DOT HS-802 043

PROGRAM LEVEL EVALUATION OF ASAP DIAGNOSIS, REFERRAL AND REHABILITATION EFFORTS
Volume II - Analysis of ASAP Diagnosis and Referral Activity

Contract No. DOT-HS-191-3-759
September 1976
Final Report

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16. Abstract

This volume focuses on the diagnosis and referral systems of the NHTSA Alcohol Safety Action Projects (ASAPs) for the period 1972 to 1974.

A description of the subsystems as they operated at the 35 ASAPs is presented along with client flow data.

Profiles of clients in drinker diagnosis categories and several rehabilitation modality categories are presented for demographic and arrest history variables.

Analyses designed to assess the validity of several types of diagnostic systems employed by the ASAPs are presented. Results of these analyses indicate that NHTSA criteria for drinker diagnosis are the most valid of the systems analyzed.

Analyses concerning the validity of standardized diagnostic tests utilized in the ASAP diagnostic procedures are presented. The results of the analyses support only the use of the Mortimer-Filkins Questionnaire and Interview together. The Mortimer-Filkins Questionnaire alone was found to have less predictive validity than the Interview and Questionnaire together.

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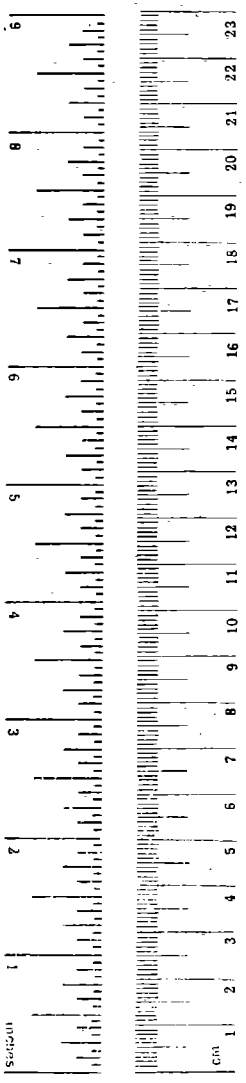
METRIC CONVERSION FACTORS

Approximate Conversions to Metric Measures

Symbol	When You Know	Multiply by	To Find	Symbol
	LENGTH			
in	inches	*2.5	centimeters	cm
ft	feet	30	centimeters	cm
yd	yards	0.9	meters	m
mi	miles	1.6	kilometers	km
	AREA			
in^2	square inches	6.5	square centimeters	cm^2
ft^2	square feet	0.09	square meters	m^2
yd^2	square yards	0.8	square meters	m^2
mi^2	square miles	2.6	square kilometers	km^2
	acres	0.4	hectares	ha
	MASS (weight)			
oz	ounces	28	grams	g
lb	pounds	0.45	kilograms	kg
	short tons (2000 lb)	0.9	tonnes	t
	VOLUME			
tsp	teaspoons	5	milliliters	ml
Tbsp	tablespoons	15	milliliters	ml
fl oz	fluid ounces	30	milliliters	ml
c	cups	0.24	liters	l
pt	pints	0.47	liters	l
qt	quarts	0.95	liters	l
gal	gallons	3.8	liters	l
ft^3	cubic feet	0.03	cubic meters	m^3
yd^3	cubic yards	0.76	cubic meters	m^3
	TEMPERATURE (exact)			
°F	Fahrenheit temperature	5/9 (after subtracting 32)	Celsius temperature	°C

*1 in = 2.54 (exactly). For other exact conversions and more detailed tables, see NBS Misc. Publ. 286, Units of Weights and Measures, Price $2.25, SD Catalog No. C13.10:286.



Approximate Conversions from Metric Measures

Symbol	When You Know	Multiply by	To Find	Symbol
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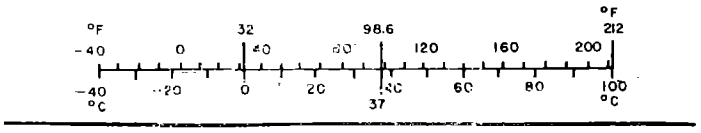
cm	centimeters	0.4	inches	in
m	meters	3.3	feet	ft
m	meters	1.1	yards	yd
km	kilometers	0.6	miles	mi
	AREA			
cm^2	square centimeters	0.16	square inches	in^2
m^2	square meters	1.2	square yards	yd^2
km^2	square kilometers	0.4	square miles	mi^2
ha	hectares (10,000 m^2)	2.5	acres	
	MASS (weight)			
g	grams	0.035	ounces	oz
kg	kilograms	2.2	pounds	lb
t	tonnes (1000 kg)	1.1	short tons	
	VOLUME			
ml	milliliters	0.03	fluid ounces	fl oz
l	liters	2.1	pints	pt
l	liters	1.06	quarts	qt
l	liters	0.26	gallons	gal
m^3	cubic meters	35	cubic feet	ft^3
m^3	cubic meters	1.3	cubic yards	yd^3
	TEMPERATURE (exact)			
°C	Celsius temperature	9/5 (then add 32)	Fahrenheit temperature	°F



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INTRODUCTION

The present report is Volume II of a four volume final report for Contract Number DOT-HS-191-3-759. The first volume (Description of ASAP Diagnosis, Referral and Rehabilitation Functions) contains a detailed description of ASAP diagnosis, referral and rehabilitation on a site-by-site basis, in addition to categorical summaries of major diagnosis, referral and rehabilitation procedures. The third volume (Analyses of ASAP Rehabilitation Countermeasures Effectiveness) addresses the effectiveness of rehabilitation employed by the ASAPs. Analyses presented in the volume concern both ASAP and non-ASAP funded rehabilitation on the program (across project) level. The fourth volume [Development of the Short Term Rehabilitation (STR) Study] of the final report deals with the Short Term Rehabilitation (STR) project. Contained in the volume are a description of the STR project design and preliminary analyses concerning scoring of life change measurement instruments.

The present volume focuses on the diagnosis and referral subsystems of the Department of Transportation's Alcohol Safety Action Projects. Contained in this volume are both description of the subsystems and analyses designed to assess their effectiveness. A brief section of the present volume is devoted to the history and development of the ASAP concept. This section is designed primarily for those readers unfamiliar with the ASAP concept, who do not have access to Volume I of this report. Readers desiring more complete and detailed information in this area are referred to Volume I of this report.

HISTORY AND DEVELOPMENT OF THE ASAP CONCEPT

The well documented problems resulting from the concurrent use of alcohol and the automobile[1,2] resulted in the

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[1]Borkenstein, R. F., Crowther, R. F., Shumate, R. P., Ziel, W. B., and Zylman, R. The role of the drinking driver and traffic accidents. Bloomington, Indiana, Department of Police Administration, Indiana University, 1964.

[2]Secretary of Transportation, 1968 alcohol and highway safety report, U.S. Dept. of Transportation, August, 1968.

establishment, during the late 1960s, of alcohol countermeasures as a first priority of the U. S. Department of Transportation, National Safety Bureau, Office of Safety Demonstration Projects (now the National Highway Traffic Safety Administration, Office of Driver and Pedestrian Programs). At the time the alcohol countermeasure priority was set, the driver control system consisted primarily of enforcement, adjudication, and application of punitive sanctions in the event of guilty judgments. Punitive sanctions routinely consisted of fines and jail sentences levied by courts, and in some instances drivers license actions imposed by Departments of Motor Vehicles. At the same time, community alcohol rehabilitation resources were operating, for the most part, isolated from the court system and certainly from the driver control system. Further, the vast majority of alcohol rehabilitation programs in existence were designed for only those individuals with severe drinking problems or for alcoholics. The driver control and alcohol rehabilitation systems as they existed in the late 1960s, when the alcohol countermeasure priority was established, are depicted schematically in Figure 1.

The result of the alcohol countermeasure priority was the establishment of the series of 35 Alcohol Safety Action Projects (ASAPs) designed to integrate and supplement the existing driver control system and community alcohol rehabilitation facilities. Each of the 35 projects was initially funded for a six month project initiation phase, a three year operational phase, and a final reporting phase. Seven projects began operation in January, 1971. Two projects began operation later during 1971. Nineteen projects began operations in January, 1972; one in March, 1972; and six projects initiated operations between July 1, and October 1, 1972. Ten of the twenty projects beginning operations in early 1972 received extensions to enable operations for two years in addition to the initial three year operational phase. The schedule for each of the 35 ASAPs is shown in Figure 2.

The ASAP concept of integration and suppletion of existing driver control and community alcohol rehabilitation facilities included funding for special ASAP law enforcement officers, training for these new officers and for non-ASAP funded law enforcement officers, and, at some projects, funding for prosecutors to deal exclusively with alcohol related offenses. Because of the general orientation of existing community alcohol rehabilitation facilities toward voluntary referrals with severe drinking problems, and the sometimes limited availability of these

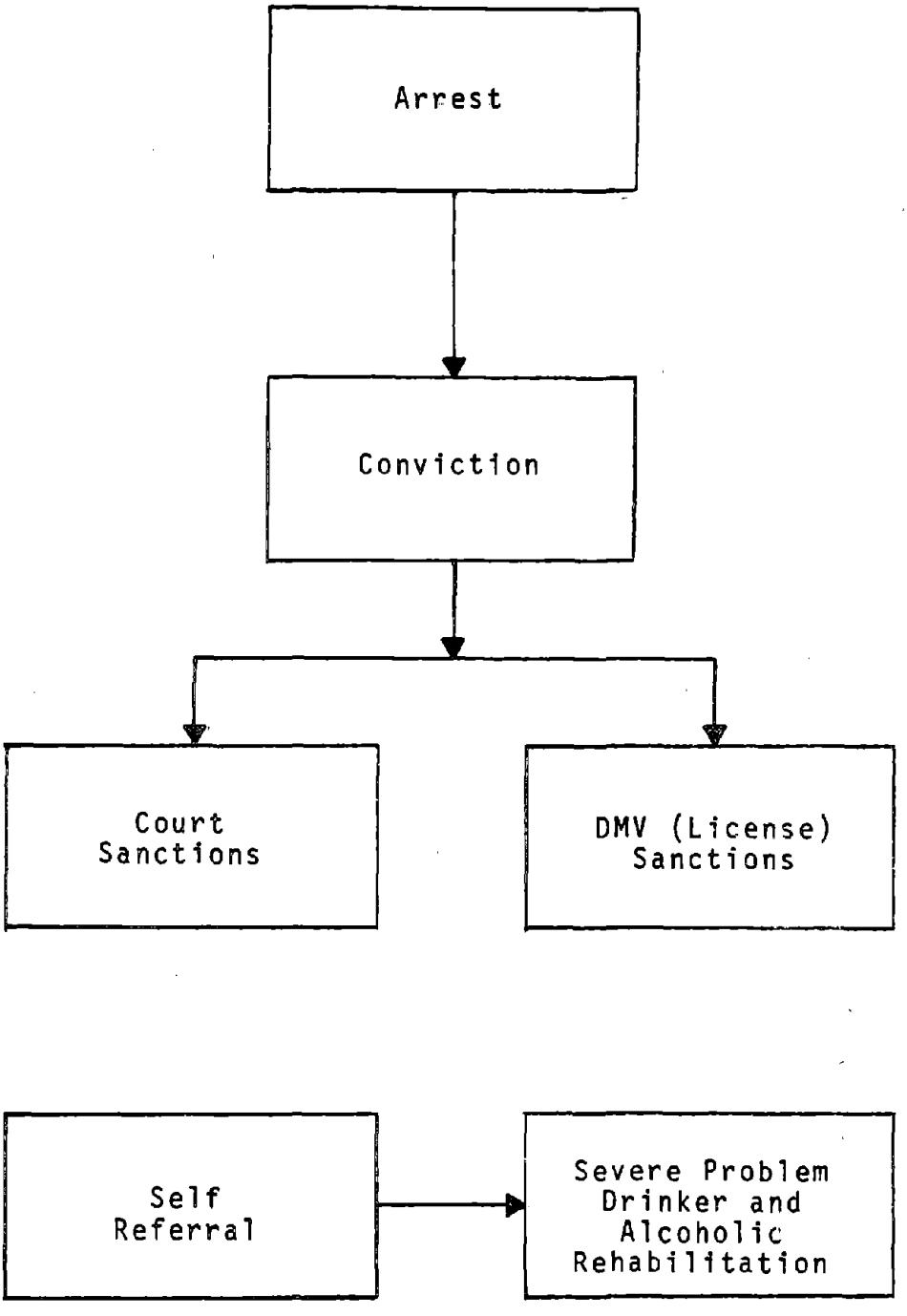

FIGURE 1. PRE-ASAP DRIVER CONTROL AND ALCOHOL REHABILITATION SYSTEMS

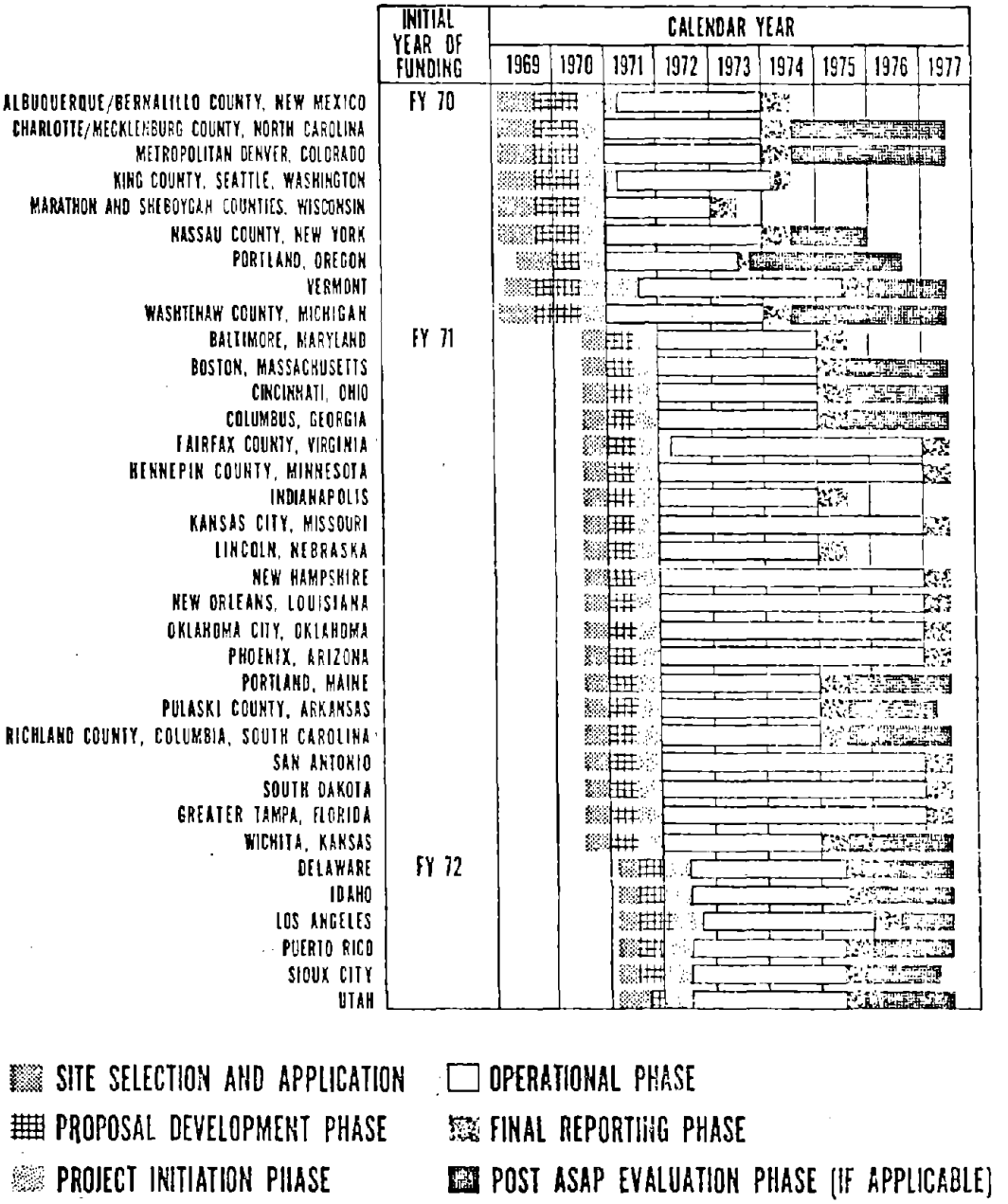

FIGURE 2. ASAP SCHEDULES

facilities, many ASAPs developed additional rehabilitation modalities. These ASAP rehabilitation modalities were of three general classes: Short term educationally oriented modalities for non-problem drinkers; short term group therapy oriented modalities for mid-range problem drinkers; and short term modalities designed to serve as transitions to longer term community programs for those individuals with more severe drinking problems. The non-problem drinker and mid-range problem drinker modalities were necessitated by a general absence of these kinds of intervention in communities prior to ASAP. ASAP transition modalities were necessitated by what were generally distinct differences between individuals entering rehabilitation as the result of an ASAP court related referral and those individuals traditionally served by community alcohol rehabilitation resources. While clients entering alcohol rehabilitation prior to ASAP were generally those who had recognized their alcohol problems and embodied a willingness to accept treatment, ASAP (court referred) clients were often quite the opposite. That is, ASAP referrals often denied their alcohol problems and did not readily accept their need for treatment. ASAP transition modalities, then, served to elicit a recognition of the drinking problem and instill a willingness to accept further treatment. The driver control and alcohol rehabilitation systems as integrated and supplemented as the result of the ASAPs is shown schematically in Figure 3.

