions, please CHECK ONE ANSWER, whichever is closest to your opinion or experience. Pay no attention to the numbers in parentheses ( ) before each answer or in the right margin. They will be used to punch your answers on data cards.

(6-7)  
01

(8-10)  
---

General information

1. Have you ever driven a car?

(1)  Yes      (2)  No (go on to Question 2)

(11)



a. (If yes) When do you usually drive a car? CHECK ONE:

(12)

- (1)  Weekends and weekdays
- (2)  Weekends only
- (3)  Weekdays only
- (4)  I seldom drive a car

b. (If yes) About how often in the past month did you drive a car?  
CHECK ONE:

(13)

- (1)  I didn't drive at all in the past month
- (2)  1-7 days
- (3)  8-14 days
- (4)  15-21 days
- (5)  22-30 days

2. Have you ever driven a motorcycle?

(1)  Yes      (2)  NO

(14)



a. (If yes) When do you usually drive a motorcycle? CHECK ONE:

(15)

- (1)  Weekends and weekdays
- (2)  Weekends only
- (3)  Weekdays only
- (4)  I seldom drive a motorcycle

(cont'd)

5. Some people say that two persons who drink the same amount of alcohol--like 4 bottles of beer a piece--will not act and feel alike, because of certain conditions. In your opinion, how much difference will each of the following conditions make in how people act and feel after drinking the same amount of alcohol? CHECK ONE answer for EACH LINE:

	<u>This condition would make:</u>				
	A lot of diff- erence (1)	Some dif-- erence (2)	Almost no dif- ference (3)	I have no idea (4)	
	How much the person is eating. . . . .	—	—	—	
Whether the person is a man or a woman	—	—	—	—	(42)
How much he weighs . . . . .	—	—	—	—	(43)
How old he is. . . . .	—	—	—	—	(44)
Whether he changes from one kind of alcoholic beverage to another while he is drinking . . . . .	—	—	—	—	(45)
How rapidly or slowly he drinks. . . . .	—	—	—	—	(46)
How he is feeling (tired, sad, happy, nervous, relaxed, etc.). . . . .	—	—	—	—	(47)
Whether he is taking medicine. . . . .	—	—	—	—	(48)
Whether he is smoking pot. . . . .	—	—	—	—	(49)
Whether he is on some strong drug like LSD . . . . .	—	—	—	—	(50)
How the people he is with are acting . .	—	—	—	—	(51)
Other conditions (write in):					
(52) _____	—	—	—	—	(52-53)
(54) _____	—	—	—	—	(54-55)

6. People use different methods to sober up. Suppose a person drank four bottles of beer in one hour. How well do you think each of the following methods would work? Please give your opinion, even if you're not sure. CHECK ONE answer for EACH LINE:

	<u>It would sober him up:</u>				
	Almost entirely (1)	About half-way (2)	Little or none (3)	I have no idea (4)	
	Drinking four cups of black coffee . . .	—	—	—	
Waiting about four hours . . . . .	—	—	—	—	(57)
Walking rapidly about four times around the block . . . . .	—	—	—	—	(58)
Eating four servings of carbohydrate, such as doughnuts. . . . .	—	—	—	—	(59)
Other (write in):					
(60) _____	—	—	—	—	(60)





There is about the same amount of pure alcohol in:

- one 12-ounce bottle of beer
- one shot or mixed drink containing 3/4 ounce of hard liquor
- one 4-ounce glass of wine

Let's call each of these "one drink." In the following questions, one "drink" will mean one of the above.

7. Suppose a person of your age and sex has two drinks in half an hour before he drives a car. In your opinion, which of the following is most likely to happen? CHECK ONE:

(01: 62)

- (1)\_\_\_ He will probably be more relaxed and so will drive somewhat better than usual.
- (2)\_\_\_ He will probably be less alert, and so will drive somewhat worse than usual.
- (3)\_\_\_ He won't be affected much; he'll drive about the same as usual.
- (4)\_\_\_ I have no idea.

8. Suppose a person of your age and sex has one drink every 15 minutes and then starts to drive. Under normal conditions, about how many drinks can he have before he is unsafe as a driver? CHECK ONE:

(63)

- (1)\_\_\_ One drink
- (2)\_\_\_ Two drinks
- (3)\_\_\_ Three or four drinks
- (4)\_\_\_ Five or six drinks
- (5)\_\_\_ Seven or eight drinks
- (6)\_\_\_ Nine to eleven drinks
- (7)\_\_\_ Twelve or more drinks
- (8)\_\_\_ I have no idea

9. Again suppose a person of your age and sex has one drink every 15 minutes. Under normal conditions, about how many drinks would it take before he becomes what you consider to be drunk or intoxicated? CHECK ONE:

(64)

- (1)\_\_\_ One drink
- (2)\_\_\_ Two drinks
- (3)\_\_\_ Three or four drinks
- (4)\_\_\_ Five or six drinks
- (5)\_\_\_ Seven or eight drinks
- (6)\_\_\_ Nine to eleven drinks
- (7)\_\_\_ Twelve or more drinks
- (8)\_\_\_ I have no idea

Amount and conditions of driving

10. Among all the students in your grade in your high school, about how many do you think drink alcoholic beverages about once a month or more? Please make a guess, even though you're not sure.

(01: 65)

- (1) \_\_\_ Almost no one drinks
- (2) \_\_\_ A few of them drink (10-15%)
- (3) \_\_\_ About one out of four
- (4) \_\_\_ About half
- (5) \_\_\_ About three out of four
- (6) \_\_\_ Nearly all
- (7) \_\_\_ I have no idea

11. Among the crowd you hang around with, about how many drink alcoholic beverages about once a month or more?

(66)

- (1) \_\_\_ No one in my crowd drinks
- (2) \_\_\_ A few drink
- (3) \_\_\_ About one out of four
- (4) \_\_\_ About half
- (5) \_\_\_ About three out of four
- (6) \_\_\_ Nearly all

12. How about yourself?

a. When do you usually drink?

(67)

- (1) \_\_\_ Weekends and weekdays
- (2) \_\_\_ Weekends only
- (3) \_\_\_ Weekdays only
- (4) \_\_\_ Don't drink at all

b. About how often do you drink?

(68)

- (1) \_\_\_ Almost everyday
- (2) \_\_\_ 3 to 5 times a week
- (3) \_\_\_ 1 or 2 times a week
- (4) \_\_\_ 1 to 3 times a month
- (5) \_\_\_ About every other month
- (6) \_\_\_ Once or twice a year
- (7) \_\_\_ Don't drink at all

(cont'd)

12. (cont'd)

c. About how much do you usually have when you are drinking?

(01: 69)

- (1) \_\_\_ One drink
- (2) \_\_\_ Two drinks
- (3) \_\_\_ 3-4 drinks
- (4) \_\_\_ 5-6 drinks
- (5) \_\_\_ 7-8 drinks
- (6) \_\_\_ 9-11 drinks
- (7) \_\_\_ 12 or more drinks
- (8) \_\_\_ Don't drink at all

d. What is the most that you would have while you are drinking?

(70)

- (1) \_\_\_ One drink
- (2) \_\_\_ Two drinks
- (3) \_\_\_ 3-4 drinks
- (4) \_\_\_ 5-6 drinks
- (5) \_\_\_ 7-8 drinks
- (6) \_\_\_ 9-11 drinks
- (7) \_\_\_ 12 or more drinks
- (8) \_\_\_ Don't drink at all

13. In the past three months, about how often have you been a passenger in a car driven by one of your friends who had been drinking (two drinks or more?)

(71)

- (1) \_\_\_ Almost every day
- (2) \_\_\_ 3 to 5 times a week
- (3) \_\_\_ Once or twice a week
- (4) \_\_\_ 1 to 3 times a month
- (5) \_\_\_ About once or twice in the past three months
- (6) \_\_\_ Not at all during this time

14. Within the past three months, have you ever turned down a ride because you felt the driver had been drinking too much? CHECK ONE:

(72)

- (1) \_\_\_ No, I have not turned down a ride for this reason
- (2) \_\_\_ It never happened that the driver had been drinking
- (3) \_\_\_ Yes, I have turned down a ride for this reason

↳ a. (if yes) How many times in the past three months?

(73)

\_\_\_\_\_ (number of times)

15. In the past three months, about how often have you driven a car, after you had been drinking (two drinks or more)?

(01: 74)

- (1) \_\_\_ Almost every day
- (2) \_\_\_ 3 to 5 times a week
- (3) \_\_\_ Once or twice a week
- (4) \_\_\_ 1 to 3 times a month
- (5) \_\_\_ Once or twice in the past three months
- (6) \_\_\_ Not at all during this time

(75-80  
blank)

(02: 1-5)  
00234

(6-7)

02

(8-10)

Some legal aspects

On each of the following questions, please make a guess, even though you may not be sure.

16. Michigan has an "implied consent law" in regard to driving. What do you think this law means?

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(11-14)  
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17. If the amount of alcohol in a person's blood reaches a certain concentration, he may be convicted of a drunk driving offense ("driving under the influence of alcohol".)

Suppose a person of your age and sex has one drink every 15 minutes, and then is arrested while driving, about how many drinks do you think it would take until he might be convicted of drunk driving? ("One drink" means the same as on page 4.)

(15)

- (1) \_\_\_ One drink
- (2) \_\_\_ Two drinks
- (3) \_\_\_ 3-4 drinks
- (4) \_\_\_ 5-6 drinks
- (5) \_\_\_ 7-8 drinks
- (6) \_\_\_ 9-11 drinks
- (7) \_\_\_ 12 or more drinks
- (8) \_\_\_ I have no idea

18. The amount of alcohol in the blood is measured roughly as a percent of blood volume. What do you think is the lowest legal limit at which a person is presumed to be a drunk driver? (16)
- (1)  0.01% to 0.04%  
(2)  0.05% to 0.09%  
(3)  0.10% to 0.14%  
(4)  0.15% to 0.24%  
(5)  0.25% to 0.49%  
(6)  0.50% to 0.99%  
(7)  1.0% or higher  
(8)  I have no idea
19. Regardless of how you answered the questions above, what is your opinion of the legal definition of intoxication in Michigan? Do you think that the law is (CHECK ONE): (17)
- (1)  Too strict--a higher blood alcohol level should be allowed before a person is called intoxicated  
(2)  About right  
(3)  Too lenient--a lower blood alcohol level should be set  
(4)  I have no idea
20. The police have a "breathalyzer" that tests for the amount of alcohol in the blood. When do you think the police can require a driver to take this test? Check ANY ANSWERS that you think apply: (23)
- The police can require a driver to take the test:
- In any car that they stop in a random spot check (18)  
 If they have evidence that the driver has been drinking (19)  
 If the driver violates a traffic law such as speeding (20)  
 If they arrest the driver for driving while intoxicated (21)  
 None of these; the police can't require anyone to take the test (22)  
 I have no idea (23)
21. Regardless of your answer above, when do you think the police should be able to require a driver to take a breathalyzer test for alcohol? (28)
- Check ANY ANSWERS that you would recommend.
- The police should be able to require a driver to take a test:
- In any car that they stop in a random spot check (24)  
 If they have evidence that the driver has been drinking (25)  
 If the driver violates a traffic law such as speeding (26)  
 If they arrest the driver for driving while intoxicated (27)  
 None of these; police should not be able to require the test (28)

22. What are the consequences of refusing to take a breath test to determine the amount of alcohol in the blood? Check ANY ANSWERS that you think apply:

- Car impounded (02: 29)
- Insurance rates increased (30)
- License suspended (31)
- Fine (32)
- Jail (33)
- I have no idea (34)
- I have no idea (35)

23. If a driver is convicted for the first time of driving while intoxicated--"driving under the influence of alcohol"--what penalty is likely to happen? Check ANY ANSWERS that you think might apply:

- His license will be suspended temporarily (36)
- His license will be taken away permanently (37)
- His car will be impounded (38)
- He will have to pay a certain fine (39)
- He will be put in jail for a number of days (40)
- He will have to get medical treatment for alcoholism (41)
- His insurance will cost more (42)
- I have no idea (43)

24. If a driver is convicted for the first time of driving while intoxicated, in your opinion what do you think should happen? (Regardless of what you think might actually happen). Check ANY ANSWERS that you would recommend, and fill in amounts if you wish:

- Suspend his license temporarily (how long? \_\_\_\_\_) (44-45)
- Take away his license permanently (46)
- Impound his car (how long? \_\_\_\_\_) (47-48)
- Fine him (how much? \$ \_\_\_\_\_) (49-50)
- Put him in jail (how long? \_\_\_\_\_) (51-52)
- Require him to get medical treatment for alcoholism (53)
- Raise his insurance rate (what amount or percent? \_\_\_\_\_) (54-55)
- Other recommendation: \_\_\_\_\_ (56)

25. Suppose a driver is convicted three times of driving while intoxicated. What do you think should happen then? (Regardless of what you think might actually happen.) Check ANY ANSWERS that you would recommend, and fill in amounts if you wish:

- Suspend his license temporarily (how long? \_\_\_\_\_) (57-58)
- Take away his license permanently (59)
- Impound his car (how long? \_\_\_\_\_) (60-61)
- Fine him (how much? \$ \_\_\_\_\_) (62-63)
- Put him in jail (how long? \_\_\_\_\_) (64-65)
- Require him to get medical treatment for alcoholism (66)
- Raise his insurance rate (what amount or percent? \_\_\_\_\_) (67-68)
- Other recommendation: \_\_\_\_\_ (69)

(70-80  
blank)

The importance of alcohol in driving

(03: 1-5)  
0 0 2 3 4

26. Opinions differ on how important alcohol is in highway crashes. We'd like your opinions of the following questions, even if you're not sure.

(6-7)  
0 3  
(8-10)

In general, would you consider that drinking while driving is (CHECK ONE):

— — —  
(11)

- (1)  Not a very serious problem
- (2)  A moderately serious problem
- (3)  A major problem
- (4)  The most serious problem in highway accidents

27. Among the highway crashes each year in which someone is killed, in about how many would you guess that the driver was intoxicated--really drunk?

(12)

- (1)  Almost none
- (2)  In a few of the crashes (5-19%)
- (3)  In about 1/4 or 1/3 (20-39%)
- (4)  In about half (40-59%)
- (5)  In about 2/3 or 3/4 (60-79%)
- (6)  In a great many (80-95%)
- (7)  In almost all crashes
- (8)  I have no idea



28. Have you personally known anyone ( a friend, relative, or yourself) who was involved in a motor vehicle accident when the driver had been drinking?

- (1)  Yes                      (2)  No (go on to Question 29)

(03: 13)



<p>a. (If yes) How serious was the accident? _____                  _____</p> <p>b. How well did you know the person? _____                  _____</p>	<p>(14)</p> <p>(15)</p>
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Your own driving

29. Have you obtained either a driver's license or a learner's permit?  
CHECK ONE:

- (1)  No, neither one                      (2)  A learner's permit only  
 (3)  Yes, a driver's license

(16)



<p>a. (If a license) About how long ago did you get your license?</p> <p>(1) <input type="checkbox"/> Less than one month                  (2) <input type="checkbox"/> One to five months ago                  (3) <input type="checkbox"/> Six to 11 months                  (4) <input type="checkbox"/> 12 to 23 months                  (5) <input type="checkbox"/> 24 months (2 years) or more ago</p>	<p>(17)</p>
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30. Have you taken a driver education course?

- (1)  Yes                      (2)  No

(18)



<p>a. (If yes) When did you take it? CHECK ONE:</p> <p>(1) <input type="checkbox"/> Grade 10, fall semester                      (6) <input type="checkbox"/> Summer after grade 11                  (2) <input type="checkbox"/> Grade 10, spring semester                      (7) <input type="checkbox"/> Grade 12, fall semester                  (3) <input type="checkbox"/> Summer after grade 10                      (8) <input type="checkbox"/> Grade 12, spring semester                  (4) <input type="checkbox"/> Grade 11, fall semester                  (5) <input type="checkbox"/> Grade 11, spring semester</p>	<p>(19)</p>
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NOTE: If you do not drive or have not driven more than a few times in the past year, CHECK HERE \_\_\_\_\_ and skip to Question 34.

(03: 20)

31. In the past 12 months, how many times have you been ticketed for a moving violation (such as speeding, going through a red light, etc.)?

\_\_\_ Not at \_\_\_ 1 \_\_\_ 2 \_\_\_ 3 \_\_\_ 4 \_\_\_ 5 or more  
all (0) time times times times times

(21)

32. Other than tickets, how many times in the past year have you been stopped and warned by a policeman?

\_\_\_ Not at \_\_\_ 1 \_\_\_ 2 \_\_\_ 3 \_\_\_ 4 \_\_\_ 5 or more  
all (0) time times times times times

(22)

33. In the past 12 months, have you had any accidents while you were driving a car or motorcycle--any mishap where there was some property damage or injury, regardless of who was at fault? (Do not count minor bumps in parking lots.)

(1) \_\_\_ Yes (2) \_\_\_ No (skip to Question 34)

(23)

a. (If yes) How many accidents did you have in the past year while you were driving?

\_\_\_ 1 \_\_\_ 2 \_\_\_ 3 \_\_\_ 4 \_\_\_ 5 or more

(24)

b. How many of your accidents in the past year happened after you had one or more drinks just before driving?