Critical to the ASAP concept were the design and implementation of diagnosis and referral subsystems. Because not all individuals arrested for driving while intoxicated (DWI) manifest problem drinking behavior, the identification of those individuals whose drinking behavior required some form of intervention was necessary to avoid the misuse and potential over-burdening of available rehabilitation resources. Also, embodied in the ASAP concept was the referral of the individuals identified as having drinking problems to the rehabilitation <u>most appropriate</u> to their needs, again, to avoid the potential misuse and over-burdening of rehabilitation resources. In effecting these functions, the diagnosis and referral subsystems were serving as a liaison between the court system and both existing community rehabilitation resources and newly implemented ASAP rehabilitation programs. Further, for the first time in most cases, diagnosis and referral to appropriate rehabilitation provided an alternative to traditional punitive sanctions.

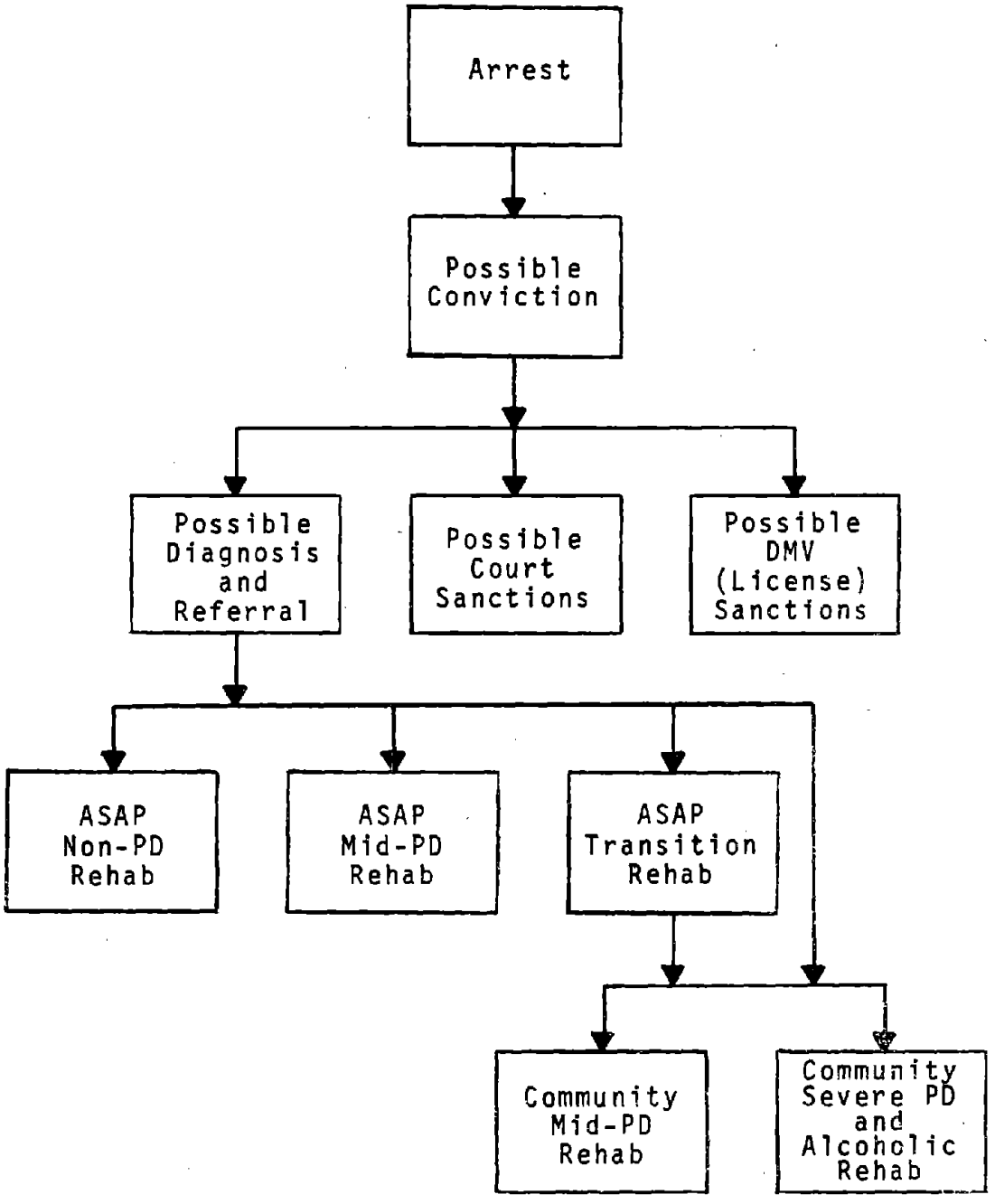

FIGURE 3. ASAP INTEGRATED DRIVER CONTROL AND ALCOHOL REHABILITATION SYSTEM

OBJECTIVES OF THIS VOLUME

As noted previously, the present volume focuses on the diagnosis and referral subsystems of the 35 ASAP systems. The first portion of the present report is primarily descriptive in nature. The report categorizes and describes the varieties of diagnosis and referral subsystems which operated at each of the ASAP sites. In addition, caseflow data is presented to provide an indication of the magnitude of the ASAP diagnosis and referral effort. Profiles of several diagnostic categories and of referrals to several rehabilitation modality categories are presented and discussed. Data concerning cost of ASAP diagnosis and referral is also presented. The second portion of the present volume is analytic in nature. A variety of data, analyses, and accompanying discussion concerning the validity and reliability of ASAP diagnosis and referral procedures are presented in this portion of the report. Also, contained in the latter portion of the present volume, is a section concerning the use, reliability, and validity of standardized diagnostic instruments.

DESCRIPTION OF DIAGNOSIS AND REFERRAL MECHANISMS

This section contains a description of ASAP diagnosis and referral subsystems relative to several characteristics salient to the operations of the subsystems. The characteristics addressed are: position of diagnosis and referral in the arrest to rehabilitation sequence, mechanisms for referral to ASAP by the court, diagnostic procedures, and procedures for referral to rehabilitation. For each of these characteristics a description is presented in terms of several categories of procedures utilized by the ASAPs rather than on a project-by-project basis. The discussion of salient characteristics based on groups of projects, similar with respect to a particular characteristic, should allow for a clearer understanding of ASAP diagnosis and referral as it operated in general. The reader interested in the characteristics listed above for a specific site is referred to Volume I of this report. A site-by-site discussion of the above characteristics is included in an appendix to that volume.

POSITION OF DIAGNOSIS AND REFERRAL IN THE ARREST TO REHABILITATION SEQUENCE

Although the processes of identifying those individuals in the drinking driving population with drinking problems, and of identifying the most appropriate rehabilitation for those individuals determined to have drinking problems generally came to be known as presentence investigation, the processes actually occurred at several points in the arrest to rehabilitation sequence at the ASAP projects. The possible positions of diagnosis and referral* in the arrest to rehabilitation sequence are shown schematically in Figure 4. The diagnosis and referral processes, in

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*The word "referral" is generally used, in the context of this report, to mean the determination of appropriate referral recommendations. Actual entry into rehabilitation may have followed determination of appropriate referral relatively quickly or it may have been delayed to allow for approval of the referral recommendation by a court, a second appearance in court for sentencing, etc. Project-to-project differences in the time sequence of diagnosis, referral (determination of appropriate rehabilitation) and treatment entry will become apparent in the course of the present section.

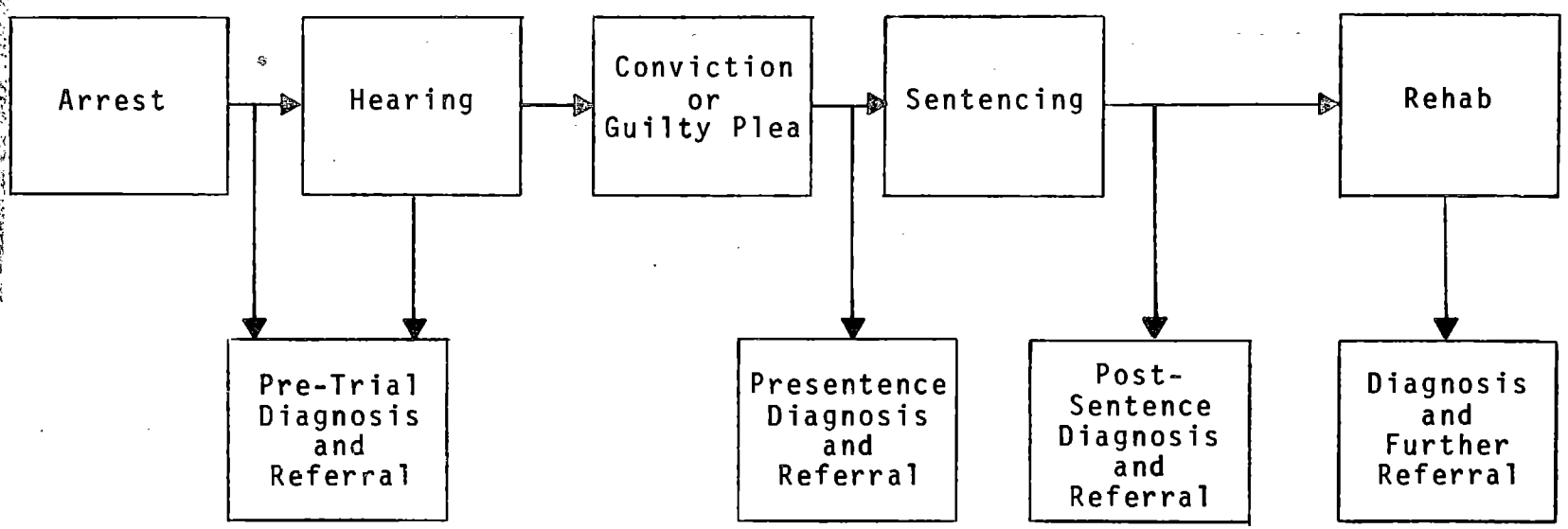

FIGURE 4. POSITION OF DIAGNOSIS AND REFERRAL IN THE ARREST TO REHABILITATION SEQUENCE

some cases, took place pre-trial: either prior to a formal court appearance or at a formal pre-trial hearing. The processes sometimes took place subsequent to conviction, but prior to sentencing. Diagnosis and referral also took place on a postsentence basis at some sites. A few sites conducted diagnosis and formulated referral recommendations for additional rehabilitation during initial rehabilitation, normally Alcohol Safety School.

The position of background investigation in the arrest to rehabilitation sequence for each of the 35 ASAPs is shown in Table 1. As may be seen in the table, post-conviction, presentence activity is by far the most common. It may also be noted that many of the ASAP sites conduct at least some portion of diagnosis and referral activity at more than one point in the arrest to rehabilitation sequence. Most frequently, pre-trial activity took place in conjunction with activity at some other point in the sequence. At the Maine project, pre-trial activity consisted of operationally defining first offenders as "non-problem drinkers" and second and subsequent offenders as "potential problem drinkers." Actual diagnosis and referral was available on a more or less voluntary basis, pre- or postsentence, for those individuals operationally defined as "potential problem drinkers." At the Charlotte/Mecklenburg, North Carolina ASAP, pre-trial activity consisted of records checks and drinker classification on the basis of National Highway Traffic Safety Administration (NHTSA) guidelines.[3] Actual diagnosis and referrals, including a client interview, took place presentence at the North Carolina ASAP. Pre-trial procedures at the Columbus, Georgia ASAP, involved a three level drinker diagnosis based exclusively on arrest blood alcohol concentration (BAC) and prior alcohol related offenses. In the Columbus Recorders Court (local court), persons were referred to one of three levels of rehabilitation based on this drinker diagnosis. Those referred to the most intense level received a postsentence background investigation during rehabilitation, presumably as a basis for further referral. In the Georgia State Court, persons were referred only to the first (least intense) level of rehabilitation based on the records check drinker diagnosis. If the drinker diagnosis suggested more intense rehabilitation, a presentence background

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[3]NHTSA, Department of Transportation, January 1973 guidelines for ASAP evaluation. Wash., D. C., 1973.

TABLE 1. POSITION OF BACKGROUND INVESTIGATION IN THE ARREST TO REHABILITATION SEQUENCE

REGION	PROJECT CODE	ASAP SITE	Pretrial	Presentence	Postsentence	In Treatment
I	2	Boston, MA		X		
	2	Maine	X	X	X	
	3	New Hampshire			X	
	1	Vermont				X
II	1	Nassau Co., NY				X
	4	Puerto Rico			X	
III	2	Baltimore, MD		X	X	
	4	Delaware		X		
	3	Fairfax Co., VA	X			
IV	1	Charlotte, NC	X	X		
	2	Columbus, GA	X	X		X
	2	Richland Co., SC	X	X		
	3	Tampa, FL		X		
V	2	Cincinnati, OH		X		
	3	Hennepin Co., MN		X		
	2	Indianapolis, IN		X		
	1	Washtenaw Co., MI		X		
	1	Wisconsin		X		
VI	1	Albuquerque, NM	X			
	3	New Orleans, LA		X		
	3	Oklahoma City, OK		X		
	2	Pulaski Co., AR	X	X		
	3	San Antonio, TX		X		
VII	3	Kansas City, MO	X	X	X	
	2	Lincoln, NE		X		
	4	Sioux City, IA		X		
	2	Wichita, KS	X	X		
VIII	1	Denver, CO		X		
	4	Salt Lake City, UT		X		
	3	South Dakota		X		
IX	4	Los Angeles, CA		X	X	
	3	Phoenix, AR	X	X		
X	4	Idaho		X		
	1	Portland, OR		X		
	1	Seattle, WA		X		

PROJECT CODE: 1 = First Nine Sites; 2 = Second Twenty Sites Not Extended; 3 = Second Twenty Sites Extended; 4 = Last Six Sites

investigation was conducted prior to referral. First offenders at the Richland, South Carolina, project were normally subject to diagnosis and referral to rehabilitation pre-trial. Multiple offenders, however, were sometimes referred to ASAP pre-trial by their lawyers, i.e., sometimes at the time of their appearance in court by a judge and sometimes presentence by a judge. A police records search, a drivers license records check, and a social agency check were performed pre-trial for each DWI arrest at the Arkansas project. A more in-depth investigation was available presentence (on a voluntary basis) for those expressing a desire for rehabilitation. A computer based background investigation resulted in a drinker diagnosis and referral recommendation available at the time of trial for all Kansas City ASAP cases. (Referral recommendation was random within drinker type after November, 1973.) The courts could request a pre- or postsentence investigation for those cases in which the computer investigation yielded an "unidentified" drinker classification. Pre-trial activity in the Wichita, Kansas, project consisted of a preliminary screening, by an ASAP medical corpsman, of all arrestees at the time of booking. Actual diagnosis and referral took place presentence. From January, 1972, to July, 1974, pre-trial activity at the Phoenix, Arizona ASAP, consisted of records checks only. Actual diagnosis and referral took place presentence. After July, 1974, two separate systems were in operation. One system consisted of pre-trial records checks, diagnosis and referral, while a second system involved pre-trial records checks with presentence diagnosis and referral. Only two sites, Albuquerque, New Mexico, and Fairfax County, Virginia, conducted all diagnosis and referral activity pre-trial. At these two sites not only diagnosis and referral activity, but also rehabilitation was completed before trial.

In addition to the eight sites noted above having activity both pre-trial and at some other point in the arrest to rehabilitation sequence, two sites, Baltimore, Maryland, and Los Angeles, California, also conducted diagnosis and referral activity at more than one point in the arrest to rehabilitation sequence. The Baltimore project operated both in city and county courts. In the county courts background investigation was either pre- or post-sentence. In the city courts the background investigation was originally presentence, but was changed to postsentence to avoid two court appearances and the resultant court docket overloading. The Los Angeles ASAP operated five separate diagnosis and referral systems in five widely disbursed geographic locations. In three of these

locations, the diagnostic activity was presentence. In two locations, the activity was primarily, but not exclusively, postsentence.

Shown in Figure 5 is the frequency with which background investigation activity took place at each of four points in the arrest to rehabilitation sequence. The reader should be cognizant of the nature of the activity conducted at each position in the arrest to rehabilitation sequence described above for those sites conducting activity at more than one position in the sequence when inspecting Figure 5.

MECHANISMS FOR REFERRAL TO ASAP

Mechanisms employed by the ASAPs to encourage participation in ASAP programs ranged from non-existent, i.e., voluntary systems; to incentive systems, e.g., shortened drivers license suspension periods; to coercive systems where the alternative to ASAP participation was a significant fine or jail sentence; to almost involuntary systems where participation in ASAP activity was made part of the court sentence. The use of referral mechanisms is shown for each of the 35 ASAP sites in Table 2.