\_\_\_ None after \_\_\_ 1 \_\_\_ 2 \_\_\_ 3 \_\_\_ 4 \_\_\_ 5 or more  
drinking (0)

(25)

Some background facts

34. What school do you attend? \_\_\_\_\_ (03: 36)

35. What is your present grade in school?    \_\_\_10th       \_\_\_11th       \_\_\_12th       (27)  
                                                          (1)           (2)           (3)

36. How old are you? (Age on your last birthday):  
\_\_\_Under 14   \_\_\_14   \_\_\_15   \_\_\_16   \_\_\_17   \_\_\_18   \_\_\_19 or       (28)  
          (1)       (2)       (3)       (4)       (5)       (6)       more (7)

37. Sex: (1)\_\_\_Male       (2)\_\_\_Female       (29)

38. Type of curriculum in school:       (30)

- (1)\_\_\_Vocational
- (2)\_\_\_General
- (3)\_\_\_College preparatory
- (4)\_\_\_Other: \_\_\_\_\_

39. What is your father's occupation? What kind of work does he do--or did he last do? (If no father, answer for male guardian if any)       (31-32)

\_\_\_\_\_

40. What is your mother's occupation? (If no mother, answer for female guardian, if any)       (33-34)

\_\_\_\_\_

41. How many grades of school or college did each of your parents complete? (If no father or mother, answer for male or female guardian, if any).  
CHECK ONE for each person:       (35-36)

	Father	Mother
7 grades of school or less. . . . .	___(1)	___(1)
8-11 grades . . . . .	___(2)	___(2)
12 grades (high school diploma) . . . . .	___(3)	___(3)
1-3 years of college or trade or business school. . . . .	___(4)	___(4)
4 years of college (bachelor's degree). . . . .	___(5)	___(5)
1 or more years of graduate work (beyond B.A.). . . . .	___(6)	___(6)



HIGH SCHOOL STUDENT INTERVIEW  
UNIVERSITY OF MICHIGAN

Highway Safety Research Institute  
School of Public Health

October, 1970

Interviewer: _____	Time started _____
	Time ended _____

PERSONAL INTERVIEW ON DRINKING AND DRIVING

Explain purpose of survey in your own words. You may wish to include some or all of these facts:

1. Study on drinking and driving
2. Three year study
3. Conducted by University of Michigan, Highway Safety Research Institute, School of Public Health
4. Students selected from high schools in Washtenaw County
5. Some students are given questionnaires; a fewer number of students are given individual interviews
6. Questionnaires and interviews are confidential
7. No names are used

1. Let's start with a few questions on driving. Have you learned how to drive a car?

\_\_\_ Yes      \_\_\_ is learning

\_\_\_ No (Go to Q. 2)

a. (IF YES OR IS LEARNING) About how often in the past month did you drive a car?

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---

2. Have you ever driven a motorcycle?

\_\_\_ Yes      \_\_\_ No (Go to Q. 3)

a. (IF YES) About how often in the past month did you drive a motorcycle?

---

---

3. Many schools have courses in areas such as eating habits, grooming, citizenship, and safety. Were there any courses in school in which you received some information about drinking and driving?

\_\_\_ Yes      \_\_\_ No, or don't remember (Go to Q. 4)

Probe: (As to the nature and scope of courses.)

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Deeper probe: (How did the course affect you?)

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Now I'd like to ask for some of your opinions on drinking.

4. Some people say that alcohol has different effects on how a person acts or feels depending on the situation, who is drinking, and the amount. What do you think?

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Probe: (In relation to situation, who is drinking, and amount.)

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5. People use different methods to sober up. What do you think a person can do to sober up?

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Probe: (Anything else?)

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6. I would like to ask you about what "taking a drink" consists of--people have different ideas about the meaning of "taking a drink." What does "taking a drink" mean to you?

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Probe: (As to beer, liquor, wine.)

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Now I'd like to know something about the opinion of your friends about drinking.

7. In the crowd you hang around with, is drinking acceptable?

Yes  No

Probe: (If yes, what type of drinking; how much drinking)  
(If no, why?)

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8. People tell us that they sometimes drink before driving. How much drinking do you think is all right if a person is going to drive?

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Probe: (Why do you feel that way?)

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9. What do you think happens to a person's ability to drive when he drinks?

---

---

Probe: (Why do you think this?)

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---

Now, we would like to ask you about how your parents feel about drinking.

10. Some parents have funny ideas about drinking. How do your parents feel about drinking?

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- a. How do your parents feel about teenage drinking?

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11. People (maybe your parents, relatives, or friends) often speak of "social drinking." What does social drinking mean to you?

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- a. How do you feel about driving and social drinking?

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Not everybody knows the effect that drinking has on driving. Now, I would like to ask you how we can give teenagers more information about the effects of drinking on driving.

12. Suppose that a committee in Washtenaw County wanted to put on an educational campaign to give teenage drivers more information about alcohol, and the effects of drinking on driving. In your opinion, what would be the best ways to reach teenagers with this kind of information?

---

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---

Probe if necessary:

- a. Some people spend alot of time listening to the radio, looking at television, reading the newspapers, going to club meetings, etc. Do you feel that any of these things would be helpful?

---

---

- b. Teenagers like to listen to some people more than others. What kind of people would you be most likely to listen to in regards to the effects of drinking on driving?

---

---

---

13. Do you ever listen to local radio stations like WCHB, WAAM, WPAG, CKLW, etc.?

Yes       No (Go to Q. 14)

a. (IF YES) On these stations do you have any favorite announcers or disk jockeys? Which ones?

---

---

---

We've been talking about drinking and driving. We know that one out of every two highway accidents in which someone is killed involves drinking and driving in some way.

14. With all the problems facing our society, such as pollution, Vietnam, race problems, poverty, and so on, how would you rate the problem of drinking and driving?

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---

Probe: (Why do you feel that way?)

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---

---

15. Have you personally known anyone--a friend, relative, or maybe yourself--who was involved in a motor vehicle accident when the driver had been drinking?

Yes       No (Go to Q. 16)

a. (IF YES) How well did you know the person? \_\_\_\_\_

---

b. How serious was the accident? \_\_\_\_\_

---

---

We have covered most of the important points of the interview. Now, I would like to ask you about drunk drivers.

16. Sometimes the police arrest people who are driving under the influence of alcohol. Some people say the courts are too strict and others say they are too lenient. What do you think?

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Probe: (On what do you base your feelings?) \_\_\_\_\_

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17. Some people say that an alcoholic is a person who has lost control over his drinking habits and must have alcohol in his system most of the time. Have you ever known such a person?

---

---

Probe: (Does this person drive? Do you think this person should be on the highway? Would you ride in a car with such a person?)

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18. Suppose a driver is convicted three times of driving while intoxicated. In your opinion, and regardless of what the law says, what do you think should happen to this driver?

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---

Probe: (Anything else?) \_\_\_\_\_

---

---

- a. Would you call this kind of person an alcoholic?

---

---

This completes the major part of the interview. Now, I would like to ask some questions about you.

BACKGROUND INFORMATION:

19. Your present grade in school is (CONFIRM):    \_\_\_ 10th    \_\_\_ 11th    \_\_\_ 12th

20. SEX (CHECK):    \_\_\_ MALE    \_\_\_ FEMALE

21. What type of curriculum are you in? (READ AND CHECK)

\_\_\_ Vocational

\_\_\_ General

\_\_\_ College preparatory

\_\_\_ Or other? (IF THIS, ASK: What is the curriculum called?)

22. What is your father's occupation or what kind of work does he do? (IF FATHER DECEASED OR SEPARATED, ASK: What kind of work did he last do? IF NO FATHER, ASK OCCUPATION OF MALE GUARDIAN IF ANY.)

23. What is your mother's occupation? (IF NO MOTHER, ASK ABOUT OCCUPATION OF FEMALE GUARDIAN IF ANY.)

24. How many grades of school or college did each of your parents complete? (CHECK ONE COLUMN EACH FOR FATHER AND MOTHER, OR FOR MALE OR FEMALE GUARDIAN. DO NOT READ ALTERNATIVES UNLESS NECESSARY TO CLARITY.)

	FATHER	MOTHER
7 GRADES OF SCHOOL OR LESS . . . . .	___	___
8-11 GRADES . . . . .	___	___
12 GRADES (HIGH SCHOOL DIPLOMA) . . . . .	___	___
1-3 YEARS OF COLLEGE/TRADE/BUSINESS SCHOOL . .	___	___
4 YEARS OF COLLEGE, WITH BACHELORS DEGREE . .	___	___
1 OR MORE YEARS OF GRADUATE WORK BEYOND B.A. .	___	___

\* \* \*

CLOSE WITH APPRECIATION, SUCH AS:

You have been very helpful in giving us some insights as to what teenagers think about drinking and driving. Are there any questions you would like to ask me? Thank you very much.

WASHTENAW COUNTY  
BAC ROADSIDE SURVEY QUESTIONNAIRE

Good evening. My name is

We are from the Highway Safety Research Institute and are conducting a survey for the Washtenaw County Alcohol Safety Action Program. The information obtained in the survey will be used to make driving safer for you and your family.

We are asking each Washtenaw County driver who is stopped at a survey site to voluntarily spend a few minutes with us.

Each driver takes an alcohol breath test and answers a few simple questions. All information obtained in the survey is strictly confidential and cannot be used against you.

Here is our card.

Are you a Washtenaw County resident? Yes \_\_\_ No \_\_\_ (send on)

Would you like to step over here and see how the Breathalyzer machine works?



\_\_\_ student

\_\_\_ unemployed \_\_\_\_\_ Are you:

\_\_\_ on strike \_\_\_ ill \_\_\_ laid off \_\_\_ fired \_\_\_ changing jobs

5. Where are you coming from?

First Response

Second Response

\_\_\_ bar

Bar \_\_\_

\_\_\_ restaurant

restaurant \_\_\_

\_\_\_ own home

own home \_\_\_

\_\_\_ friend's or relative's home

friends, relative home \_\_\_

\_\_\_ private club

private club \_\_\_

\_\_\_ sport or recreational  
building

sport or recreational \_\_\_  
building

\_\_\_ place of work or school

in vehicle \_\_\_

\_\_\_ extracurricular meeting or  
appointment

outdoors \_\_\_

(service club meeting, dental appointment, shopping,  
errand, etc.)

\_\_\_ other (specify) \_\_\_\_\_

Other \_\_\_\_\_  
specify

6a. Did you have anything to drink there?

\_\_\_ yes \_\_\_ no

b. Did you stop anywhere to drink before coming here?

\_\_\_ yes \_\_\_ no (go to Q.7)

c. Where did you stop to drink? (Check Second Response in Q.5)

d. What kind of alcoholic beverage were you drinking? How many  
drinks did you have of each type?

\_\_\_ beer, number of

\_\_\_ wine, number of

\_\_\_ spirits, number of

e. How long were you drinking? \_\_\_\_\_ number of hours

f. After you last drink, how long was it before you started driving?

\_\_\_ hours \_\_\_ minutes

(Go to Q.8)

7. Have you had anything to drink in the past 12 hours?

\_\_\_ yes \_\_\_ no (Go to Q.8)

a. Where were you drinking?

\_\_\_ bar

\_\_\_ restaurant

\_\_\_ own home

\_\_\_ home of friends or relatives

\_\_\_ private club

\_\_\_ sport or recreational building

\_\_\_ in vehicle

\_\_\_ outdoors

\_\_\_\_\_ other (specify)

b. What kind of alcoholic beverages were you drinking? How many of each type?

\_\_\_ beer, number of

\_\_\_ wine, number of

\_\_\_ spirits, number of

c. How long ago did you have your last drink?

\_\_\_ hours \_\_\_ minutes

8. Where are you going now?

\_\_\_ bar

\_\_\_ restaurant

\_\_\_ private club

\_\_\_ own home



- friend's or relative's home
  - sport or recreational event
  - work or school
  - extracurricular meeting or appointment, shopping, errand
- 
- specify other

9. Will you be drinking there?

yes     no    (Go to Q.10)

a. Will you be driving afterwards?     yes     no

10. In the last year has there been a decrease in

a. The amount you drink before driving     yes     no

b. The number of times you drink before driving     yes     no

11a. Have you heard about, or seen more police on the alert for drivers who have been drinking

yes     no    (Go to Q.12)

b. Has it influenced your own driving after drinking behavior

a lot,     some,     not at all

12a. Have you heard or seen any information about alcoholism or the risks of driving after drinking

yes     no

b. Where

radio

magazines

TV

billboards, posters

newspapers

pamphlets

other

c. Has that information influenced your own driving after drinking behavior

a lot,     some,     not at all

d. What information do you remember most \_\_\_\_\_

---

Thank you very much for your cooperation. Your Breathalyzer reading is ready if you would like to see it.

Appendix B

ALCOHOL - HIGHWAY SAFETY PROJECTS

PROPOSED FOR MICHIGAN COUNTIES

Contents: Michigan Department of Public Health  
Memorandum, December 17, 1970



MICHIGAN  
DEPARTMENT  
OF PUBLIC  
HEALTH

S. Reizen, M.D.  
Director

TO: All Local Health Department - Highway Safety  
Project Coordinators

DATE: 12/17/70

FROM: John T. McConnell, Coordinator, Michigan Department of  
Public Health, Alcohol - Highway Safety Project

*J.T. Mc*

SUBJECT: Responsibilities of Local Project Coordinators

While it is highly likely that each of the local Alcohol - Highway Safety Project programs will differ in detail, there are certain elements that must be considered in developing and implementing all local programs.

The following are responsibilities of local program coordinators. They must be accomplished in order that we might fulfill our obligations under our contract with the National Highway Safety Bureau:

1. To develop and implement a system through which drinking-driving offenders may be referred to the educational programs designed for them.
2. To provide educational programs for alcohol-related traffic offenders; determine which offenders need referral for additional services (treatment, etc.); make such referrals; and develop a system through which follow-up information may be obtained on those referred.
3. To provide educational programs for court-related and other law enforcement personnel.
4. To attempt, through the above educational experiences, to change the negative attitudes of those in attendance to those positive attitudes that will help eliminate the critical drinking-driving problem from our society.
5. To provide evaluations of the above educational experiences.
6. To provide community education services related to the project as required (service club speeches, etc.).
7. To provide the M.D.P.H. with the required records and reports (financial, narrative, etc.).
8. To provide information to the courts on those referrals made to the local educational program.
9. To work cooperatively with the M.D.P.H. Alcohol-Highway Safety Project Coordinator.

I will be available as a consultant to your program if you need me (Depending, of course, upon time available). I want to help you in any way I can to make your program a success.

JTM:lc

MEMORANDUM

Appendix C

DATA COLLECTION FORMS

Contents: State of Michigan Official  
Traffic Accident Report

Summary of Alcohol-Related  
Driving Arrest

Court Criminal Case Record

Michigan Department of State  
Report of Re-examination  
Driver Safety School Assignment

Sample Diagnostic Tool for Use  
by Driver Analysts and Court  
Counselors

3-10 (1-71) **State of Michigan** Department DO NOT USE

**OFFICIAL TRAFFIC ACCIDENT REPORT**

County \_\_\_\_\_ City \_\_\_\_\_ Twp. \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_ A.M. \_\_\_\_\_ P.M. \_\_\_\_\_

ON \_\_\_\_\_ Route No. \_\_\_\_\_ Name \_\_\_\_\_ Ft. Mi. **N S E W** Intersection \_\_\_\_\_ Route No. \_\_\_\_\_

**Vehicle #1**

State \_\_\_\_\_ Drivers License \_\_\_\_\_ DOB \_\_\_\_\_ Hazardous Action \_\_\_\_\_ HBD \_\_\_\_\_ HN \_\_\_\_\_ Test \_\_\_\_\_

Driver No. 1 \_\_\_\_\_ First \_\_\_\_\_ M. \_\_\_\_\_ Last \_\_\_\_\_ Address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ Age \_\_\_\_\_ Sex \_\_\_\_\_ Inj \_\_\_\_\_

Year \_\_\_\_\_ Make \_\_\_\_\_ Type \_\_\_\_\_ Trailer \_\_\_\_\_ Reg. \_\_\_\_\_ Yr/State \_\_\_\_\_ Removed to/by \_\_\_\_\_

Name \_\_\_\_\_ Address \_\_\_\_\_ Pos \_\_\_\_\_ Age \_\_\_\_\_ Sex \_\_\_\_\_ Inj \_\_\_\_\_

Seat Position: 1, 2, 3, 5, 6

Total Occupants \_\_\_\_\_ Local Use/Owner \_\_\_\_\_ Injured taken to \_\_\_\_\_

**Vehicle #2**

State \_\_\_\_\_ Drivers License \_\_\_\_\_ DOB \_\_\_\_\_ Hazardous Action \_\_\_\_\_ HBD \_\_\_\_\_ HN \_\_\_\_\_ Test \_\_\_\_\_

Driver No. 2 \_\_\_\_\_ First \_\_\_\_\_ M. \_\_\_\_\_ Last \_\_\_\_\_ Address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ Age \_\_\_\_\_ Sex \_\_\_\_\_ Inj \_\_\_\_\_