By far the most common mechanism for encouraging participation in ASAP diagnosis, referral and rehabilitation was some form of probation. Generally, either some specific rehabilitation program or cooperation with ASAP was made a condition of probation. Probation was frequently accompanied by a reduction or complete suspension of jail and/or fine sentences. The amount of supervision associated with probation varied from site to site, as did the definition of reporting and non-reporting probation. While some sites considered a monthly telephone call from a probationer to his (her) probation officer as reporting probation, and no contact between client and probation officer as non-reporting probation, other sites defined in-person contacts between a probationer and his (her) probation officer as reporting probation and periodic telephone or mail contact as non-reporting probation. For the purpose of standardization, those probation systems requiring face-to-face probation officer/client contact were recorded as reporting probation in Table 2, and those probation systems not requiring face-to-face contact between probationer and probation officer were recorded as non-reporting probation in Table 2. As a result of this standard definition, some sites with probation systems categorized as non-reporting required telephone or mail contact on a regular basis while others

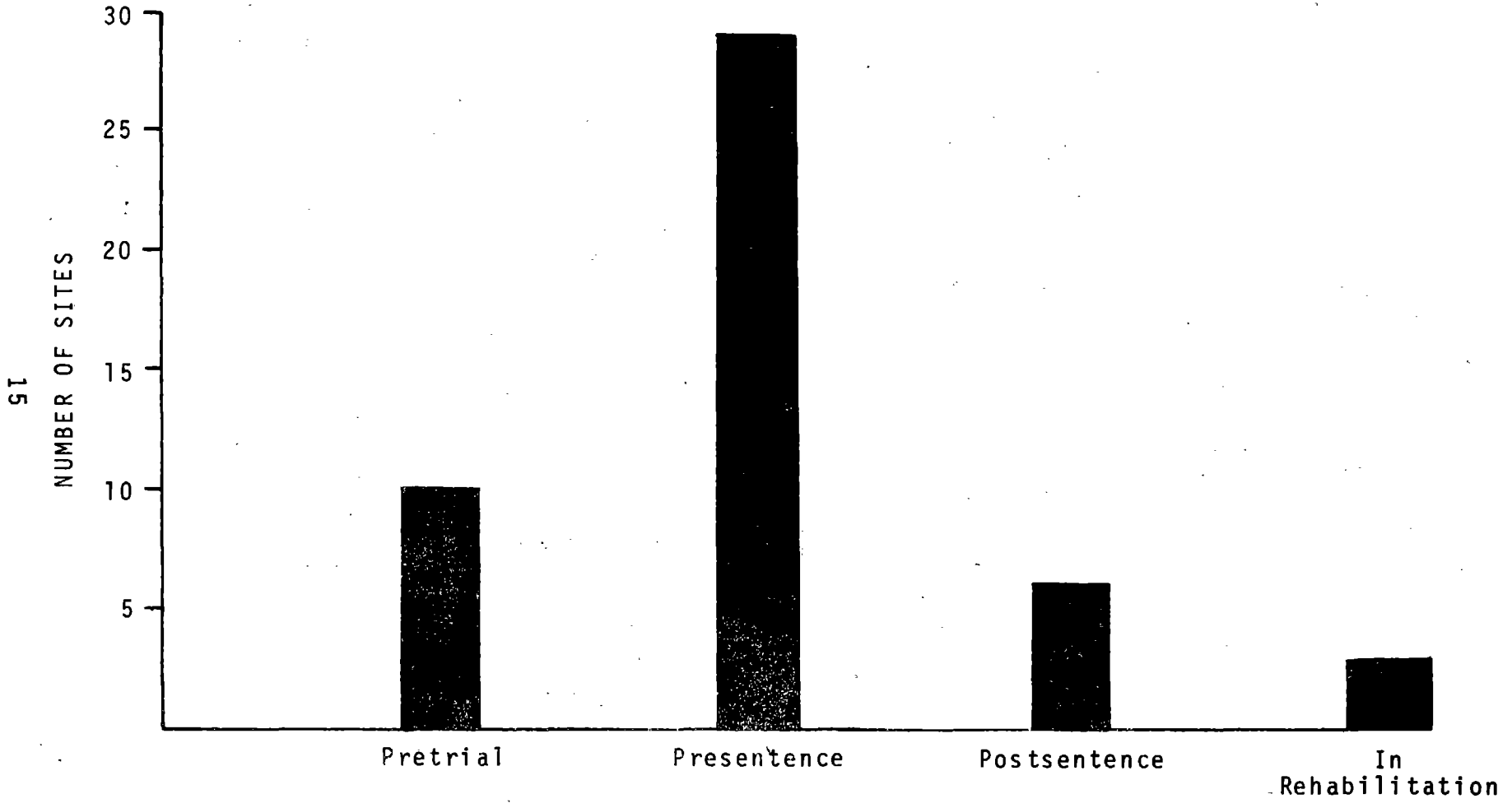

FIGURE 5. POSITION OF BACKGROUND INVESTIGATION IN THE ARREST TO REHABILITATION SEQUENCE

TABLE 2. MECHANISMS FOR REFERRAL TO ASAP

REGION	PROJECT CODE	ASAP SITE	Reporting Probation	Non-Reporting Probation	Delayed Verdict or Sentence	Reduced or Dropped Charge	Part of Sentence	Reduced License Suspension	Voluntary	Other
I	2	Boston, MA	X		X	X				
	2	Maine		X					X	
	3	New Hampshire						X		
	1	Vermont	X					X		
II	1	Nassau Co., NY						X		
	4	Puerto Rico	X					X		
III	2	Baltimore, MD	X							
	4	Delaware							X	X
	3	Fairfax Co., VA	X		X	X				
IV	1	Charlotte, NC			X		X			
	2	Columbus, GA					X			
	2	Richland Co., SC			X	X		X		
	3	Tampa, FL	X		X	X				
V	2	Cincinnati, OH	PD	PD						
	3	Hennepin Co., MN	X							
	2	Indianapolis, IN	X							
	1	Washtenaw Co., MI	X							
	1	Wisconsin	X							X
VI	1	Albuquerque, NM			X	X				
	3	New Orleans, LA	PD	PD						
	3	Oklahoma City, OK	X	X	X					
	2	Pulaski Co., AR		X					X	
	3	San Antonio, TX		X	X	X				
VII	3	Kansas City, MO	PD	PD		X				
	2	Lincoln, NE		X						
	4	Sioux City, IA	PD	PD				X		
	2	Wichita, KS	PD	PD						
VIII	1	Denver, CO	X							
	4	Salt Lake City, UT	X		X	X		X		
	3	South Dakota					X			
IX	4	Los Angeles, CA	X				X			
	3	Phoenix, AR			X					
X	4	Idaho		X	X					
	1	Portland, OR	X							
	1	Seattle, WA	X				X			

PROJECT CODE: 1 = First Nine Sites; 2 = Second Twenty Sites Not Extended; 3 = Second Twenty Sites Extended; 4 = Last Six Sites

did not. It should also be noted that some sites employed probation systems in which the degree of supervision varied with drinker diagnosis. In the six sites where this type of system operated, reporting probation was required for problem drinkers and non-reporting probation was required for non-problem drinkers.

A second frequently employed mechanism for encouraging participation in ASAP diagnosis, referral and rehabilitation was the delay of verdict or sentence on the DWI charge. In the case of the delayed verdict, court procedures were generally effected to the point where it became apparent that a guilty verdict would result. At that point in time, proceedings were suspended to allow participation in ASAP diagnosis, referral and, if indicated, rehabilitation. Subsequent to participation in ASAP diagnosis, referral, and designated rehabilitation programs, an individual would return to court. At that time, a guilty verdict would be rendered for a reduced or a lesser charge if participation in diagnosis, referral and rehabilitation had been satisfactory. In the case of a delayed sentence, a similar procedure was followed. Court procedures would be effected to the point of rendering a guilty finding. Sentencing would be delayed to allow for participation in ASAP diagnosis, referral, and if indicated, rehabilitation. Subsequent to participation in ASAP diagnosis, referral and rehabilitaton programs an individual returned to court where jail and/or fine sentences were reduced or completely suspended if participation in ASAP programs had been satisfactory.

At five sites, participation in ASAP diagnosis, referral, and rehabilitation programs was incorporated into the normal court sentence. That is, an individual might have been sentenced to $150 fine, ten days in jail, and cooperation with ASAP. In these cases, failure to comply with the ASAP portion of the sentence was treated in much the same way as failure to pay a fine, or failure to appear for jail sentence, i.e., contempt of court.

A reduction or elimination of drivers license suspension or revocation was employed by seven sites as a mechanism for encouraging participation in ASAP programs. This mechanism for encouraging participation in ASAP rehabilitation was sometimes more difficult to effect than those previously discussed. In cases where the court system had discretion concerning length of license suspension, cooperation of the court system was all that was required. In some cases, however, license suspension or revocation was an administrative function of the Department of Motor Vehicles, and consequently, modifications to

existing legislation were required to allow for flexibility in length of suspension or revocation.

At three ASAP sites (Maine, Delaware, and Pulaski County, Arkansas), participation in rehabilitation was essentially voluntary.

The Delaware and Wisconsin projects were both able to take advantage of a rather unusual mechanism for encouraging individuals to participate in ASAP programs. At both of these sites, drivers license counselors referred individuals to ASAP programs who, based on driving records, would benefit from exposure to these programs. This mechanism presented a unique opportunity for referring individuals to ASAP who had avoided referral by way of normal court mechanisms.

The frequency of use of the various mechanisms to encourage participation in ASAP programs is shown in Figure 6. It should be remembered when inspecting Figure 6 that many ASAPs employed multiple mechanisms for encouraging participation in ASAP programs as shown in Table 2.

A discussion of the efficacy of the mechanisms discussed above for encouraging participation in ASAP programs is included in a subsequent section of the present volume entitled Client Flow.

DIAGNOSTIC PROCEDURES

Although there are, in actuality, as many diagnostic procedures as there are ASAP sites, the procedures employed for diagnosis by the ASAP sites may be categorized in four general groups: those employing the objective National Highway Traffic Safety Administration (NHTSA) diagnostic criteria, those employing other objective diagnostic criteria, those employing partially subjective diagnostic criteria, and those employing subjective diagnostic criteria. The present section focuses on describing diagnostic procedures, while the validity of the four categories of diagnostic procedure are discussed in a later section of the present volume. In addition, references are made below to standardized diagnostic instruments employed by ASAP sites as part of drinker diagnosis procedures. A subsequent section of the present volume is devoted to describing the use made of standardized tests by the 35 ASAPs and to analyzing the efficacy and validity of the most frequently employed of these instruments. The category of diagnostic procedure employed by each of the 35 ASAP sites is shown in Table 3.

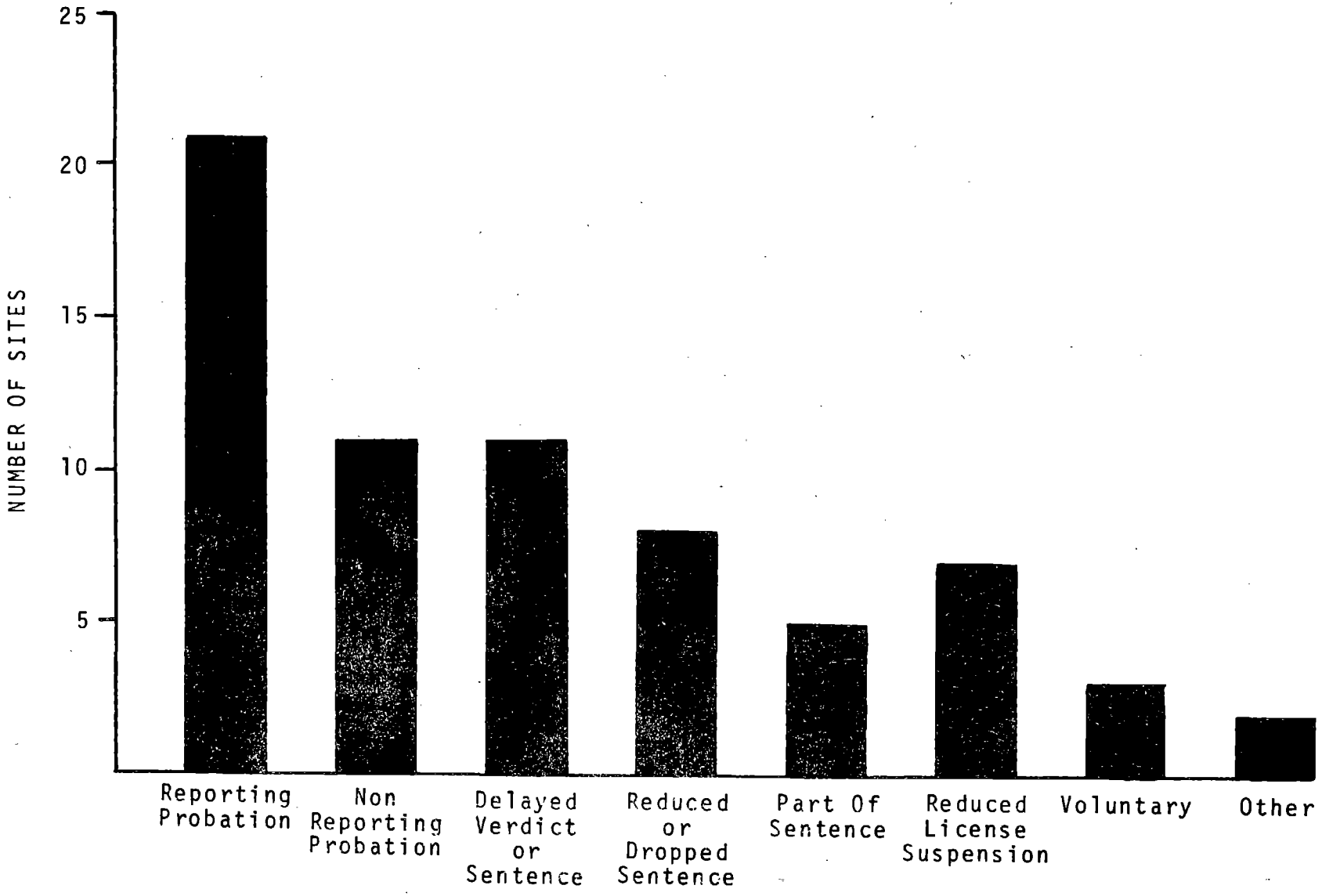

FIGURE 6. MECHANISMS FOR REFERRAL TO ASAP

TABLE 3. DIAGNOSTIC PROCEDURE

REGION	PROJECT CODE	ASAP SITE	NHTSA Criteria	Other Objective	Partially Subjective	Subjective
I	2	Boston, MA				X
	2	Maine			X	
	3	New Hampshire			X	
	1	Vermont				X
II	1	Nassau Co., NY				X
	4	Puerto Rico	X			
III	2	Baltimore, MD	X			
	4	Delaware		X		
	3	Fairfax Co., VA			X	
IV	1	Charlotte, NC	X			
	2	Columbus, GA		X		
	2	Richland Co., SC				X
	3	Tampa, FL		X		
V	2	Cincinnati, OH			X	
	3	Hennepin Co., MN				X
	2	Indianapolis, IN	X			
	1	Washtenaw Co., MI				X
	1	Wisconsin				X
VI	1	Albuquerque, NM				X
	3	New Orleans, LA			X	
	3	Oklahoma City, OK				X
	2	Pulaski Co., AR	X			
	3	San Antonio, TX	X			
VII	3	Kansas City, MO	X			
	2	Lincoln, NE	X			
	4	Sioux City, IA	X			
	2	Wichita, KS	X			
VIII	1	Denver, CO		X		
	4	Salt Lake City, UT		X		
	3	South Dakota			X	
IX	4	Los Angeles, CA				X
	3	Phoenix, AR		X		
X	4	Idaho	X			
	1	Portland, OR			X	X
	1	Seattle, WA	X			X

PROJECT CODE: 1 = First Nine Sites; 2 = Second Twenty Sites Not Extended; 3 = Second Twenty Sites Extended; 4 = Last Six Sites

The NHTSA drinker classification criteria are a relatively simple and objective (to the user) set of criteria provided by the NHTSA for use by the ASAP projects in the identification of problem drinkers. The NHTSA drinker classification criteria as presented in the January 1973 guidelines for ASAP Evaluation[4] are shown in Exhibit A. As may be noted by inspection of the criteria, all with the exception of No. 1 are objective. However, since the diagnostician in the ASAP setting is generally not associated with the medical or treatment facility, information concerning diagnosis as an alcoholic by a competent medical or treatment facility can, in a sense, be considered to be an objective criteria by the ASAP diagnostician. A major advantage of the NHTSA drinker classification criteria is that they may be applied by individuals with relatively little specialized training in the area of problem drinker diagnosis. That is, it is not necessary to be a qualified mental health professional or to have extensive training in the area of alcohol problems in order to apply the NHTSA criteria.

Six sites employed objective diagnostic criteria other than those supplied by the NHTSA. The Delaware project based drinker diagnosis exclusively on the Mortimer-Filkins Questionnaire and Interview[5-6-7-8-9] total score.

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[4] Ibid., p. 11.

[5] Mortimer, R., Filkins, L., Lower, J., Kerlan, M., Post, D., Mudge, B., and Rosenblatt, C. Development of court procedures for identifying problem drinkers. NHTSA Report No. DOT-HS-800-630, Highway Research Institute, The University of Michigan, July, 1971.