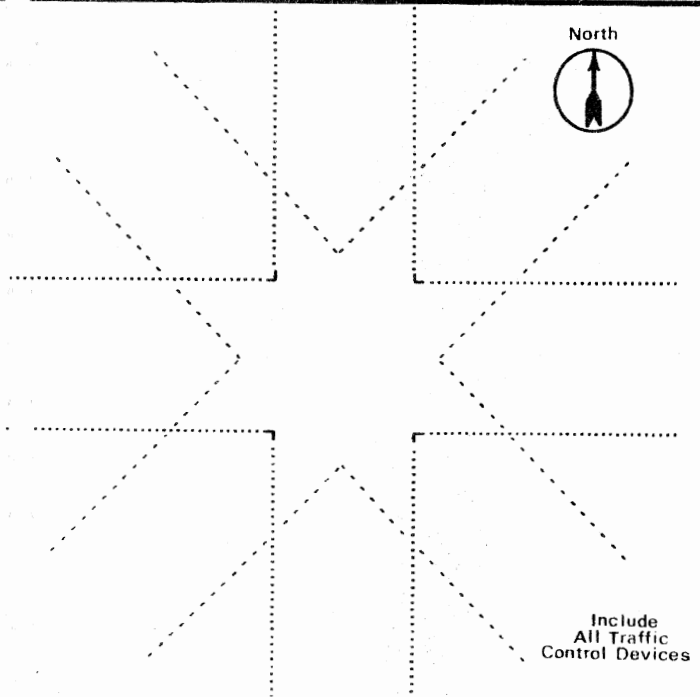
Year \_\_\_\_\_ Make \_\_\_\_\_ Type \_\_\_\_\_ Trailer \_\_\_\_\_ Reg. \_\_\_\_\_ Yr/State \_\_\_\_\_ Removed to/by \_\_\_\_\_

Name \_\_\_\_\_ Address \_\_\_\_\_ Pos \_\_\_\_\_ Age \_\_\_\_\_ Sex \_\_\_\_\_ Inj \_\_\_\_\_

Seat Position: 2, 3, 5, 6

Total Occupants \_\_\_\_\_ Local Use/Owner \_\_\_\_\_ Injured taken to \_\_\_\_\_

<b>WEATHER</b> <input type="checkbox"/> Clear <input type="checkbox"/> Rain <input type="checkbox"/> Cloudy <input type="checkbox"/> Fog <input type="checkbox"/> Snow	<b>LIGHT</b> <input type="checkbox"/> Day <input type="checkbox"/> Dark <input type="checkbox"/> Dawn Dusk <input type="checkbox"/> Street Lights	<b>ROAD SURFACE</b> <input type="checkbox"/> Dry <input type="checkbox"/> Snowy Icy <input type="checkbox"/> Wet <input type="checkbox"/> Other	<b>ROAD CONDITION</b> <input type="checkbox"/> Engineering <input type="checkbox"/> Maintenance <input type="checkbox"/> Construction Zone	<b>VISION OBSTRUCTION</b> <input type="checkbox"/> Vehicle #1 <input type="checkbox"/> Vehicle #2 <input type="checkbox"/> None (Explain)	<b>VEHICLE DEFECTS</b> <input type="checkbox"/> Vehicle #1 <input type="checkbox"/> Vehicle #2 <input type="checkbox"/> None (Explain)
<b>IMPACT CODE</b> V #1 Veh. #2 Total Veh.	<b>TOTAL LANES</b> <input type="checkbox"/> Divided <input type="checkbox"/> Limited Access	<b>DRIVER RE-EXAM.</b> <input type="checkbox"/> Driver #1 <input type="checkbox"/> Driver #2	Damage Property Other Than Vehicles Owner _____ Address _____		



**ACCIDENT DESCRIPTION & REMARKS**

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Describe all unusual conditions and circumstances

Date Received \_\_\_\_\_ Time \_\_\_\_\_ A.M. \_\_\_\_\_ P.M. \_\_\_\_\_ Investigators \_\_\_\_\_

Photos by \_\_\_\_\_

<b>1</b> <input type="checkbox"/>	<b>2</b> <input type="checkbox"/>	<b>POLICE ACTION</b>	Reviewer _____
<input type="checkbox"/>	<input type="checkbox"/>	Cited for Hazardous Vio.	Comp. Status <input type="checkbox"/> open <input type="checkbox"/> closed
<input type="checkbox"/>	<input type="checkbox"/>	Cited for Other Violation	
<input type="checkbox"/>	<input type="checkbox"/>	No Enforcement Action	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Investigated at Scene	

NAME OF ARRESTEE \_\_\_\_\_

DRIVER LICENSE NUMBER \_\_\_\_\_ CASE REPORT # \_\_\_\_\_

ARRESTING POLICE DEPT. Ypsilanti

ORIGINAL CHARGE BY OFFICER 1. DUIL 2. Impaired Driving  
3. Drunk & disorderly (only if vehicle was involved)DATE OF ARREST \_\_\_\_\_ TIME OF ARREST \_\_\_\_\_ a.m.  
p.m.  
Month day YearMAILING ADDRESS OF ARRESTEE 1. Ann Arbor 2. Ypsilanti 3. Remainder of  
Washtenaw County  
4. In-state, not Washtenaw County 5. Out-state

SEX 1. Male 2. Female RACE 1. White 2. Black 3. Not known

OCCUPATION \_\_\_\_\_

YEAR OF VEHICLE \_\_\_\_\_ MAKE OF VEHICLE \_\_\_\_\_

MODEL OF VEHICLE \_\_\_\_\_ (sedan, coupe, sta. wagon, truck, etc.)

BLOOD ALCOHOL LEVEL \_\_\_\_\_  
First Second

1. Refused test 2. Not offered 3. Not known

BIRTH DATE OF ARRESTEE \_\_\_\_\_ AGE OF ARRESTEE \_\_\_\_\_ (years)  
Month Day Year

DATE OF ARREST 1. Mon 2. Tues 3. Wed 4. Thurs 5. Fri 6. Sat 7. Sun

DID ARREST FOLLOW A TRAFFIC ACCIDENT? 1. Yes 2. No 3. Not known

LOCATION OF ARREST (give street # or nearest cross street &amp; city)

LOCATION WHERE DRINKING OCCURED 1. Drinking or food establishment (bar, hall,  
restaurant, private club)2. Sporting or recreational event  
bowling alley, football game) 3. Private home 4. In vehicle

5. Outdoors (beach, park) 6. Other \_\_\_\_\_ 7. Not known

FINAL OUTCOME OF CASE: Final charge \_\_\_\_\_ Fine cost \_\_\_\_\_

Paid? 1. Yes 2. No

Jail? 1. Yes 2. No How long? \_\_\_\_\_

Date of sentence \_\_\_\_\_

NAME OF JUDGE ON THE CASE \_\_\_\_\_

**MICHIGAN DEPARTMENT OF STATE**

Lansing, Michigan 48918

**DRIVER EXAMINING DIVISION  
REPORT OF RE-EXAMINATION**

LIC. # \_\_\_\_\_ OPER. \_\_\_\_\_ CHAUF. \_\_\_\_\_ PROB. \_\_\_\_\_

NAME \_\_\_\_\_ SEX \_\_\_\_\_ BIRTHDATE \_\_\_\_\_

ADDRESS \_\_\_\_\_ L.A.B. \_\_\_\_\_ SO  
JURISDICTION \_\_\_\_\_ PD

PRESENT AT RE-EXAMINATION \_\_\_\_\_ YEARS OF DRIVER EDUCATION \_\_\_\_\_ DRIVER EDUCATION Yes \_\_\_\_\_

OCCUPATION \_\_\_\_\_ EMPLOYER \_\_\_\_\_ HOW LONG \_\_\_\_\_

MARITAL STATUS:  Single  Married  Divorced  Separated  Dependents \_\_\_\_\_

YEARS DRIVEN \_\_\_\_\_ MILES PER WEK. \_\_\_\_\_ NEED FOR DRIVING: ECONOMIC  PERSONAL  NONE \_\_\_\_\_

VEHICLE USED:  Own  Parents  Employer  Other \_\_\_\_\_ MAKE \_\_\_\_\_ YEAR \_\_\_\_\_

PREVIOUS RE-EXAMINATIONS: Date \_\_\_\_\_

POINT VALUE OF VIOLATIONS ON MDR-2 YEARS \_\_\_\_\_ MDR CORRECTIONS \_\_\_\_\_

POINT VALUE OF ADDITIONAL VIOLATIONS \_\_\_\_\_

TOTAL POINT VALUE \_\_\_\_\_

LIST ADDITIONAL VIOLATIONS \_\_\_\_\_

DOES CITEE RECOGNIZE HIS PROBLEM: Yes  ?  No

PROBLEM IDENTIFIED: Physical  Mental  Marital  Job   
Friends  Alcohol  Personal  Other \_\_\_\_\_

SEES PERSONAL BENEFITS BY IMPROVING: Yes  No  Explain \_\_\_\_\_

WHAT ARE HIS IMPROVEMENT PLANS:

IMPRESSIONS OF CITEE: Receptive  Argumentive  Careless  Indifferent  Rejects help   
Blames Others  Accuses Police  Other \_\_\_\_\_

PROGNOSIS FOR IMPROVEMENT: good  ?  poor

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**RECOMMENDED ACTION**

- ( ) (40) Revocation \_\_\_\_\_ effective \_\_\_\_\_
- ( ) (30) Suspension \_\_\_\_\_ from \_\_\_\_\_ thru \_\_\_\_\_
- ( ) (30) Indefinite suspension \_\_\_\_\_ from \_\_\_\_\_ thru \_\_\_\_\_ and until \_\_\_\_\_
- ( ) (03) Instruction \_\_\_\_\_
- ( ) (60) Restricted License \_\_\_\_\_ Number \_\_\_\_\_ Attach Copy to File
- ( ) (03) Other Action \_\_\_\_\_ Specify \_\_\_\_\_

CHECK FORMS DI-4, DI-9, DI-11, DI-73, DI-77, OC-20, OC-20A, DI-96, CD-4078 LICENSE YES ( ) DE-23  
ISSUED ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ATTACHED NO ( ) ( )

DATE \_\_\_\_\_ MONTH \_\_\_\_\_ DAY \_\_\_\_\_ YEAR \_\_\_\_\_ DRIVER LICENSE ANALYST \_\_\_\_\_

**OFFICE USE ONLY**

REFERRED TO \_\_\_\_\_ REVIEW OFFICER \_\_\_\_\_



Michigan Department of Education  
Bureau of Educational Services  
TRAFFIC & SAFETY EDUCATION UNIT  
Box 420, Lansing, Michigan 48902

COPIES TO:

- BLUE — REFERRAL OFFICIAL
- PINK — INSTRUCTOR
- PINK — RETURN TO REFERRAL AGENCY
- GREEN — STUDENT
- WHITE — DEPARTMENT OF EDUCATION

DRIVER SAFETY SCHOOL ASSIGNMENT AND ENROLLMENT APPLICATION

I. REFERRAL

Court Case Number \_\_\_\_\_ Date \_\_\_\_\_  
MO. DAY YR.

The person named below has been instructed to enroll in a driver safety school and has been advised that a fee of \$ \_\_\_\_\_ will be collected.

Name \_\_\_\_\_  
(LAST) (FIRST) (MIDDLE)

Address \_\_\_\_\_  
(NUMBER) (STREET) (CITY) (ZIP)

Date of Birth 

MO.	DAY	YR.
-----	-----	-----

 Age \_\_\_\_\_ Telephone No. \_\_\_\_\_

Driver's license number 

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

 Expires 

MO.	DAY	YR.
-----	-----	-----

Reason for Referral \_\_\_\_\_  
 \_\_\_\_\_

Judge or Analyst Making Referral \_\_\_\_\_  
(SIGNATURE)

Court Address \_\_\_\_\_  
(NAME) (STREET) (CITY)

Signature of Driver \_\_\_\_\_

II. CLASS ASSIGNMENT

Name of School \_\_\_\_\_

Address \_\_\_\_\_ Room \_\_\_\_\_

Starting Time \_\_\_\_\_ At \_\_\_\_\_ A.M.  
(MONTH) (DAY) (YEAR) P.M.

Instructor \_\_\_\_\_

III. FOR INSTRUCTOR'S USE ONLY

Course completed:  Yes  No Attendance record: 1 ( ) 2 ( ) 3 ( ) 4 ( ) 5 ( )

Student's attitude:  Satisfactory  Unsatisfactory

Knowledge of laws and good driving practices:  Satisfactory  Unsatisfactory

Instructor Remarks: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Instructor's Signature \_\_\_\_\_ Date 

MO.	DAY	YR.
-----	-----	-----

## SAMPLE DIAGNOSTIC TOOL

### FORM B CLIENT INTERVIEW

#### DIRECTIONS FOR INTERVIEWER:

For each item record your judgment:

1. Circle Y if yes, N if no
2. Place appropriate number in space
3. In the last column:
  - a. Draw vertical line ( | ) if question is not applicable
  - b. Write (R) if client refuses to respond

All items printed in large type are to be asked of the client. Items printed in small type are to be filled in only if applicable and mentioned by the client.

If the respondent does not understand, feel free to rephrase the questions. In the cases where you feel that the respondent is evading the question, you may cautiously inquire, "Can you tell me (more) about it?" or "How much of a problem is this for you?" However, once you have sufficient information to answer the question on your interview form, move on to the next question.

All items should be answered.

Serial No. \_\_\_\_\_ 1

Form B 2

CLIENT INTERVIEW

I.D. No. \_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_ 3

Driver's License Number

Operator \_\_\_\_\_ 4

Chauffeur \_\_\_\_\_ 5

If license number is unavailable write out full name:

\_\_\_\_\_ 6

First

Middle

Last

Sex: Male \_\_\_ Female \_\_\_ 7

Date of birth: \_\_\_\_\_ 8

month day year

How old were you when you first got a driver's license? \_\_\_\_\_ age 9

About how many miles have you driven during the  
past year? \_\_\_\_\_ miles 10

Place of Interview \_\_\_\_\_ 11

Date of Interview \_\_\_\_\_ 12

Interviewer \_\_\_\_\_ 13

(In order to retain the confidentiality of this interview,  
this page will be removed and kept in a locked file.)

(L) or (R)

- 1. How old are you? ..... yrs. \_\_\_\_\_ ( ) 15
- How much do you weigh? ..... lbs. \_\_\_\_\_ ( ) 16
- What is your national origin? \_\_\_\_\_ ( ) 17
- Are you a member of a religious group? ..... Y N ( ) 18
- (If yes): What religion? \_\_\_\_\_ ( ) 19
- How is your general health? \_\_\_\_\_ ( ) 20

(Put appropriate no. in space)

- 1. better than average or very good, excellent
- 2. average or good
- 3. less than average, fair, poor, bad

(If less than average): What are the problems?

\_\_\_\_\_  
 \_\_\_\_\_ ( ) 21

The client complains of:

- a. being tired or fatigued ..... Y N ( ) 22
- b. general weakness ..... Y N ( ) 23
- c. just feeling bad all over ..... Y N ( ) 24
- d. weight loss or inability to eat ..... Y N ( ) 25
- e. inability to concentrate ..... Y N ( ) 26
- f. difficulty sleeping ..... Y N ( ) 27
- g. increased irritability ..... Y N ( ) 28
- h. difficulty doing his job or taking care of his home ..... Y N ( ) 29
- 3. Do you have a chronic disease or illness? ..... Y N ( ) 30
- (If yes): What? \_\_\_\_\_ 31

Was any disease mentioned spontaneously? ..... Y N ( ) 32

Have you had any of the following?

- a. fatty liver ..... Y N ( ) 33
- b. cirrhosis ..... Y N ( ) 34
- c. pain and/or weakness of legs ..... Y N ( ) 35
- d. fluid in the abdomen (ascites) ..... Y N ( ) 36
- e. anemia ..... Y N ( ) 37
- f. convulsions or epilepsy ..... Y N ( ) 38
- g. diabetes ..... Y N ( ) 39

- h. ulcers or stomach problems ..... Y N ( ) 40
- i. hepatitis ..... Y N ( ) 41
- j. mental or emotional illness ..... Y N ( ) 42
- k. any severe bleeding problems ..... Y N ( ) 43
- l. pancreatitis ..... Y N ( ) 44
- 4. Are you disabled or do you have any physical defect? ..... Y N ( ) 45
- (If yes): What? \_\_\_\_\_
- \_\_\_\_\_ ( ) 46

Does the handicap limit his adjustment or ability to perform:

- a. in his job situation ..... Y N ( ) 47
- b. in friendships or in a social setting ..... Y N ( ) 48
- c. in his family situation ..... Y N ( ) 49

Has the client made an adequate emotional adjustment to the handicap? ..... Y N ( ) 50

Is the client using the handicap as an excuse for drinking or as an excuse for family or job problems? ..... Y N ( ) 51

- 5. Have you had a serious injury or illness in the past? ..... Y N ( ) 52
- (If yes): What was its nature? \_\_\_\_\_
- \_\_\_\_\_ ( ) 53

If any of the diseases listed in Q.3 are mentioned here, record in Q.3

Are you completely well from this (these)? ..... Y N ( ) 54

**QUESTIONS 6-10 ARE ONLY TO BE USED WITH COURT SAMPLES OR PERSONS IN PENAL INSTITUTIONS; FOR OTHERS, PLEASE CHECK THE BLANK AT RIGHT AND GO TO QUESTION 11 \_\_\_\_\_ 55**

- 6. Can you tell me about the arrest? When did it happen and what happened?
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_ ( ) 56
- What time did the arrest occur? \_\_\_\_\_ ( ) 57
- What time did the client say he was arrested? \_\_\_\_\_ ( ) 58
- There is more than an hour difference between the police report and client's report. .... Y N ( ) 59

7. How much did you have to drink before you were arrested and what were you drinking? \_\_\_\_\_

(Put appropriate number in space)

\_\_\_\_\_ ( ) 60

- 1. client gives an exact number of drinks
- 2. client gives an approximate number of drinks
- 3. client is unable to give a figure

Number of drinks: .....