[6] Mortimer, R., Filkins, L., and Lower, J. Development of court procedures for identifying problem drinkers. NHTSA Report No. DOT-HS-800-631, Highway Research Institute, The University of Michigan, November, 1971.

[7] Kerlan, M., Mortimer, R., Mudge, B., and Filkins, L. Court procedures for identifying problem drinkers, volume 1. NHTSA Report No. DOT-HS-800-632, Highway Research Institute, The University of Michigan, June, 1971.

[8] Mudge, B., Kerlan, M., Post, D., Mortimer, R., and Filkins, L. Court procedures for identifying problem drinkers, volume 2, supplementary readings. NHTSA Report No. DOT-HS-800-633, Highway Research Institute, The University of Michigan, June, 1971.

EXHIBIT A

NHTSA DRINKER CLASSIFICATION CRITERIA

Problem Drinker - a drinker defined by any one of the following:

1. Diagnosis as an alcoholic by a competent medical or treatment facility, or

2. Self admission of Alcoholism or Problem Drinking, or

3. Two or more of the following:

   a. A BAC of .15 percent or more at the time of arrest,

   b. A record of one or more prior alcohol related arrests,

   c. A record of previous alcohol related contacts with medical, social, or community agencies,

   d. Reports of marital, employment or social problems related to alcohol,

   e. Diagnosis of problem drinker on the basis of approved structured written diagnostic interview instruments. Examples: (MAST, Mortimer-Filkins, NCA, and Johns Hopkins diagnostic tests).

Non-Problem Drinker - when decisions are made on the basis of a background investigation, anyone that is not classified as a problem drinker would be tabulated in this category. This includes those determined to be social drinkers.

Category Unidentified - after the investigation has been completed and no decision can be made to classify a person as a problem or non-problem drinker he should then be classified as Unidentified. This category should also be used by those ASAPs who make background investigations but do not make a decision on the basis of the investigation activity.

The Georgia project based drinker diagnosis on Blood Alcohol Concentration (BAC) at the time of arrest and prior alcohol related offenses. Formulae were originally devised to combine BAC and prior offenses to yield a two classification drinker diagnosis: problem drinker and non-problem drinker. During the course of the project, the formulae for combining BAC and priors to yield drinker classifications, were modified to yield a three category drinker diagnosis: non-problem drinkers, less severe problem drinkers and more severe problem drinkers. The Tampa, Florida ASAP, like the Delaware project, based drinker diagnosis on the Mortimer-Filkins Questionnaire and Interview total score. The Denver, Colorado ASAP, based diagnosis on a questionnaire developed by the site. Diagnosis at the Salt Lake City, Utah project, was based primarily on NHTSA criteria, but with additional weight placed on a high BAC at the time of arrest. The Phoenix, Arizona project, like the Denver, Colorado project, based diagnosis on a site developed questionnaire.

Seven sites employed what are identified as partially subjective diagnostic criteria in this report. Those sites employing diagnostic criteria identified as partially subjective based diagnosis on objective information, but utilized a subjective interpretation of this objective information. That is, objective information such as BAC at the time of arrest, prior traffic and criminal records, standardized diagnostic test scores, etc., formed the basis for diagnostic decisions, but no standardized procedure for combining information obtained from these sources to arrive at a drinker diagnosis was employed. Diagnoses were subjective decisions based on objective information.

Twelve sites employed what have been identified, in this report, as subjective diagnostic procedures. Although many of the diagnostic procedures identified as subjective were based to some extent on objective information, subjective information such as client demeanor, client appearance, etc., was also incorporated into the diagnostic decision. Diagnostic procedures identified as subjective were, then, subjective decisions based on a combination of objective and subjective information. It is interesting to note that seven of the twelve sites employing subjective diagnostic procedures are among the first nine projects funded.

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[9]Filkins, L., Mortimer, R., Post, D., and Chapman, M. Field evaluation of court procedures for identifying problem drinkers. NHTSA Report No. DOT-HS-801-091, Highway Safety Research Institute, University of Michigan, May, 1974.

This may reflect some change in the philosophy of drinker diagnosis during the course of the ASAP program or simply that NHTSA criteria were not available for the majority of the operational periods of the first nine projects.

Unique characteristics make the diagnostic procedures employed by three sites worthy of special explanation. The diagnostic process at the Nassau County, New York project, was unique in that it had relatively little to do with an individual's participation in rehabilitation. All individuals arrested for DWI in New York were randomly referred to Alcohol Safety School or to a control group. Diagnosis took place during the first session of the Alcohol Safety School to:

1. Provide insight concerning class groups for instructors and,

2. Provide data for research purposes.

Diagnostic data was used only infrequently as a basis for further referral, although during the course of the project, some individuals with apparently severe drinking problems were assigned to special school groups. The Portland, Oregon project, employed an initial problem drinker screening diagnosis which was partially subjective. Those individuals identified as probable problem drinkers on the basis of this screening diagnosis received an in-depth diagnosis which was subjective. The Seattle, Washington project, employed NHTSA drinker classification criteria for reporting to the court. A subjective, four category drinker diagnosis was developed for in-house use.

The frequency of use for each of the four categories of drinker diagnosis procedure is shown in Figure 7.

PROCEDURES FOR REFERRAL TO REHABILITATION

Subsequent to, or in conjunction with, the identification of those individuals in the drinking driving population in need of rehabilitation, mechanisms for referral to rehabilitation were initiated. The relationship between diagnosis and referral to rehabilitation can be categorized in two general groups. At some projects, drinker diagnosis determined rehabilitation referral. For example, all those identified as non-problem drinkers at a particular project would attend non-problem drinker Alcohol Safety School. All those identified as mid-range problem drinkers would attend a problem drinker Alcohol Safety School,

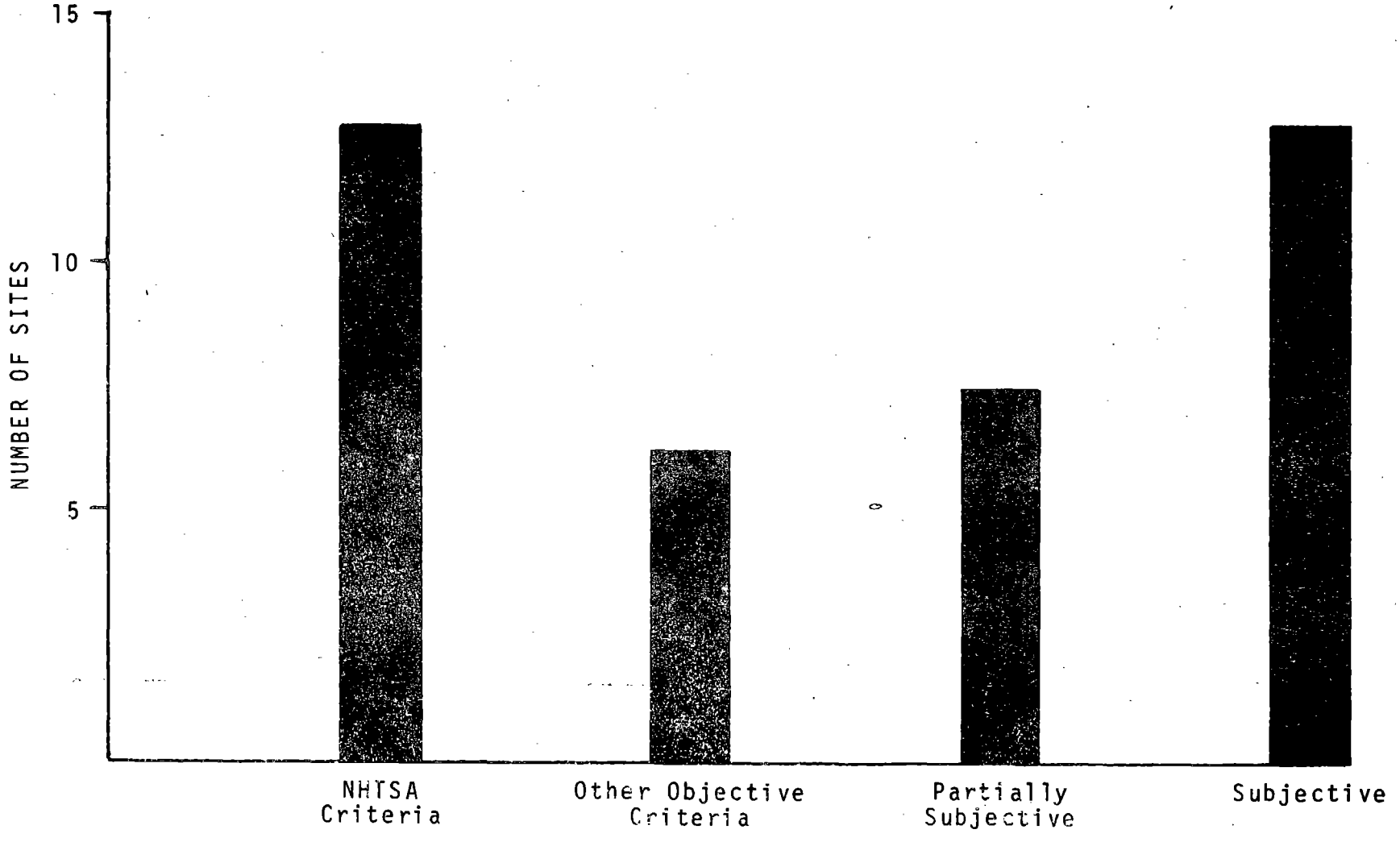

FIGURE 7. DIAGNOSTIC PROCEDURE

and those individuals identified as problem drinkers would attend problem drinker Alcohol Safety School and a short term group therapy program. At the remaining projects, assignment to rehabilitation was a decision separate from diagnosis. Although drinker diagnosis at these sites was an important factor in determining rehabilitation assignment, more than one possible rehabilitation assignment was available for an individual of a given diagnostic category. Problem drinkers, for example, could be assigned to problem drinker Alcohol Safety School or group therapy or an inpatient program or a combination of these programs.

The relationship between rehabilitation assignment and diagnosis at any particular ASAP project was generally the result of the environment in which the project was operating. Projects with a variety of community rehabilitation resources available or projects at which available rehabilitation resources varied with geographic locations, e.g., statewide projects, tended to fall into the group of projects for which rehabilitation assignment was a decision separate from drinker diagnosis. Projects with limited numbers of rehabilitation resources available tended to fall in the category of projects where drinker diagnosis determined rehabilitation assignment. It should be noted that several projects (for example, New Orleans, San Antonio, and Indianapolis) at which rehabilitation assignment was determined by diagnosis, referred to agencies with a variety of available programs. All non-problem drinkers, for example, would be referred to Alcohol Safety School and all problem drinkers would be referred to an alcohol treatment agency. Problem drinkers referred to the alcohol treatment agency were then, however, assigned to one or more of several available rehabilitation tracts.

The relationship between diagnosis and referral for each of the 35 ASAPs is shown in Table 4.

The relationships between diagnosis and referral at some sites do not fit readily into either of the two categories described above and as such are not accurately reflected in Table 4. The following provides a brief description of the relationships between diagnosis and referral for those projects. The reader is referred to Volume I of the present report for more detail. The North Carolina project utilized three separate procedures for referral to rehabilitation. These subsystems involved both diagnosis which determined referral, and referrals which were decisions separate from diagnosis. Referral at the Cincinnati, Ohio, and Portland, Oregon projects, was determined by diagnosis for non-problem drinkers but, not for problem drinkers. At the Nassau County, New York

TABLE 4. PROCEDURES FOR REFERRAL TO REHABILITATION

REGION	PROJECT CODE	ASAP SITE	Determined by Diagnosis	Separate Decision from Diagnosis	Subject to Court Approval	Decision Delegated to ASAP
I	2	Boston, MA	X			X
	2	Maine		X		X
	3	New Hampshire	X			X
	1	Vermont		X		X
II	1	Nassau Co., NY				
	4	Puerto Rico	X			
III	2	Baltimore, MD		X	X	X
	4	Delaware		X		
	3	Fairfax Co., VA	X			
IV	1	Charlotte, NC	X	X	X	X
	2	Columbus, GA		X	X	
	2	Richland Co., SC		X		X
	3	Tampa, FL	X			X
V	2	Cincinnati, OH	X	X		X
	3	Hennepin Co., MN		X	X	
	2	Indianapolis, IN	X		X	
	1	Washtenaw Co., MI		X	X	
	1	Wisconsin		X		X
VI	1	Albuquerque, NM	X		X	
	3	New Orleans, LA	X		X	
	3	Oklahoma City, OK		X	X	
	2	Pulaski Co., AR		X		X
	3	San Antonio, TX	X			X
VII	3	Kansas City, MO			X	
	2	Lincoln, NE		X	X	
	4	Sioux City, IA	X		X	
	2	Wichita, KS		X	X	
VIII	1	Denver, CO	X		X	
	4	Salt Lake City, UT		X	X	
	3	South Dakota		X	X	
IX	4	Los Angeles, CA		X	X	
	3	Phoenix, AR		X		X
X	4	Idaho		X	X	
	1	Portland, OR	X	X	X	
	1	Seattle, WA		X	X	

PROJECT CODE: 1 = First Nine Sites; 2 = Second Twenty Sites Not Extended; 3 = Second Twenty Sites Extended; 4 = Last Six Sites

project, referral to rehabilitation was determined by random assignment required by law. As such, the eventual drinker diagnosis made during rehabilitation was unrelated to the rehabilitation referral. Referral to rehabilitation at the Kansas City project was determined by random assignment within drinker type. Rehabilitation was essentially voluntary at the Maine and Pulaski County, Arkansas projects, but in both cases referral recommendations were available to those individuals desiring to participate in ASAP programs. Recommended rehabilitation was also essentially voluntary at the Delaware ASAP. Driver relicensing examiners sometimes, however, require rehabilitation before the reissue of a drivers license revoked as a result of a DWI arrest. Rehabilitation referrals were specified by law for each drinker type at the Puerto Rico ASAP.

A second factor salient to the rehabilitation referral process was the degree of control exercised by court systems over the rehabilitation assignment. At some ASAP sites the decision concerning rehabilitation assignment was delegated to ASAP personnel by the court system. This delegation may have taken the form of a probation condition which simply required cooperation with ASAP. This probation condition then required participation in diagnosis, referral, and designated rehabilitation. At the remaining ASAP sites assignments to rehabilitation were subject to the approval of court systems. In this case, specific rehabilitation assignments could have been made conditions of probation subsequent to review and acceptance by the court system of diagnosis and referral recommendation results. Similar procedures were followed when specific rehabilitation and assignments were made part of the court sentence.

The control of courts over ASAP rehabilitation referral recommendations is shown in Table 4. It may be noted that the Baltimore and North Carolina projects are identified in both categories. In both cases multiple mechanisms for referral to rehabilitation were utilized with one or more falling in each category.

In some circumstances, review and possible alteration of rehabilitation assignment by court systems could be construed as a threat to the validity of the referral process. If it is assumed that the rehabilitation assignment recommendations made on the basis of background investigations were valid, then alterations of these recommendations by the court system might have decreased the validity of the assignments. Although this problem was discussed briefly in a document previously prepared

for Contract DOT-HS-191-3-759,[10] there is generally little data available to indicate:

1. The frequency and extent to which ASAP formulated rehabilitation assignment recommendations were altered by court systems, and

2. The relative validity of initial ASAP rehabilitation assignment recommendations and final court rehabilitation assignments.

It is certainly a topic worthy of further investigation in future court related diagnosis and referral systems.

The frequency of subsystems in which referral was determined by diagnosis and in which referral was a separate decision from diagnosis, in addition to the frequency of subsystems in which the referral decision was subject to court approval, and the frequency of subsystems in which the referral decision was delegated to ASAP personnel is shown in Figure 8.

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[10] Struckman-Johnson, D. L. Alcohol safety action projects: 1975 interim assessments of drinker diagnosis and referral, analytic study No. 5. Interim Report, Contract DOT-HS-191-3-759, Human Factors Laboratory, University of South Dakota, Vermillion, S. D., 1976.

SITE DRINKER CLASSIFICATION PROFILES

Contained in the present section are profiles, or descriptions, of the diagnostic categories employed by ASAP sites to define the severity of drinking problems. The descriptions are based on the characteristics of the individuals making up these categories. Such a description of the individuals classified in diagnostic categories is useful for several reasons. On the basis of discussion concerning diagnostic procedure presented in the previous section of this volume, it should be clear that the method employed for determining the severity of an individual's drinking problem varied considerably from site to site. Presentation of drinker type profiles allows for perusal of the results of drinker diagnosis in order that greater insight into the procedures involved in arriving at a drinker diagnosis can be acquired. Further, the description of individuals categorized in each of several site drinker classifications may provide information relative to potential target groups for future alcohol traffic safety programs.

The drinker classification profiles provided in the present section are unique relative to previously available drinker classification profiles. Previous drinker classification profiles have, of necessity, been provided on a site-by-site basis. Although each ASAP site forwarded data to the NHTSA for national level analysis, the type of data necessary for drinker classification profiles were not included in the information submitted by the projects to the NHTSA. One task of the contract, on which the present volume is based, was the acquisition, on an individual client basis, of data collected during the diagnosis, referral and rehabilitation process at individual ASAP sites. Data were obtained directly from thirteen ASAP sites and through the Stanford Research Institute, from nine National Institute on Alcohol Abuse and Alcoholism (NIAAA)/ASAP Alcohol Centers,* operating at ASAP sites.

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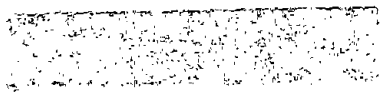
*NIAAA/ASAP Alcohol Centers were rehabilitation facilities made available through NIAAA grants to communities in which ASAPs were operating. The centers, which were designed to supplement inadequate community facilities, generally served clients in the mid-range problem drinker and problem drinker categories. A more complete description of programs available at the centers may be found in Volume I of the current report.

(As the result of technical problems, data were ultimately employed from nine of the thirteen ASAP sites and all of the NIAAA/ASAP Alcohol Centers). Data from the ASAP sites and from the NIAAA/ASAP Alcohol Centers were merged to form a master "client file." A complete description of the development of the master client file, and of the modifications to the data from each of the ASAP sites and the NIAAA/ASAP Alcohol Centers necessary for standardization is included in Appendix A. The availability of the master client file data made it possible for the first time to present drinker classification profiles based on data from more than one ASAP site. Although the drinker classification profiles presented in this section are not based on data from all ASAP sites, they are in most cases based on data for sufficient numbers of individuals to be considered representative of the total population of the ASAP clients. Exceptions to the norm in this regard will be noted when appropriate.

Diagnostic procedures employed by ASAP sites involved both two category and three category drinker classification schemes. Because the center category in three category classification schemes generally overlapped both categories in two category classification schemes, it was felt that combining data obtained from sites employing two category drinker classification schemes with data from sites employing the three category drinker classification schemes would both obscure the distinctions between drinker types and mask information concerning the nature of the drinker diagnosis processes. There are, therefore, actually two sets of drinker classification profiles described in this section: one for sites employing two diagnostic categories and one for sites employing three diagnostic categories.

The general format of the data presentation is a simple cross tabulation. Rows of each table are categories of the profile variables (age, sex, race, etc.), while the columns of each table are drinker classifications. For each table profiling the classifications of three category diagnostic schemes, the drinker classifications are labeled as follows: non-problem drinkers, mid-range problem drinkers, and problem drinkers. For each table profiling the classifications of two category drinker diagnostic schemes, the drinker classifications are labeled as follows: non-problem drinkers and problem drinkers. It should be noted that these category labels do not, in all cases, correspond to drinker classification category labels employed by ASAP sites. Appendix A provides information concerning the drinker classification



labels employed by each site corresponding to drinker classification labels utilized in the tables presented in this section. The variables employed for the profiles in this section were not available on the client files of all sites in all cases. As a result, the number of sites from which data were drawn to create a particular table varies from table to table. Further, because of partially missing data on some client files, some tables constructed with data drawn from the same group of sites may reflect a different number of individuals.

It should be remembered when inspecting the profiles presented in this section that the profiles represent the results of drinker diagnosis. They do not necessarily reflect the importance of a particular profile variable in the determination of drinker diagnosis. The fact that the distribution of a particular variable changes considerably from one drinker classification to another may indicate either that:

1. The variable of interest was given a high weight in the determination of drinker classification, or

2. The variable of interest was not given a high weight in the determination of drinker classification, but was nonetheless related to drinker classification.

For the majority of variables exhibiting different distributions between drinker classifications in the present section, information is not available to differentiate between the former and latter possibilities described above. Arrest blood alcohol concentration and prior alcohol related offenses are exceptions, in that, the majority of sites have indicated their importance in the determination of drinker classification.

AGE

The cross tabulation of age category by site drinker classification for those sites employing a three category system is shown in Table 5. Data included in the table are from six ASAP sites and the NIAAA/ASAP Alcohol Centers. The information presented in the table is based on a total sample of 37,093 individuals and, as such, should be representative of ASAP clients in general.

TABLE 5. AGE CATEGORY BY SITE DRINKER CLASSIFICATION IN SITES USING THREE CATEGORY DRINKER CLASSIFICATIONS

Age Category	Site Drinker Classification			Row Totals and Percent of Total
	Non-Problem	Midrange Problem	Problem	
15 to 17	81 38.2 0.9	88 41.5 0.7	43 20.3 0.3	212 0.6
18 to 19	722 37.2 7.8	830 42.7 6.9	390 20.1 2.5	1942 5.2
20 to 24	1939 30.1 20.9	2490 38.5 20.6	2043 31.6 13.0	6472 17.4
25 to 34	2640 24.9 28.4	3543 33.5 29.3	4380 41.5 27.8	10,563 28.5
35 to 44	1814 22.3 19.5	2356 28.9 19.5	3977 48.8 25.3	8147 22.0
45 to 54	1307 20.3 14.1	1785 27.7 14.8	3350 52.0 21.3	6442 17.4
55 to 64	604 22.1 6.5	784 28.7 6.5	1339 49.1 8.5	2727 7.4
65 or older	176 30.0 1.9	196 33.3 1.6	216 36.7 1.4	588 1.6
Column Totals Percent of Total	9283 23.6	12,072 29.4	15,738 47.0	37,093

Cell contents are: frequency
row percent
column percent

Data from: Fairfax
Hennepin County
New Orleans
NIAAA/ASAP Alcohol Centers
Oklahoma City
Salt Lake City
South Dakota

The first data entry in each cell of the table is simply the number of individuals falling in the category of interest. The upper left hand cell of Table 5, for example, indicates that 81 individuals between the ages of 15 and 17 were classified as non-problem drinkers. The second entry in each cell indicates the percent of individuals in an entire row falling in a particular cell of that row. For example, 38.2% of the individuals 15 to 17 years old were classified non-problem drinkers, 41.5% of the individuals 15 to 17 years old were classified as mid-range problem drinkers and 20.3% of the individuals 15 to 17 years old were classified as problem drinkers. The third entry in each table cell indicates the percent of individuals in an entire column classified in a particular cell of that column. For example, 0.9% of those individuals classified as non-problem drinkers fell in the 15 to 17 year old category, 7.8% of those individuals classified as non-problem drinkers were in the 18 to 19 year old age category, 20.9% of those individuals classified as non-problem drinkers were in the 25 to 34 year old age category, etc. Entries in the row total and column total cells are also of interest. For example, 212 individuals are in the 15 to 17 year old age group irrespective of drinker classification. These 212 individuals represent 0.6% of all individuals included in the table. A total of 9,283 individuals were classified as non-problem drinkers, regardless of their age category. These 9,283 individuals represent 23.6% of all individuals included in the table.

Several trends appear in the data tabulated in Table 5. It is apparent that the proportion of individuals in a particular age category classified as problem drinkers increases with an increase in age. The proportion of persons classified as problem drinkers within each age category increases steadily from the 15 to 17 year old category through the 45 to 54 year old category. The proportion of persons categorized as problem drinkers in the 55 to 64 year old age group and the 65 and older age group tends to drop off from the high of 52.0% problem drinkers for the 45 to 54 age group. Corresponding to the increase in the proportion of individuals classified as problem drinkers from the 15 to 17 year old age category to the 45 to 54 year old age category is a decrease in the proportion of the individuals classified as non-problem drinkers or mid-range problem drinkers in these same categories. As noted above, the row totals provide information concerning the distribution of age for individuals subject to diagnosis and referral irrespective of their drinker classification. While individuals in the 25 to 34 year old age category represent the largest

category of individuals subject to ASAP diagnosis, it must be noted that the 20 to 24 year old age category represents only a five year age span as compared to the ten year age span for the 25 to 34 year old category. The row totals and percent of totals, in fact, indicate that the modal age for individuals subject to ASAP diagnosis is in the 20 to 24 year old category.

The cross tabulation of age by site drinker classification for those ASAPs employing two drinker classification categories is shown in Table 6. Data from these sites resulted in the tabulation of 7,068 individuals in Table 6. Trends similar to those observed in Table 5 are apparent in Table 6. The proportion of individuals classified as problem drinkers in each age category increases to the 45 to 54 year old category and decreases somewhat in the 55 to 64 year old and 65 or older categories. Again, although only 16.0% of the individuals represented in Table 6 fall in the 20 to 24 year old age category, this category represents the modal age category of all those individuals subject to ASAP drinker diagnosis.

SEX

Presented in Table 7 is the cross tabulation of sex and drinker classification for those sites employing three category drinker diagnosis. A total of 36,103 individuals are represented in the data drawn from five ASAP sites and the NIAAA/ASAP Alcohol Centers. It is clear from the row totals, and associated percentages, that the vast majority (91.6%) of all individuals subject to drinker diagnosis are male. It is also apparent that a somewhat larger proportion of males than females are classified as problem drinkers. While 46.6% of males are classified as problem drinkers, 38.4% of females are classified as problem drinkers.

The cross tabulation of sex and drinker classification for those sites employing two category drinker classification schemes may be found in Table 8. Data from three sites resulted in a total of 6,098 individuals represented in the table. The information presented is similar to that available in Table 7. Again, the vast majority of individuals subject to ASAP diagnosis are male. The proportion of males subject to two category diagnostic procedures is slightly larger than the proportion of males subject to three category drinker diagnosis (93.0% vs. 91.6%). It is also again apparent that the proportion of males classified as problem drinkers (61.6%) is somewhat larger than the proportion of females classified as problem drinkers (51.3%).

TABLE 6. AGE CATEGORY BY SITE DRINKER CLASSIFICATION USING TWO CATEGORY DRINKER CLASSIFICATIONS

Age Category	Site Drinker Classification		Row Totals and Percent of Total
	Non-Problem	Problem	
15 to 17	22 51.2 0.8	21 48.8 0.5	43 0.6
18 to 19	183 50.1 6.5	182 49.9 4.3	365 5.2
20 to 24	544 47.9 19.2	591 52.1 14.0	1135 16.0
25 to 34	750 38.7 26.5	1186 61.3 28.0	1936 27.4
35 to 44	582 39.2 20.5	902 60.8 21.3	1484 21.0
45 to 54	424 32.9 15.0	865 67.1 20.4	1289 18.2
55 to 64	200 40.2 7.1	298 59.8 7.0	498 7.0
65 or older	128 40.3 4.5	190 59.7 4.5	318 4.5
Column Totals Percent of Total	2833 40.1	4235 60.0	7068

Cell contents are: frequency
row percent
column percent

Data from: New Hampshire
San Antonio
Wichita

TABLE 7. SEX BY SITE DRINKER CLASSIFICATION FOR SITES USING THREE CATEGORY DRINKER CLASSIFICATIONS

Sex	Site Drinker Classification			Row Totals and Percent of Total
	Non-Problem	Midrange Problem	Problem	
Male	7182 21.7 89.8	10,482 31.7 90.0	15,404 46.6 93.0	33,068 91.6
Female	819 27.0 10.2	1051 34.6 9.1	1165 38.4 7.0	3035 8.4
Column Totals Percent of Total	8001 22.1	11,533 31.9	16,569 45.9	36,103

Cell contents are: frequency
row percent
column percent

Data from: Fairfax
Hennepin County
NIAAA/ASAP Alcohol Centers
Oklahoma City
Salt Lake City
South Dakota

TABLE 8. SEX BY SITE DRINKER CLASSIFICATION FOR SITES USING TWO CATEGORY DRINKER CLASSIFICATIONS.

Sex	Site Drinker Classification		Row Totals and Percent of Total
	Non-Problem	Problem	
Male	2466 38.4 91.4	3964 61.6 94.2	6430 93.0
Female	233 48.7 8.6	245 51.3 5.8	478 6.9
Column Totals Percent of Total	2699 39.1	4209 60.9	6908

Cell contents are: frequency
row percent
column percent

Data from: New Hampshire
San Antonio
Wichita

RACE

Race by drinker type for those sites employing three category drinker classification procedures is shown in Table 9. Data from five ASAP sites and the NIAAA/ ASAP Alcohol Centers account for 29,493 entries in the table. The data reflected in Table 9 suggest several observations. While approximately equal proportions of white and black individuals are classified as problem drinkers, the proportions of whites classified as non-problem drinkers and as mid-range problem drinkers, is almost the reverse of the proportions of blacks in these two categories (26.8% and 31.4% vs. 35.9% and 22.1%). A larger proportion of those individuals in the other race category, than in either the black or white category, are classified as problem drinkers. Although it is not evident from the table, the sites contributing data to the tabulation (particularly Oklahoma City, Salt Lake City, and South Dakota) suggest that a significant number of those individuals in the other race category are probably American Indians.

The cross tabulation of race and site drinker classification for those sites employing two drinker classifications are found in Table 10. The only site contributing data to the table is Wichita. As a result, the information provided in Table 10 may not be representative of those sites employing a two-category drinker classification procedure. It is interesting to note, however, that the information provided in Table 10 is similar to that provided in Table 9. That is, the proportion of white and black individuals classified as problem drinkers is approximately equal, while the proportion of individuals classified as problem drinkers in the other race category is somewhat higher.

EDUCATION

The distribution of education categories between drinker classifications for sites employing three category drinker classification procedures is shown in Table 11. A total of 16,159 individuals are represented in the table. Data are drawn from six ASAP sites and the NIAAA/ ASAP Alcohol Centers. A clearly larger proportion of those individuals with an eighth grade or less education (55.1%), or a high school education (44.6%) than individuals with a higher educational level are classified as problem drinkers. The percentage of individuals classified as problem drinkers in the some college or business or trade school category, the college degree

TABLE 9. RACE BY SITE DRINKER CLASSIFICATION FOR SITES USING THREE CATEGORY DRINKER CLASSIFICATIONS

Race	Site Drinker Classification			Row Totals and Percent of Total
	Non-Problem	Midrange Problem	Problem	
White	6185 26.8 77.5	7248 31.4 80.9	9657 41.8 76.9	23,090 78.3
Black	1478 35.9 18.5	909 22.1 10.2	1731 42.0 13.8	4118 14.0
Other	316 13.8 4.0	797 34.9 9.0	1172 51.3 9.3	2285 8.0
Column Totals Percent of Total	7979 27.1	8954 30.4	12,560 42.6	29,493

Cell contents are: frequency
row percent
column percent

Data from: Fairfax
New Orleans
NIAAA/ASAP Alcohol Centers
Oklahoma City
Salt Lake City
South Dakota

TABLE 10. RACE BY SITE DRINKER CLASSIFICATION FOR SITES USING TWO CATEGORY DRINKER CLASSIFICATIONS.

Race	Site Drinker Classification		Row Totals and Percent of Total
	Non-Problem	Problem	
White	50 30.9 12.0	112 69.1 13.0	162 12.7
Black	351 33.5 84.0	696 66.5 80.8	1047 81.8
Other	17 24.3 4.1	53 75.7 6.2	70 5.5
Column Totals Percent of Total	418 32.7	861 67.3	1279

Cell contents are: frequency
row percent
column percent

Data from: Wichita

TABLE 11. EDUCATION CATEGORY BY SITE DRINKER CLASSIFICATION FOR SITES USING THREE CATEGORY DRINKER CLASSIFICATIONS

Education Category	Site Drinker Classification			Row Totals and Percent of Total
	Non-Problem	Midrange Problem	Problem	
8th Grade or Less	944 19.3 10.2	1257 25.6 10.9	2701 55.1 16.7	4902 13.3
High School	5339 23.7 57.6	7154 31.7 61.9	10,060 44.6 62.3	22,553 61.0
Some College or Business or Trade School	2057 30.1 22.2	2317 34.0 20.0	2459 36.0 15.2	6833 18.5
College Degree	688 33.7 7.4	656 32.1 5.7	699 34.2 4.3	2043 5.5
Post College	245 37.1 2.6	175 26.5 1.5	240 36.4 1.5	660 1.8
Column Totals Percent of Total	9273 25.1	11,559 31.2	16,159 43.7	36,991

Cell contents are: frequency
row percent
column percent

Data from: Fairfax
Hennepin County
New Orleans
NIAAA/ASAP Alcohol Centers
Oklahoma City
Salt Lake City
South Dakota

category and post college category is relatively constant. There is, however, a somewhat higher proportion of individuals in the post college category classified as non-problem drinkers than in either the some college or business or trade school category or the college degree category.

The distribution of education categories between drinker types for sites employing two category drinker diagnosis appears in Table 12. A total of 3,296 individuals drawn from three ASAP sites are included in the table. The proportion of individuals classified as problem drinkers remains relatively constant for all education categories except post college. A higher proportion of individuals in the post college category than in other categories are classified as problem drinkers. It may be noted, however, that while there are 4,722 individuals represented in Table 12, the post college category represents only 26 individuals. The instability in proportions caused by this relatively small number of individuals is undoubtedly the explanation for the discrepancy between this category in Tables 11 and 12. The higher proportion of persons with eighth grade or less education or a high school education classified as problem drinker in Table 11 is not apparent in Table 12. Unstable proportions are not a reasonable explanation of discrepancies in this case. The discrepancy may be due to either differences in the clients diagnosed by the sites reflected in the two tables or differences in diagnostic procedures.