\_\_\_\_\_ ( ) 61

(Put appropriate number in space)

- 1. four or less
- 2. five or six
- 3. seven or more

What was the kind of liquor? .....

\_\_\_\_\_ ( ) 62

(Put appropriate number in space)

- 1. beer
- 2. wine
- 3. mixed drink
- 4. combination of the above
- 5. unknown

6. other \_\_\_\_\_

\_\_\_\_\_ ( ) 63

Do you believe this amount is accurate? .....

Y N ( ) 64

8. How long did it take you to drink this? (hrs./days) \_\_\_\_\_

Was there more than an hour between the time he stopped drinking and the arrest? .....

Y N ( ) 65

The time the client spent drinking was: .....

\_\_\_\_\_ ( ) 66

(Put appropriate number in space)

- 1. under 2 hrs.
- 2. 2-4 hrs.
- 3. 4-8 hrs.
- 4. all day or longer

9. What were you doing that called you to the attention of the police?  
\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_ ( ) 67

Specific behaviors mentioned:

a. drunk or impaired driving ..... Y N ( ) 68

b. car accident ..... Y N ( ) 69

c. asleep in or near car ..... Y N ( ) 70

d. fighting or argument ..... Y N ( ) 71

- e. staggering ..... Y N ( ) 72
- f. molesting or bothering people ..... Y N ( ) 73
- g. breaking probation ..... Y N ( ) 74
- h. noise making ..... Y N ( ) 75
- i. other \_\_\_\_\_ ( ) 76

You would estimate that at the time of arrest the person was: \_\_\_\_\_ ( ) 77

(Put appropriate number in space)

1. high or feeling good but still in reasonable control
2. moderately intoxicated: some speech impairment, swaying, difficulty with fine hand movements
3. severely intoxicated: marked speech impairment, stagger, or inability to walk

Does the person seem to remember the events of the arrest well ..... Y N ( ) 78

Do you feel that he was in a blackout at the time of arrest? ..... Y N ( ) 79

Does his description of the arrest correspond well to the description given in the police report? ..... Y N ( ) 80

10. How do you feel now about being arrested? \_\_\_\_\_ ( ) 81

He feels that the behavior which led to his arrest was wrong ..... Y N ( ) 82

He feels that alcohol contributed to his deviant behavior ..... Y N ( ) 83

He expresses anger or hostility toward the police or court ..... Y N ( ) 84

He appears to accept the arrest without much feeling ..... Y N ( ) 85

He expresses the hope that this arrest pattern will not be repeated ..... Y N ( ) 86

He expresses the need for help in order to avoid future arrest ..... Y N ( ) 87

Interviewer's conclusions:

Do you feel that this drinking situation was unique and unlikely to happen again? ..... Y N ( ) 88

Did the client give you any evidence of a past behavior pattern of heavy drinking? ..... Y N ( ) 89

Do you feel that without any therapeutic intervention he is likely to repeat this drinking behavior within the next five years? ..... Y N ( ) 90

**FOR ALL SUBJECTS CONTINUE HERE**

11. Have you been arrested for driving under the influence of liquor or for impaired driving? ..... Y N ( ) 91

(If yes): How many times? \_\_\_\_\_ ( ) 92

12. Have you have been arrested for being drunk and disorderly or for public

- intoxication? ..... Y N ( ) 93
- (If yes): How many times? \_\_\_\_\_ ( ) 94
- Was driving related to any of these? ..... Y N ( ) 95
- (If yes): In how many instances? \_\_\_\_\_ ( ) 96
- 13. Have you ever been arrested for reckless driving? ..... Y N ( ) 97
- (If yes): How many times? \_\_\_\_\_ ( ) 98
- Was this ever reduced from the original charge? ..... Y N ( ) 99
- (If yes) What was the original charge? \_\_\_\_\_ ( ) 100
- Was the original charge DUUI or impaired? \_\_\_\_\_ ( ) 101
- 14. Have you ever been arrested for anything else? ..... Y N ( ) 102
- (If yes): How many times and for what? \_\_\_\_\_ ( ) 103

(List the charges *only if mentioned.*)

Kinds of offenses ( List no. for each, put "00" if none, put "01" if one)

- Crimes involving property ..... ( ) 104
- Crimes of personal assault ..... ( ) 105
- Crimes involving sex ..... ( ) 106
- Other (list) \_\_\_\_\_

**QUESTIONS 15 AND 16 TO BE ASKED IF CLIENT HAS PREVIOUS RECORD**

- 15. How old were you at the time of your first arrest? (yrs.) \_\_\_\_\_ ( ) 107
- How long has it been since your last arrest? (The arrest previous to the current arrest) (mos./yrs.) \_\_\_\_\_ ( ) 108
- 16. Are you currently on probation? ..... Y N ( ) 109
- (If yes): Is non-drinking part of the probation? ..... Y N ( ) 110
- 17. How many traffic tickets have you received in the past two years? Do not include parking tickets or faulty equipment tickets. (no.) \_\_\_\_\_ ( ) 111
- While driving, have you ever been stopped by police, but not ticketed, when you knew you had been drinking too much? ..... Y N ( ) 112
- 18. Has your driver's license ever been suspended or revoked in Michigan or any other state? ..... Y N ( ) 113
- (If yes): How many times? (no.) \_\_\_\_\_ ( ) 114
- Do you have a valid license now? ..... Y N ( ) 115
- Was drinking related to the suspension(s) or revocation(s)? ..... Y N ( ) 116
- 19. How old were you when you first started drinking? (yrs.) \_\_\_\_\_ ( ) 117



22. Do you feel that drinking is causing any problems in your life? ..... Y N ( ) 118  
 (If yes): Can you tell me what these problems are? \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_ ( ) 119

Problems mentioned:

- a. marriage ..... Y N ( ) 120
- b. job or employment ..... Y N ( ) 121
- c. health ..... Y N ( ) 122
- d. court ..... Y N ( ) 123
- e. other (list) \_\_\_\_\_ ( ) 124

21. Do you feel that you always drink like a social drinker? ..... Y N ( ) 125  
 (If no): When and how do you differ from the social drinker? \_\_\_\_\_  
 \_\_\_\_\_ ( ) 126

Differs from a social drinker in the following ways:

- a. drinks more frequently ..... Y N ( ) 127
- b. drinks greater quantity when he drinks ..... Y N ( ) 128
- c. feels worse after drinking ..... Y N ( ) 129
- d. has a compulsion to drink ..... Y N ( ) 130
- e. drinks at unusual times ..... Y N ( ) 131
- f. other \_\_\_\_\_ ( ) 132

23. Do you ever find that you drink more than you had intended to drink? ..... Y N ( ) 133  
 (If yes): Do you ever get drunk without intending to? ..... Y N ( ) 134

24. Do you usually drink every day? ..... Y N ( ) 135  
 (If no): How many days a week do you usually drink? \_\_\_\_\_ ( ) 136  
 If every day record 7; if less than once a week record 1; if weekends only record 2.

24. Do you usually drink four or more drinks at one sitting? \_\_\_\_\_ Y N ( ) 137  
 What kind of drinks are these? \_\_\_\_\_ ( ) 138  
 \_\_\_\_\_  
 double martini, boilermaker, straight shots, etc.