INCOME CATEGORY

Shown in Table 13 is the distribution of yearly income categories between drinker classifications for three level diagnostic systems. A total of 25,646 persons from five ASAP sites and the NIAAA/ASAP Alcohol Centers are tabulated in the table. The proportion of individuals classified in each of the three drinker classifications, for all income categories except the 2,000 or less category, are quite similar. The only large, between-category difference evident in Table 13 is in the proportion of individuals in the 2,000 or less income category classified as problem drinkers. Nearly fifty percent of those individuals with an income of $2,000 or less are categorized as problem drinkers versus approximately forty percent of the individuals in all other categories.

TABLE 12. EDUCATION CATEGORY BY SITE DRINKER CLASSIFICATION FOR SITES USING TWO CATEGORY DRINKER CLASSIFICATIONS

Education Category	Site Drinker Classification		Row Totals and Percent of Total
	Non-Problem	Problem	
8th Grade or Less	583 30.5 40.9	1331 69.5 40.4	1914 40.5
High School	670 30.3 47.0	1544 69.8 46.8	2214 46.9
Some College or Business or Trade School	134 29.3 9.4	324 70.7 9.8	458 9.7
College Degree	34 30.9 2.4	76 69.1 2.3	110 2.3
Post College	5 19.2 0.4	21 80.8 0.6	26 0.6
Column Totals Percent of Total	1426 30.2	3296 69.8	4722

Cell contents are: frequency
row percent
column percent

Data from: New Hampshire
San Antonio
Wichita

TABLE 13. INCOME CATEGORY BY SITE DRINKER CLASSIFICATION FOR SITES USING THREE CATEGORY DRINKER CLASSIFICATIONS

Income Category	Site Drinker Classification			Row Totals and Percent of Total
	Non-Problem	Midrange Problem	Problem	
$2000 or less	611 21.3 8.1	830 28.9 10.9	1432 49.8 13.5	2873 11.2
$2001 to $6000	1955 27.8 25.9	2394 34.0 30.4	2695 38.3 25.5	7044 27.5
$6001 to $10,000	2334 28.8 31.0	2438 30.1 30.9	3326 41.1 31.4	8098 31.6
$10,001 to $15,000	1255 28.1 22.0	1298 29.1 16.5	1909 42.8 18.0	4462 17.4
$15,001 or more	991 31.3 13.1	959 30.3 12.2	1219 38.5 11.5	3169 12.4
Column Totals Percent of Total	7146 27.9	7919 30.9	10,581 41.3	25,646

Cell contents are: frequency
row percent
column percent

Data from: Fairfax
New Orleans
NIAAA/ASAP Alcohol Centers
Oklahoma City
Salt Lake City
South Dakota

Table 14 presents the distribution of yearly income categories between drinker types for sites using two drinker classifications. Data from three ASAP sites resulted in the inclusion of 3,705 individuals in the table. The higher proportion of individuals diagnosed as problem drinkers in the $2,000 or less income category appearing in Table 13 is also apparent in Table 14. Table 14 data would also appear to suggest that the proportion of individuals in the $15,000 or more income category are categorized as problem drinkers less frequently than individuals in other income categories. It should be noted that the $15,000 or more income category, however, is comprised of only 55 individuals. It would seem reasonable to dismiss the proportion of problem drinkers in the $15,000 or more category as unstable due to the small number of individuals in the category.

MARITAL STATUS

The cross tabulation of marital status and site drinker classification for those sites employing a three category drinker classification is shown in Table 15. The table is comprised of data from six ASAP sites and the NIAAA/ASAP Alcohol Centers. A total of 38,654 individuals are represented in the table. It is evident that those individuals either divorced or separated are classified as problem drinkers more frequently than married, single, or widowed individuals. The data in the table also indicate, however, that individuals who are married are more frequently classified as problem drinkers than those individuals who are single or widowed. Although the possible relationship between a problematic marital situation (divorced or separated) and problem drinking is relatively obvious, it is not clear why individuals who are married are more frequently classified as problem drinkers than those individuals who are single or widowed. A possible explanation may relate to the age distribution of problem drinkers presented previously in Table 5. It was noted that the proportion of individuals classified as problem drinkers increased with age. If the number of individuals who are married (as opposed to single) increases with age, then it might be expected that the proportion of individuals classified as problem drinkers would be greater in the married category because of the relationship between age and the frequency of a problem drinker classification.

Shown in Table 16 is the cross tabulation of marital status and the site drinker classification for those sites employing a two category drinker classification.

TABLE 14. INCOME CATEGORY BY SITE DRINKER CLASSIFICATION FOR SITES USING TWO CATEGORY DRINKER CLASSIFICATIONS

Income Category	Site Drinker Classification		Row Totals and Percent of Total
	Non-Problem	Problem	
$2000 or less	73 21.7 6.8	263 78.3 10.0	336 9.1
$2001 to $6000	464 29.4 43.0	1113 70.6 42.4	1577 42.6
$6001 to $10,000	388 30.4 36.0	888 69.6 33.8	1276 34.4
$10,001 to $15,000	128 27.8 11.9	333 72.2 12.7	461 12.4
$15,001 or more	25 45.5 2.3	30 54.5 1.1	55 1.5
Column Totals Percent of Total	1078 29.1	2627 70.1	3705

Cell contents are: frequency
row percent
column percent

Data from: New Hampshire
San Antonio
Wichita

TABLE 15. MARITAL STATUS BY SITE DRINKER CLASSIFICATION FOR SITES USING THREE CATEGORY DRINKER CLASSIFICATIONS

Marital Status	Site Drinker Classification			Row Totals and Percent of Total
	Non-Problem	Midrange Problem	Problem	
Single or Widowed	3374 28.8 35.3	4209 35.9 34.8	4128 35.2 24.3	11,711 30.1
Married	4631 25.6 48.5	5396 29.9 44.6	8042 44.5 47.3	18,069 46.7
Divorced or Separated	1552 17.5 16.2	2496 28.1 20.6	4826 54.4 28.4	8874 23.0
Column Totals Percent of Total	9557 24.7	12,101 31.3	16,996 44.0	38,654

Cell contents are: frequency
row percent
column percent

Data from: Fairfax
Hennepin County
New Orleans
NIAAA/ASAP Alcohol Centers
Oklahoma City
Salt Lake City
South Dakota

TABLE 16. MARITAL STATUS BY SITE DRINKER CLASSIFICATION FOR SITES USING TWO CATEGORY DRINKER CLASSIFICATIONS.

Marital Status	Site Drinker Classification		Row Totals and Percent of Total
	Non-Problem	Problem	
Single or Widowed	166 23.2 33.8	549 76.8 28.6	715 29.7
Married	241 22.1 49.1	848 77.9 44.2	1089 45.2
Divorced or Separated	84 13.9 17.1	522 86.1 27.2	606 25.1
Column Totals Percent of Total	491 20.4	1919 79.6	2410

Cell contents are: frequency
row percent
column percent

Data from: New Hampshire
Wichita

Data from two sites provide a total of 2,410 individuals for Table 16. Although the proportion of individuals in the divorced or separated category classified as problem drinkers is higher than the proportion of individuals classified as problem drinkers in the married or single or widowed categories, the proportion of individuals categorized as problem drinkers in the single or widowed category and the married category is approximately equal. This would appear to contradict the explanation for differences in the proportion of individuals classified as problem drinkers in the single or widowed category and the married category appearing in Table 15. The discrepancies may be due to either differences in the clients diagnosed by those sites contributing data to Tables 15 and 16 or to differences in diagnostic procedures. It seems clear that divorced or separated individuals are more frequently classified as problem drinkers than those single, widowed or married. The relationship between drinker diagnosis and marital status is less clear for those individuals who are single, widowed, or married.

OCCUPATION CATEGORY

The distribution of occupation categories between drinker types for sites using three category drinker classification schemes is shown in Table 17. Data from five ASAP sites and the NIAAA/ASAP Alcohol Centers provide 29,420 individuals for inclusion in the table. It may be seen from Table 17 that those individuals in the unemployed category are identified as problem drinkers more frequently than individuals in any other occupation category. White collar sales and clerical workers, housewives, students and retired persons tend to be classified as problem drinkers less frequently than individuals in other occupational categories. The proportion of blue collar workers, either skilled or unskilled, and professional or managerial white collar workers tend to be classified as problem drinkers with a proportional frequency somewhere between unemployed persons and white collar sales and clerical workers, housewives, students, and retired persons. It is interesting to note that over fifty percent of the individuals subject to ASAP diagnosis regardless of eventual drinker classifications are either skilled or unskilled blue collar workers.

The distribution of occupation categories between site drinker classifications for projects employing two classification drinker diagnostic procedures is shown in Table 18. Data from two sites provided a total of 2,151 individuals for inclusion in Table 18. Although it

TABLE 17. OCCUPATION CATEGORY BY SITE DRINKER CLASSIFICATION FOR SITES USING THREE CATEGORY DRINKER CLASSIFICATIONS.

Occupation Category	Site Drinker Classification			Row Totals and Percent of Total
	Non-Problem	Midrange Problem	Problem	
White Collar - Professional, Management, etc.	1360 31.6 17.1	1243 28.9 13.9	1694 39.4 13.5	4297 14.6
White Collar - Sales, Clerical, etc.	1251 36.5 15.7	1052 30.7 11.8	1124 32.8 9.0	3427 11.6
Blue Collar - Skilled	2641 25.1 33.2	3098 29.4 34.6	4797 45.5 38.3	10,536 35.8
Blue Collar - Unskilled	1487 23.3 18.7	2002 31.4 22.4	2892 45.3 23.1	6381 21.7
Housewives, Students, Retired, etc.	687 33.5 8.6	737 35.9 8.2	627 30.6 5.0	2051 7.0
Unemployed	523 19.2 6.6	814 29.9 9.1	1391 51.0 11.1	2728 9.9
Column Totals Percent of Total	7949 27.0	8946 30.4	12,525 42.6	29,420

Cell contents are: frequency
row percent
column percent

Data from: Fairfax
NIAAA/ASAP Alcohol Centers
New Orleans
Oklahoma City
Salt Lake City
South Dakota

TABLE 18. OCCUPATION CATEGORY BY SITE DRINKER CLASSIFICATION FOR SITES USING TWO CATEGORY DRINKER CLASSIFICATIONS.

Occupation Category	Site Drinker Classification		Row Totals and Percent of Total
	Non-Problem	Problem	
White Collar, Professional, Managers, etc.	38 18.4 9.2	168 81.6 9.7	206 9.6
White Collar, Sales, Clerical, etc.	46 34.8 11.2	86 65.2 4.9	132 6.1
Blue Collar, Skilled	127 14.6 30.8	741 85.4 42.6	868 40.3
Blue Collar, Unskilled	150 24.6 36.4	460 75.4 26.5	610 28.4
Students, Housewives, Retired, etc.	11 10.0 2.7	101 90.2 5.8	112 5.2
Unemployed	40 18.0 9.7	183 82.1 10.5	223 10.4
Column Totals Percent of Total	412 19.2	1739 80.8	2151

Cell contents are: frequency
row percent
column percent

Data from: New Hampshire
Wichita

would appear that the proportions of individuals categorized as problem drinkers in each of the occupation categories are at variance with the proportions reported in Table 17, inspection of the data in Table 18 indicates that all occupational categories, with the exception of blue collar skilled and unskilled, are represented by relatively small numbers of individuals. The instability associated with the small number of individuals in the majority of occupation categories, shown in Table 18, indicates that interpretation would be inappropriate. It does seem appropriate to note that, again, the majority of individuals subjected to ASAP diagnosis fall in the blue collar skilled or blue collar unskilled occupation categories.

ARREST BAC CATEGORY

The distribution of arrest BAC for each drinker classification employed by sites using three drinker types is shown in Table 19. A total of 24,823 individuals from five ASAP sites and the NIAAA/ASAP Alcohol Centers are tabulated. Ignoring arrest BAC categories of .01 to .04, .40 to .44, and .45 to .49, because of low frequencies in these categories, a relatively constant increase in the proportion of individuals classified as problem drinkers with an increase in arrest BAC is apparent. This result is not unexpected because of the importance placed on BAC by many of the ASAP diagnostic systems. The increase in the proportion of individuals classified as problem drinkers, with an increase in arrest BAC category, is accompanied by a decrease in the proportion of individuals classified as non-problem and mid-range problem drinkers, with an increase in arrest BAC category.

The distribution of BAC categories by drinker classification for those sites employing two category drinker classifications may be found in Table 20. Data presented in the table are drawn from three ASAP sites and represent a total of 4,110 individuals. Again, ignoring those arrest BAC categories representing a relatively small number of individuals, an increase in the proportion of individuals in a particular category categorized as problem drinkers may be observed for an increase in the arrest BAC category. It is interesting to note that nearly forty percent of all individuals subject to ASAP diagnosis had arrest BACs between .15 and .19, with nearly an additional thirty percent in the .20 to .24 category.

TABLE 19. ARREST BAC BY SITE DRINKER CLASSIFICATION FOR SITES USING THREE CATEGORY DRINKER CLASSIFICATIONS.

Arrest BAC	Site Drinker Classification			Row Totals and Percent of Total
	Non-Problem	Midrange Problem	Problem	
.01 to .04	24 22.4 0.4	23 21.5 0.3	60 56.1 0.6	107 0.4
.05 to .09	115 49.1 1.9	60 25.6 0.7	59 25.2 0.6	234 0.9
.10 to .14	2050 43.6 33.8	1477 31.4 18.3	1173 24.9 11.6	4700 18.9
.15 to .19	2481 28.2 40.9	3207 36.4 39.7	3123 35.4 31.0	8811 35.5
.20 to .24	1089 15.6 18.0	2270 32.5 28.1	3617 51.8 35.9	6976 28.1
.25 to .29	244 8.7 4.0	790 28.1 9.8	1774 63.2 16.6	2808 11.3
.30 to .34	51 5.6 0.8	199 21.8 2.5	664 72.6 6.6	914 3.7
.35 to .39	5 2.2 0.1	44 19.6 0.5	175 78.1 1.7	224 0.9
.40 to .44	2 5.6 0.0	10 27.8 0.1	24 66.7 0.2	36 0.1
.45 to .49	0 0.0 0.0	4 30.8 0.0	9 69.2 0.1	13 0.1
Column Totals Percent of Total	6061 24.4	8084 32.6	10,678 43.0	24,823

Cell contents are: frequency
row percent
column percent

Data from: Hennepin County
New Orleans
NIAAA/ASAP Alcohol Centers
Oklahoma City
Salt Lake City
South Dakota

TABLE 20. ARREST BAC CATEGORY BY SITE DRINKER CLASSIFICATION FOR SITES USING TWO CATEGORY DRINKER CLASSIFICATIONS.

Arrest BAC Category	Site Drinker Classification		Row Totals and Percent of Total
	Non-Problem	Problem	
.01 to .04	2 100.0 0.1	0	2 0.0
.05 to .09	2 20.0 0.1	8 80.0 0.3	10 0.2
.10 to .14	485 57.5 30.9	359 42.5 14.1	844 20.5
.15 to .19	634 39.1 40.4	988 60.9 38.9	1622 39.5
.20 to .24	350 29.5 22.3	837 70.5 33.0	1187 28.9
.25 to .29	88 23.6 5.6	285 76.4 11.2	373 9.1
.30 to .34	7 12.5 0.4	49 87.5 1.9	56 1.4
.35 to .39	0	13 100.0 0.5	13 0.3
.40 to .44	1 33.3 0.1	2 66.7 0.1	3 0.1
Column Totals Percent of Total	1569 38.2	2541 61.8	4110

Cell contents are: frequency
row percent
column percent

Data from: New Hampshire
San Antonio
Wichita

PRIOR ALCOHOL RELATED TRAFFIC OFFENSES

The distribution of prior alcohol related traffic offenses for each drinker classification utilized by sites with three category drinker classification systems is shown in Table 21. A total of 26,368 individuals are represented. Data tabulated in the table were drawn from four ASAP sites and the NIAAA/ASAP Alcohol Centers. It is clear that the proportion of individuals classified as problem drinkers changes dramatically with the number of prior alcohol related traffic offenses. While only 36.1% of those individuals with no prior traffic offenses were classified as problem drinkers, the proportion of individuals classified as problem drinkers with one prior alcohol related offense jumps to 57.2% and the proportion of individuals classified as problem drinkers with two prior alcohol related offenses increases to 71.2%. The proportion of individuals classified as problem drinkers remains relatively constant at around 70% for those individuals with three or four prior alcohol related traffic offenses. The number of individuals with more than four prior alcohol related traffic offenses is relatively small and as a result the proportions of individuals identified as problem drinkers in these categories are somewhat unstable.

The distribution of prior alcohol related traffic offenses by drinker classification for two sites employing two category diagnostic systems may be found in Table 22. A total of 3,535 individuals are included in the table. The dramatic increase in the proportion of individuals classified as problem drinkers with an increase in prior alcohol related traffic offenses apparent in Table 21 is even more apparent in Table 22; while 36% of those individuals with no prior alcohol related traffic offenses were classified as problem drinkers, 80.9% of those individuals with one prior alcohol related traffic offense were categorized as problem drinkers. The information presented in Tables 21 and 22 suggests that prior alcohol related traffic offenses are weighted heavily in the drinker diagnosis procedures employed by ASAP sites.

PRIOR NON-ALCOHOL RELATED TRAFFIC OFFENSES

The distribution of prior non-alcohol related traffic offenses for each of the three drinker classifications is presented in Table 23. A total of 35,145 individuals from five ASAP sites and the NIAAA/ASAP Alcohol Centers, are represented in the table. A general increase in the proportion of persons classified as problem drinkers with

TABLE 21. PRIOR ALCOHOL RELATED TRAFFIC OFFENSES BY SITE DRINKER CLASSIFICATION FOR SITES USING THREE CATEGORY DRINKER CLASSIFICATIONS.

Prior Alcohol Related Traffic Offenses	Site Drinker Classification			Row Totals and Percent of Total
	Non-Problem	Midrange Problem	Problem	
0	5509 30.7 85.7	5966 33.2 73.1	6479 36.1 55.0	17,954 68.1
1	751 15.0 11.7	1408 27.9 17.3	2886 57.2 24.5	5045 19.1
2	120 6.1 1.9	449 22.7 5.5	1410 71.2 12.0	1979 7.5
3	27 3.7 0.4	168 23.2 2.1	530 73.1 4.5	725 2.7
4	13 3.8 0.2	80 23.6 1.0	246 72.6 2.1	339 1.3
5	2 1.5 0.0	24 18.0 0.3	107 80.4 0.9	133 0.5
6	2 2.9 0.0	23 33.3 0.3	44 63.8 0.4	69 0.3
7	1 3.3 0.0	15 50.0 0.2	14 46.7 0.1	30 0.1
8	0 0.0 0.0	9 42.9 0.1	12 57.1 0.1	21 0.1
9	4 6.0 0.1	15 22.4 0.2	48 71.6 0.4	67 0.3
10	1 16.7 0.0	2 33.3 0.0	3 50.0 0.0	6 0.0
Column Totals Percent of Total	6340 24.4	8159 30.9	11,779 44.7	26,368

Cell contents are: frequency
row percent
column percent

Data from: Fairfax
NIAAA/ASAP Alcohol Centers
Oklahoma City
Salt Lake City
South Dakota

TABLE 22. PRIOR ALCOHOL RELATED TRAFFIC OFFENSES BY SITE DRINKER CLASSIFICATION FOR SITES USING TWO CATEGORY DRINKER CLASSIFICATIONS.

Prior Alcohol-Related Traffic Offenses	Site Drinker Classification		Row Totals and Percent of Total
	Non-Problem	Problem	
0	995 64.0 77.7	559 36.0 24.8	1554 44.0
1	119 19.1 9.3	504 80.9 22.4	623 17.6
2	52 12.8 4.1	354 87.2 15.7	406 11.5
3	51 17.0 4.0	249 83.0 11.0	300 8.5
4	27 13.5 2.1	173 86.6 7.7	200 5.7
5	12 8.5 0.9	130 91.5 5.8	142 4.1
6	8 8.6 0.6	85 91.4 3.8	93 2.6
7	8 10.3 0.6	70 89.8 3.1	78 2.2
8	2 4.5 0.2	42 95.5 1.9	44 1.2
9	3 5.7 0.2	50 94.3 2.2	53 1.5
10	3 7.1 0.2	39 92.9 1.7	42 1.1
Column Totals Percent of Total	1280 36.2	2255 63.8	3535

Cell contents are: frequency
row percent
column percent

Data from: San Antonio
Wichita

TABLE 23. PRIOR NON-ALCOHOL RELATED TRAFFIC OFFENSES BY SITE DRINKER CLASSIFICATION FOR SITES USING THREE CATEGORY DRINKER CLASSIFICATIONS.

Prior Non-Alcohol Related Traffic Offenses	Site Drinker Classification			Row Totals and Percent of Total
	Non-Problem	Midrange Problem	Problem	
0	5118 24.6 65.4	7030 33.8 62.4	8626 41.5 53.7	20,774 59.1
1	1300 19.7 16.6	2086 31.6 18.5	3223 48.8 20.1	6609 18.8
2	615 19.5 7.9	869 27.6 7.7	1666 52.9 10.4	3150 9.0
3	324 19.0 4.1	467 27.4 4.1	915 53.6 5.7	1706 4.9
4	178 18.6 2.3	263 27.5 2.3	517 54.0 3.2	958 2.7
5	106 18.3 1.4	186 32.1 1.7	287 49.6 1.8	579 1.6
6	51 14.0 0.7	105 28.9 0.9	207 57.0 1.3	363 1.0
7	29 11.5 0.4	72 28.6 0.6	151 60.0 1.0	252 0.7
8	35 12.0 0.4	64 21.9 0.6	193 66.1 1.2	292 0.8
9	61 15.3 0.8	106 26.6 0.9	231 58.0 1.4	398 1.1
10	11 17.2 0.1	16 25.0 0.1	37 57.8 0.2	64 0.2
Column Totals Percent of Total	7828 22.3	11,264 32.0	16,053 45.7	35,145

Cell contents are: frequency
row percent
column percent

Data from: Fairfax
Hennepin County
NIAAA/ASAP Alcohol Centers
Oklahoma City
Salt Lake City
South Dakota

an increase in the number of prior non-alcohol related traffic offenses is apparent in the data presented in the table. Also apparent is the corresponding decrease in the proportion of persons classified as non-problem or mid-range problem drinkers with an increase in the number of prior alcohol related traffic offenses. The trends appearing in Table 23, however, are not as dramatic as those extant in the case of prior alcohol related traffic offenses.

Presented in Table 24 is the distribution of prior non-alcohol related traffic offenses, for each drinker classification, employed by those sites using a two drinker category diagnostic scheme. Data presented in Table 24 represent individuals from only one ASAP site and, as such, may be somewhat nonrepresentative of ASAP clients in general. The trends appearing in Table 23, however, are present to some degree in Table 24. There is an increase in the proportion of individuals classified as problem drinkers as the number of prior non-alcohol related traffic offenses increases from 0 to 3. It should be observed, however, that only the 0 and 1 prior alcohol related traffic offenses categories represent sufficient individuals to be considered stable.

PRIOR CRIMINAL OFFENSES

Found in Table 25 are the distributions of prior criminal offenses for each of the three drinker classifications employed by those sites using three category drinker classifications. A total of 27,159 individuals are represented in the table. Data for the table were drawn from three ASAP sites. It is first apparent that the great majority of persons subject to ASAP diagnosis (81.9%) do not have prior criminal offenses. There is a trend toward the proportion of individuals classified as problem drinkers to increase with an increase in the number of prior criminal offenses. While 41.6% of those individuals with no prior criminal offenses are categorized as problem drinkers, 47.5% of those individuals with one prior criminal offense are categorized as problem drinkers, and greater than 50% of those individuals with more than one prior criminal offense are categorized as problem drinkers. It should be observed that the number of individuals with more than four prior criminal offenses is relatively small and probably results in unstable estimates of the proportion of individuals identified as problem drinkers for those categories.

TABLE 24. PRIOR NON-ALCOHOL RELATED TRAFFIC OFFENSES BY SITE DRINKER CLASSIFICATION FOR SITES USING TWO CATEGORY DRINKER CLASSIFICATIONS.

Prior Non-Alcohol Related Traffic Offenses	Site Drinker Classification		Row Totals and Percent of Total
	Non-Problem	Problem	
0	388 36.5 84.2	674 63.5 75.2	1062 78.3
1	58 31.0 12.6	129 69.0 14.4	187 13.8
2	8 12.1 1.7	58 87.9 6.5	66 4.9
3	2 12.5 0.4	14 87.5 1.6	16 1.2
4	3 16.7 0.7	15 83.3 1.7	18 1.3
5	1 50.0 0.2	1 50.0 0.1	2 0.1
6	0	2 100.0 0.2	2 0.1
7	1 33.3 0.2	2 66.7 0.2	3 0.2
8	0	0	0
9	0	0	0
10	0	1 100.0 0.1	1 0.1
Column Totals Percent of Total	461 34.0	896 66.0	1357

Cell contents are: frequency
row percent
column percent

Data from: Wichita

TABLE 25. PRIOR CRIMINAL OFFENSES BY SITE DRINKER CLASSIFICATION FOR SITES USING THREE CATEGORY DRINKER CLASSIFICATONS.

Prior Criminal Offenses	Site Drinker Classification			Row Totals and Percent of Total
	Non-Problem	Midrange Problem	Problem	
0	5221 23.5 87.4	7770 35.0 83.4	9241 41.6 77.8	22,232 81.9
1	443 17.1 7.4	920 35.5 9.9	1231 47.5 10.4	2594 9.6
2	136 15.0 2.3	256 28.2 2.7	513 56.7 4.3	905 3.3
3	48 11.8 0.8	138 33.9 1.4	221 54.3 1.9	407 1.5
4	31 14.0 0.5	60 27.0 0.6	131 59.0 1.1	222 0.8
5	12 8.1 0.2	30 20.1 0.3	107 71.8 0.9	149 0.5
6	14 13.0 0.2	17 15.7 0.2	77 71.3 0.6	108 0.4
7	4 7.2 0.1	13 23.6 0.1	38 69.1 0.3	55 0.2
8	2 3.4 0.0	7 12.1 0.1	49 84.4 0.4	58 0.2
9	9 5.2 0.2	33 19.2 0.4	130 75.6 1.1	172 0.6
10	53 20.6 0.9	68 26.5 0.7	136 52.9 1.1	257 0.9
Column Totals Percent of Total	5973 22.0	9312 34.3	11,874 43.7	27,159

Cell contents are: frequency
row percent
column percent

Data from: Fairfax
Hennepin County
South Dakota

Presented in Table 26 are the distributions of prior criminal offenses for drinker diagnosis categories of one site employing a two category diagnostic system. Although the number of individuals in all but the 0 prior criminal offenses category is relatively small, an increase in the proportion of individuals categorized as problem drinkers is evidenced from the 0 prior criminal offense category to the one prior criminal offense category.

STANDARDIZED DIAGNOSTIC TEST SCORES

A description of the relationship between standardized diagnostic test scores and site drinker classification is necessary for the accurate and complete description of drinker types. Although inclusion of test scores in the present profile section would be appropriate, profiles of site drinker classifications by test scores are reserved for a later section of the present volume devoted exclusively to standardized diagnostic tests.

SUMMARY

Because of the relatively large amount of information present in the current section, a summary of the major findings concerning the relationship of each profile variable and drinker type is presented below. The reader is cautioned that information presented below deals with only major findings and cannot be construed to represent all of the findings discussed previously.

Age Category

The proportion of individuals classified as problem drinkers increases with age. The modal age category for persons subject to ASAP diagnosis is 20 to 24.

Sex

Over 90 percent of persons subject to ASAP diagnosis are male. A slightly greater proportion of males than females are classified as problem drinkers.

TABLE 26. PRIOR CRIMINAL OFFENSES BY SITE DRINKER CLASSIFICATION FOR SITES USING TWO CATEGORY DRINKER CLASSIFICATIONS.

Prior Criminal Offenses	Site Drinker Classification		Row Totals and Percent of Total
	Non-Problem	Problem	
0	428 36.2 92.4	755 63.8 83.4	1183 86.5
1	16 18.4 3.5	71 81.6 7.8	87 6.4
2	9 22.5 1.9	31 77.5 3.4	40 2.9
3	3 15.0 0.6	17 85.0 1.9	20 1.5
4	1 14.3 0.2	6 85.7 0.7	7 0.5
5	1 16.7 0.2	5 83.3 0.6	6 0.4
6	3 37.5 0.6	5 62.5 0.6	8 0.6
7	0	3 100.0 0.3	3 0.3
8	0	7 100.0 0.8	7 0.5
9	2 28.6 0.4	5 71.4 0.6	7 0.5
Column Totals Percent of Total	463 33.8	905 66.2	1368

Cell contents are: frequency
row percent
column percent

Data from: Wichita

Race

The proportion of White and Black persons classified as problem drinkers is approximately equal. Persons of other races are classified as problem drinkers proportionately more frequently.

Education

At sites employing three category drinker classification procedures, persons with high school educations or less are classified as problem drinkers proportionally more frequently than those individuals with a higher education level. At sites employing two category drinker classification procedures, the proportion of persons classified as problem drinkers is relatively constant for all education levels. No straightforward explanation for this discrepancy is apparent.

Income Category

Persons with yearly incomes of $2,000 per year or less are classified as problem drinkers proportionally more frequently than those individuals with higher annual incomes.

Marital Status

A greater proportion of divorced or separated persons than persons in other marital status categories are classified as problem drinkers at all sites. At sites employing three category drinker classification schemes, married individuals are classified as problem drinkers proportionally more frequently than single or widowed individuals. This is not the case for sites employing two category drinker classification schemes. The explanation for this discrepancy is not apparent.

Occupation Category

Persons most frequently subject to ASAP diagnosis are either skilled or unskilled blue collar workers. Unemployed persons are categorized as problem drinkers proportionally more frequently than individuals in any other occupation category.

Arrest BAC Category

The proportion of persons classified as problem drinkers increases with an increase in arrest BAC category.

Prior Alcohol Related Traffic Offenses

The proportion of persons classified as problem drinkers increases dramatically with an increase in the number of prior alcohol related traffic offenses.

Prior Non-Alcohol Related Traffic Offenses

The proportion of persons classified as problem drinkers increases with an increase in the number of prior non-alcohol related traffic offenses. The increase is not as dramatic as is the case for prior alcohol related traffic offenses.

Prior Criminal Offenses

Over eighty percent of those individuals subject to ASAP diagnosis do not have prior criminal records. The proportion of persons classified as problem drinkers increases with an increase in prior criminal offenses.

REHABILITATION MODALITY PROFILES

An accurate conception of the ASAP referral and rehabilitation subsystems would be incomplete without descriptions of the clients assigned to various treatment modalities. Therefore, in order to define the treatment modality populations, modality descriptions are presented based on the same set of master client file variables employed in the previous section for drinker type profiles. In lieu of a more sophisticated clustering technique, such as that employed in Volume III of this report, treatment modalities, with the exception of school type modalities, are grouped according to gross operating characteristics. School modality groups were developed by Reis.[11] Modality categories for which profiles are presented are School Type I, II, and III, outpatient treatment, inpatient treatment, chemotherapy, Alcoholics Anonymous (AA), and NIAAA/ASAP Alcohol Centers. These particular modality groupings are used as a result of poor correspondence between referrals, as reported on the site client files, and the Volume III treatment modality groups based on treatment modality descriptions extracted from site visits, System Description Forms (SDFs), Detailed Plans and Analytic Studies No. 5 and 6 submitted by each project.

Type I Schools are characterized as long duration (17.5 hours average), relatively intensive counseling, with a high degree of participant-participant and participant-leader interaction. In other words, Type I Schools tend to be more interactive rather than didactic in their orientation. Type II Schools are of shorter duration than Type I Schools, tend to be more didactic in their orientation, and have higher enrollments per session than Type I Schools. Type III Schools are quite different than Type I Schools in that they are almost totally didactic in orientation, on the average half as long in length of sessions, and nearly three times as large in terms of enrollment per session.

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[11] Reis, R. E. A preliminary program level evaluation model for alcohol safety schools. Contract DOT-HS-191-3-759, Human Factors Laboratory, University of South Dakota, Vermillion, S. D., July, 1974.

Inpatient treatment modalities are characterized by residential treatment programs including group therapy, individual counseling and therapy, and in some instances, chemotherapy.

Chemotherapy involves the administration of disulfiram to clients. An individual receiving disulfiram treatment will experience adverse, unpleasant effects upon ingestion of alcohol into the body. The effects of disulfiram and procedures involved in the administration of chemotherapy are outlined in greater detail by Joscelyn, Maickel, and Goldenbaum.[12] It should be noted that the administration of disulfiram takes place for some individuals in some modalities categorized in modality groups other than chemotherapy. Consequently, the client profiles describing individuals entering chemotherapy are not necessarily indicative of all individuals receiving disulfiram treatment.

Outpatient treatment is essentially a conglomeration of all treatment modalities other than Alcoholics Anonymous (AA) not described in the preceding modality descriptions. Operational characteristics for outpatient treatment modalities include individual counseling, group therapy, family counseling, and vocational rehabilitation administered on a non-residential basis.

NIAAA/ASAP Alcohol Center rehabilitation programs include emergency detoxification, inpatient, outpatient, and chemotherapy services. NIAAA/ASAP Alcohol Center rehabilitation programs are located in Denver, Colorado; Tampa, Florida; Columbus, Georgia; Indianapolis, Indiana; Wichita, Kansas; Biddeford, Maine; Portland, Maine; Boston, Massachusetts; Columbia, South Carolina; and Waterford, Vermont. These reahbilitation programs were supported by companion grants issued by the National Institute on Alcohol Abuse and Alcoholism. For more detailed accounts of NIAAA/ASAP Alcohol Center modalities refer to Towle.[13]

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[12]Joscelyn, K. B., Maickel, R. P., and Goldenbaum, D. M. The drinking driver guidelines for court personnel. Report No. DOT-HS-800-607, Contract FH-11-7580, October, 1971.