25. Where do you usually do your drinking?  
 a. own home ..... Y N ( ) 139  
 b. friend's home ..... Y N ( ) 140  
 c. party ..... Y N ( ) 141  
 d. bar or lounge ..... Y N ( ) 142  
 e. restaurant ..... Y N ( ) 143  
 f. other (list) \_\_\_\_\_ ( ) 144

26. Have you gone on a drinking spree or binge in the last five years? ..... Y N ( ) 145
27. Do you ever get the feeling that you "NEED" or "REALLY WANT" a drink? ..... Y N ( ) 146  
 (If yes): When do these feelings occur? \_\_\_\_\_ ( ) 147
- Has it ever happened after you have gone to bed? ..... Y N ( ) 148
- Do you ever feel this way before noon? ..... Y N ( ) 149
- Client states he needs a drink when:
- a. angry ..... Y N ( ) 150
  - b. depressed ..... Y N ( ) 151
  - c. lonely ..... Y N ( ) 152
  - d. happy ..... Y N ( ) 153
  - e. tense or nervous ..... Y N ( ) 154
  - f. with friends ..... Y N ( ) 155
  - g. things go wrong ..... Y N ( ) 156
  - h. at parties ..... Y N ( ) 157
  - i. at certain times of day ..... Y N ( ) 158
  - j. other (list) \_\_\_\_\_ ( ) 159
28. Have you ever hidden a bottle of liquor? ..... Y N ( ) 160
29. Do you drink to feel less self-conscious and more ease around people? ..... Y N ( ) 161
30. Do you ever feel that it is easier to start something after you have had a drink? ..... Y N ( ) 162
31. Does drinking sometimes give you courage or self-confidence? ..... Y N ( ) 163
32. Do you feel more quarrelsome or angry after you have had several drinks? ..... Y N ( ) 164
33. Have you been told that you become rowdy or noisy when you have had too  
 much to drink? ..... Y N ( ) 165
34. Have you ever destroyed property or gotten into a physical fight when you were  
 drinking? ..... Y N ( ) 166
35. Have you ever thought about cutting down on drinking? ..... Y N ( ) 167  
 (If yes): Have you ever stopped drinking for a period of time? ..... Y N ( ) 168
36. Have you ever felt bad or guilty about drinking? ..... Y N ( ) 169
37. Have any of your friends or members of your family suggested that you watch or  
 cut down on drinking? ..... Y N ( ) 170
38. Have you ever been treated for drinking? ..... Y N ( ) 171
39. Have you ever taken medicine or pills other than aspirin to help sober up? ..... Y N ( ) 172
40. Have you ever found that you can't remember or wonder what you did the night  
 before when you were drinking? ..... Y N ( ) 173
41. Did you ever fall or seriously injure yourself when you were drinking? ..... Y N ( ) 174
42. After drinking the night before, have you ever decided not to go to work  
 the next morning? ..... Y N ( ) 175  
 (If yes): Does this happen more than twice a year? ..... Y N ( ) 176

43. Have you ever found that your hands shake and tremble in the morning? ..... Y N ( ) 177  
 (If yes): Does a drink help this go away? ..... Y N ( ) 178
44. Have you ever vomited or been very sick to your stomach, not while drinking, but  
 the morning after drinking? ..... Y N ( ) 179
45. Do you ever drink in the morning before breakfast or before going to work? ..... Y N ( ) 180
46. Do you feel that your health would be better if you decreased or stopped  
 drinking? ..... Y N ( ) 181
47. Do you take sleeping pills? ..... Y N ( ) 182  
 (If yes): Do you take more now than you did a year ago? ..... Y N ( ) 183
48. Do you ever take tranquilizers, anti-depressant or pep-up pills? ..... Y N ( ) 184  
 (If yes): Do you take these regularly or only when you need them? ..... \_\_\_\_\_ ( ) 185  
 (Put appropriate number in space)
1. regularly
  2. when needed
- Are you taking more of these now than when you first started taking them? ..... Y N ( ) 186
49. Have you ever been told that your drinking was injuring your liver? ..... Y N ( ) 187
50. Have you ever had bad stomach or abdominal pain? ..... Y N ( ) 188  
 (If yes): Did this occur after drinking? ..... Y N ( ) 189
51. In the past two years, how often did you go to your doctor or the emergency  
 room because you injured yourself? ..... \_\_\_\_\_ ( ) 190  
 (If one or more times): Had you been drinking when this happened? ..... Y N ( ) 191

**FOR THE FOLLOWING QUESTION, READ THE POSSIBLE CATEGORIES TO CLIENT**

52. What is your marital status? ..... \_\_\_\_\_ ( ) 192  
 (Put in corresponding number in space)
1. married
  2. single
  3. widowed
  4. separated
  5. divorced
- (If married):
- How long have you been married? ..... (yrs.) \_\_\_\_\_ ( ) 193
- Do you and your wife/husband get along pretty well? ..... Y N ( ) 194
- Do you ever have arguments about drinking ..... Y N ( ) 195
- Do you have any children? ..... Y N ( ) 196
- (If yes): How many children do you have at home? ..... (no.) \_\_\_\_\_ ( ) 197
- Do you have any problems with your children? ..... Y N ( ) 198
- Are there any other family problems? ..... Y N ( ) 199
- Have you ever been married before? ..... Y N ( ) 200

(If single):

Have you ever been married? ..... Y N ( ) 201

(If widowed):

For how long? ..... (yrs.) \_\_\_\_\_ ( ) 202

Has your drinking increased since you lost your (wife/husband)? ..... Y N ( ) 203

(If separated or divorced):

Did you have family arguments over drinking? ..... Y N ( ) 204

Has your drinking increased since the separation or divorce? ..... Y N ( ) 205

Were there any children? ..... Y N ( ) 206

53. Are you presently employed? ..... Y N ( ) 207

If respondent is female and answers negatively, ask if she considers herself a housewife or homemaker.

(If yes): What is your present job? (Title plus description) \_\_\_\_\_

(Such as carpenter, clerk in grocery store, housewife, etc.) \_\_\_\_\_ ( ) 208

How long have you had this job? ..... (yrs.) \_\_\_\_\_ ( ) 209

How good do you think your work is at your present job? ..... ( ) 210

(Put appropriate number in space)

- 1. excellent
- 2. good
- 3. fair or poor

(If no): How long have you been unemployed? ..... (mos.) \_\_\_\_\_ ( ) 211

Why did you lose your previous job? \_\_\_\_\_ ( ) 212

Or: Why are you unemployed?

Reason for unemployment:

a. laid off previous job ..... Y N ( ) 213

b. fired ..... Y N ( ) 214

c. strike ..... Y N ( ) 215

d. illness ..... Y N ( ) 216

e. other \_\_\_\_\_ ( ) 217

Did drinking contribute to your job loss? ..... Y N ( ) 218

How do you spend your time now? \_\_\_\_\_ ( ) 219

a. working at part-time jobs ..... Y N ( ) 220

b. working around his home ..... Y N ( ) 221

c. in family activities ..... Y N ( ) 222

d. drinking in his home ..... Y N ( ) 223

e. drinking at bars or lounge ..... Y N ( ) 224  
f. other \_\_\_\_\_ ( ) 225

54. Have you ever been fired? ..... Y N ( ) 226

55. How far did you go in school? (number of years) ..... ( ) 227

Grammar School 1-8 yrs.

High School 9-12 yrs.

College 13-16 yrs.

Graduate work: 17+ yrs.

56. Do you ever want to talk with someone but don't know whom to call? ..... Y N ( ) 228

57. Would you describe yourself as being lonely a good deal of the time? ..... Y N ( ) 229

58. Do you feel that your life is difficult to manage and you are not sure  
how to straighten it out? ..... Y N ( ) 230

(If yes): Would you like us to give you some information about where  
you may obtain help? ..... Y N ( ) 231

Interviewer's initial diagnosis:

Drinking pattern:

1. Has client previously exhibited a pattern of controlled drinking? ..... Y N ( ) 232

2. How experienced is this person at drinking?

(Select a value from 1, very inexperienced, to 5, very experienced)

Inexperienced 1,2,3,4,5 experienced drinker.

(Select appropriate number and write it in space) ..... ( ) 233

Drinking diagnosis: ..... ( ) 234

(Put appropriate number in space)

1. client is an abstainer

2. client is an inexperienced maladaptive drinker

3. client is a social drinker

4. client is a heavy social drinker

5. client is a pre-alcoholic (dependent on alcohol but life resources still  
relatively intact)

6. client is an alcoholic

Problem diagnosis: ..... ( ) 235

(Put appropriate number in space)

1. client has no problems related to drinking

2. client doesn't show a pattern of problem drinking in relation to society

3. client shows a pattern of problem drinking in relation to society

Interviewer's physical observation of client:

- a. looks older than stated age ..... Y N ( ) 236
  - b. looks younger than stated age ..... Y N ( ) 237
  - c. looks ill ..... Y N ( ) 238
  - d. smells of alcohol ..... Y N ( ) 239
  - e. has a hand tremor ..... Y N ( ) 240
  - f. has bloodshot or glassy eyes ..... Y N ( ) 241
  - g. has a flushed face ..... Y N ( ) 242
  - h. has language difficulty ..... Y N ( ) 243
  - i. appears to be markedly below average in intelligence ..... Y N ( ) 244
59. Do you feel that you are a problem drinker? ..... Y N ( ) 245