[13]Towle, L. H. Development of a pilot program for monitoring and evaluating the operation of ten DOT/NIAAA joint alcoholism programs--evaluation of the ASAP/AC program. Phase II, Final Report, Contract # HEW-OS-72-208, September, 1974.

Alcoholics Anonymous is a fellowship of individuals who are self-admitted alcoholics and who feel that the only cure for alcoholism is complete abstinence. For further descriptions of individual treatment modalities, refer to Volume I of this report.

The availability of particular rehabilitation modalites at some sites and the availability of particular profile variables on the master client file for some sites result in the modality category profiles presented in this section being composed of data from variable numbers of sites. Sites contributing data to each modality group profile for each profile variable are indicated on the tables of the present section by two letter Postal Service abbreviations corresponding to the states in which they were located.

Profiles pertaining to standardized test scores are present in this section as opposed to in a later section of this volume dealing exclusively with standardized tests. Information concerning the nature of the tests themselves is, however, contained in the later section.

AGE

Age profiles for all modality groups are presented in Table 27. Type I, II, and III School clients are younger than the clients referred to more counseling oriented modalities. The mode of the age distributions for clients referred to the three schools lies in the 20 to 24 age category. When viewing Table 27, it should be remembered that the 20 to 24 age category is smaller than the 25 to 34 age category since it covers five years as compared to ten. Therefore, the number of individuals in the 20 to 24 age category may be effectively doubled in order to have a metric consistent with that used in the 25 to 34 age category. Outpatient treatment referrals have a distribution mode extending from age 25 to 44. Over half of the individuals entering outpatient treatment programs are between 25 and 44 years of age. Individuals referred to AA range in age from 25 to 54 years. The modal age category occurs at 25 to 34 years. The distribution of individuals outside of the 25 to 54 age group drops off sharply relative to the number of individuals between 25 and 54. Chemotherapy clients are the oldest of those referred to any modality. Over half of those referred are between the ages of 35 and 54. The largest age category for chemotherapy referrals is 35 to 44, containing 31.1 percent of all those referred to that modality. Inpatient treatment programs are subject to frequent

TABLE 27. AGE CATEGORY BY MODALITY CATEGORY

Age Category	Modality Category							
	Type I Schools	Type II Schools	Type III Schools	Out-Patient	AA	Chemo-therapy	Inpatient	NIAAA/ ASAP Alcohol Centers
15 to 17	20 0.9	87 0.6	24 0.3	29 0.4	1 0.0	2 0.2	2 0.1	7 0.5
18 to 19	150 6.8	899 6.7	471 5.5	176 2.5	61 2.0	2 0.2	40 2.2	26 1.9
20 to 24	414 18.8	2608 19.4	1609 18.8	761 10.7	393 13.0	45 4.6	265 14.8	159 11.9
25 to 34	600 27.3	3694 27.4	2486 29.1	1844 25.9	904 29.8	216 21.9	542 30.2	431 32.2
35 to 44	391 17.8	2713 20.1	1846 21.6	1839 25.9	710 23.4	307 31.1	377 21.0	357 26.7
45 to 54	385 17.5	2184 16.2	1440 16.9	1615 22.7	628 20.7	300 30.4	363 20.3	258 19.3
55 to 64	140 6.4	1034 7.7	566 6.6	688 9.7	280 9.2	101 10.2	180 10.0	90 6.7
65 or older	99 4.5	246 1.8	100 1.2	156 2.2	52 1.7	14 1.4	22 1.2	11 0.8
Total	2199	13465	8542	7108	3029	987	1792	1339
Data From	KS NH	MN TX OK UT SD	LA MN SD	KS OK LA SD MN TX	KS OK MN SD	KS LA	KS OK MN SD	

Cell contents are: frequency
column percent

referral of clients between the ages of 25 and 34. Thirty percent of all those referred to inpatient therapy are in that age class. The vast majority of all clients entering inpatient treatment are between the ages of 25 and 54 (71.5 percent). The age distribution of persons referred to the NIAAA/ASAP Alcohol Center appears to be similar to the inpatient distribution. Here again, the 25 to 34 age class is the largest category with 32.2 percent of all inpatient clients, while 73.2 percent of NIAAA/ASAP Alcohol Center clients are between the ages of 25 and 54.

SEX

The sex distributions, presented in Table 28, for all modality types appear to be similar. The percentage of males enrolled in any modality reaches no lower than 90.8 percent and no higher than 93.5 percent. The type III School population had the lowest proportion of males, while the inpatient treatment population had the highest proportion. Information on the sex distribution of individuals referred to chemotherapy was not available.

RACE

Race profiles of individuals referred to each of the modality groups appear in Table 29. Type II Schools, outpatient treatment, AA, and inpatient treatment referral groups are populated predominantly by whites. Type II School clients contain the highest proportion of whites (83.9 percent). Blacks constitute the majority of individuals referred to Type I Schools, Type III Schools, and chemotherapy. The largest black population proportion (78.4 percent) is contained in the Type I School groups. These three modality populations are influenced heavily by the client distributions in Wichita/Sedgwick County and New Orleans. Black clients constitute a disproportionately large portion of the population at these projects in comparison to the black proportion elsewhere. The South Dakota and Oklahoma City client population have a large effect on the significance of the other race category in the modality profiles. For those modality groups where South Dakota and Oklahoma City clients are referred, the proportion of other races are higher than for the modality groups without South Dakota and Oklahoma City referrals. The most noteworthy proportion of other races appears in the distribution of inpatient clients, where 26.2 percent of the individuals are classified as other. For South Dakota and Oklahoma City the other race category is constituted predominantly of American Indians.

TABLE 28. SEX BY MODALITY CATEGORY

Sex	Modality Category							
	Type I School	Type II School	Type III School	Out-patient	AA	Chemo-therapy	Inpatient	NIAAA/ ASAP Alcohol Centers
Male	2051 92.1	12,335 91.5	4671 90.8	4880 91.4	2828 93.1		1665 93.5	3437 93.4
Female	177 7.9	1148 8.5	473 9.2	460 8.6	208 6.9		115 6.5	241 6.6
Total	2228	13,483	5144	5340	3036		1770	3678
Data From	KS NH	MN TX OK UT SD	MN SD	KS SD MN TX OK	KS OK MN SD		KS OK MN SD	

Cell contents are: frequency
column percent

TABLE 29. RACE BY MODALITY CATEGORY

Race	Modality Category							
	Type I School	Type II School	Type III School	Out-patient	AA	Chemo-therapy	Inpatient	NIAAA/ ASAP Alcohol Centers
White	64 14.7	7769 83.9	2030 44.8	3184 60.5	485 69.0	303 30.8	244 63.4	2613 70.9
Black	342 78.4	88 1.0	2445 53.9	1529 29.0	101 14.4	681 69.2	40 10.4	786 21.3
Others	30 6.9	1406 15.2	59 1.3	551 10.5	117 16.6	0 0.0	101 26.2	285 7.7
Total	436	9263	4534	5264	703	984	385	3684
Data From	KS	OK UT SD	LA SD	KS OK LA SD	KS SD OK	KS LA	KS SD OK	

Cell contents are: frequency
column percent

Since the Type I School population is comprised solely of individuals from Wichita/Sedgwick County, caution should be used in the interpretation of that particular profile.

EDUCATION

As can be seen from Table 30 the majority of all individuals entering all treatment categories possess no higher than a high school education level. Population proportions of individuals with high school educations range from 55.3 percent (Type I Schools) to 65.5 (inpatient treatment). The largest proportion of individuals in any modality population distribution possessing an education level of eighth grade or less are referred to chemotherapy (32.1 percent). The lowest proportion of individuals with an eighth grade or less education level (13.8 percent) are referred to both inpatient modalities and Type II Schools. Population proportions of individuals with some college education range from 8.6 percent of those referred to chemotherapy, to 19.0 percent of those referred to Type III Schools. For individuals with college degrees, proportions of individual modality referrals range from 2.9 percent (outpatient treatment and chemotherapy) to 4.9 percent (Type III Schools). Individuals with post college level education are by far the smallest proportion of all modality populations. NIAAA/ASAP Alcohol Centers have the population with the highest proportion of post college educated individuals. Of their referral population, 1.7 percent have a post college education.

INCOME

Categorized income profiles are shown in Table 31. The NIAAA/ASAP Alcohol Centers' client population appears to have the highest income level. Of those referred to the alcohol centers, 23.6 percent earn over $10,000 per year. The chemotherapy clientele is the next highest in income level; 20.2 percent of those individuals earned over $10,000. The inpatient treatment group clientele has the lowest income. Individuals with an annual income of under $2,000 comprise 32.2 percent of the inpatient population, while 71.1 percent of those entering inpatient treatment have an annual income under $6,000. Alcoholics Anonymous clients have the next lowest income levels with 54.9 percent of those referred to AA earning under $6,000. NIAAA/ASAP Alcohol Centers seem to have the widest dispersion of clients in income levels of any treatment modality group.

TABLE 30. EDUCATION CATEGORY BY MODALITY CATEGORY

Education Category	Modality Category							
	Type I School	Type II School	Type III School	Out-patient	AA	Chemo-therapy	Inpatient	NIAAA/ ASAP Alcohol Centers
8th Grade or Less	401 27.6	1761 13.8	1253 16.0	1624 23.8	362 14.8	325 32.1	188 13.8	734 19.9
High School	773 53.3	8269 64.9	4670 59.6	4167 61.0	1547 63.2	567 55.9	891 65.5	2225 60.4
Some College or Business or Trade School	195 13.4	2192 17.2	1491 19.0	800 11.7	448 18.3	87 8.6	234 17.2	520 14.1
College Degree	62 4.3	434 3.4	381 4.9	197 2.9	82 3.4	29 2.9	46 3.4	144 3.9
Post College	20 1.4	91 0.7	47 0.6	39 0.6	6 0.2	6 0.6	2 0.1	63 1.7
Total	1451	12,747	7842	6827	2445	1014	1361	3686
Data From	KS NH	MN TX OK UT SD	LA SD MN	KS SD MN TX OK	KS OK LA SD MN	KS LA	KS OK MN SD	

Cell contents are: frequency
column percent

TABLE 31. INCOME CATEGORY BY MODALITY CATEGORY

Income Category	Modality Category							
	Type I School	Type II School	Type III School	Out-patient	AA	Chemo-therapy	Inpatient	NIAAA/ ASAP Alcohol Centers
$2000 or less	154 13.7	1342 12.3	481 10.9	615 14.8	74 14.0	109 11.4	107 32.2	767 21.5
$2001 to $6000	372 33.0	4157 38.2	1595 36.3	1618 39.0	217 40.9	341 35.6	129 38.9	695 19.4
$6001 to $10,000	395 35.1	3311 30.4	1426 32.4	1204 29.0	144 27.2	315 32.9	67 20.2	1269 35.5
$10,001 to $15,000	199 17.7	1378 12.7	643 14.6	515 12.4	69 13.0	150 15.7	17 5.1	605 16.9
$15,001 or more	6 0.5	694 6.4	255 5.8	195 4.7	26 4.9	43 4.5	12 3.6	239 6.7
Total	1126	10,882	4400	4147	530	958	332	3275
Data From	KS NH	OK TX SD UT	LA SD	KS SD LA TX OK	KS SD OK	KS LA	KS SD	

Cell contents are: frequency
column percent

MARITAL STATUS

Marital Status profiles are presented in Table 32. The largest proportion of individuals entering any rehabilitation modality group is comprised of married clients. Chemotherapy is populated with the highest percentage of married clients (50.7 percent). Inpatient treatment clients have the lowest proportion of married clients of any of the treatment types. It is also interesting to note that the inpatient treatment modality population has the most even distribution of married, single/widowed, and separated/divorced clients of all of the treatment types. The Type II Schools population contains the highest proportion of single/widowed clients (36.1 percent), while the chemotherapy population has the lowest (16.3 percent). The inpatient treatment population has the highest proportion of separated/divorced clients (33.5 percent), and Type II School clients have the lowest proportion in this category (20.6 percent). On the whole, all three school type populations have proportionally less separated/divorced individuals than the other treatment modality populations.

OCCUPATION

It can be determined from Table 33 that all modality populations, with the exception of outpatient treatment, are heavily populated by skilled blue collar workers. NIAAA/ASAP Alcohol Center clients have the highest proportion of skilled blue collar workers in their distribution with 53.4 percent falling in this category. Blue collar workers of all types comprise over half of the population for each modality type; however, the inpatient treatment population is unique in that the proportion of unemployed referred to treatment is almost as high as either subcategory of blue collar workers. NIAAA/ASAP clients have the highest proportion of white collar workers (20.9 percent), followed closely by Type II School clients (19.2 percent). Inpatient treatment clients have the highest proportion of students, housewives, and retired among their population with 13.3 percent. It is interesting that no students, housewives, or retired individuals entered chemotherapy.

BAC

Arrest blood alcohol content profiles shown in Table 34 indicate that the more intensive treatment modality populations (outpatient, inpatient, AA, and chemotherapy) include individuals with the highest arrest BACs.

TABLE 32. - MARITAL STATUS BY MODALITY CATEGORY

Marital Status	Modality Category							
	Type I School	Type II School	Type III School	Out-patient	AA	Chemo-therapy	In-patient	NIAAA/ ASAP Alcohol Centers
Single or Widowed	457 30.1	3981 36.1	2701 32.6	1518 23.3	645 23.2	166 16.3	454 28.3	863 23.4
Married	687 45.3	4774 43.3	3761 45.4	2977 45.7	1374 49.3	518 50.7	611 38.1	1838 49.7
Divorced or Separated	372 24.5	2277 20.6	1814 21.9	2023 31.4	766 27.5	337 33.0	537 33.5	994 26.9
Total	1516	11032	8276	6518	2785	1021	1602	3695
Data From	KS NH	MN SD OK UT	LA SD MN	KS OK LA SD MN	KS OK MN SD	KS LA	KS OK MN SD	

Cell contents are: frequency
column percent

TABLE 33. OCCUPATION CATEGORY BY MODALITY CATEGORY

Occupation Category	Modality Category							
	Type I School	Type II School	Type III School	Out-patient	AA	Chemo-therapy	In-patient	NIAAA/ ASAP Alcohol Centers
White Collar - Professional, Management, etc.	154 11.5	626 6.8	317 6.9	374 7.2	47 6.8	48 4.7	15 4.0	429 11.8
White Collar - Sales, Clerical, etc.	64 4.8	1140 12.4	409 8.9	378 7.3	48 7.0	67 6.6	12 3.2	331 9.1
Blue Collar - Skilled	624 46.5	2929 31.8	1726 37.5	1425 27.4	235 34.1	367 36.2	109 28.9	1942 53.4
Blue Collar - Unskilled	302 22.5	2379 25.3	1314 28.6	1872 35.9	225 32.6	324 32.0	101 26.8	646 17.7
Housewives, Students, Retired, etc.	87 6.5	1076 11.7	213 4.6	257 4.9	58 8.4	0 0.0	50 13.3	97 2.7
Unemployed	112 8.3	1119 12.1	621 13.5	902 17.3	77 11.2	208 20.5	90 23.9	195 5.4
Total	1343	9219	4600	5208	690	1014	377	3640
Data From	KS NH	OK UT SD	LA SD	KS OK LA SD	KS SD OK	KS LA	KS SD OK	

Cell contents are: frequency
column percent

TABLE 34. ARREST BAC CATEGORY BY MODALITY CATEGORY

Arrest BAC Category	Modality Category							
	Type I School	Type II School	Type III School	Out-patient	AA	Chemo-therapy	In-patient	NIAAA/ ASAP Alcohol Centers
.01 to .04	0 0.0	7 0.1	9 0.1	7 0.1	2 0.1	0 0.0	2 0.1	79 3.0
.05 to .09	5 0.5	62 0.6	56 0.8	37 0.6	11 0.5	2 0.2	9 0.7	25 1.0
.10 to .14	260 25.1	1751 16.9	1808 24.6	779 12.9	253 10.5	117 13.6	116 8.5	463 17.8
.15 to .19	370 35.7	3686 35.5	3071 41.7	1808 30.0	719 30.0	294 34.3	358 26.1	831 31.9
.20 to .24	258 24.9	3047 29.4	1797 24.4	1984 33.0	852 35.5	313 36.5	501 36.6	777 29.8
.25 to .29	112 10.8	1237 11.9	522 7.1	1000 16.6	401 16.7	101 11.8	238 17.4	297 11.4
.30 to .34	24 2.3	438 4.2	87 1.2	321 5.3	126 5.2	27 3.1	114 8.3	98 3.8
.35 to .39	7 0.7	118 1.1	11 0.1	69 1.1	35 1.5	3 0.3	27 2.0	31 1.2
.40 to .44	1 0.1	19 0.2	2 0.0	10 0.2	4 0.2	0 0.0	4 0.3	4 0.2
.45 to .49	0 0.0	11 0.1	1 0.0	5 0.1	0 0.0	1 0.1	1 0.1	0 0.0
Total	1037	10,376	7364	6020	2403	858	1370	2605
Data From	KS NH	MN TX OK UT SD	LA SD MN	KS OK LA SD MN TX	KS OK MN SD	KS LA	KS SD MN	

Cell contents are: frequency
column percent

The modes for the BAC distributions for these modality populations occur at the .20 to .24 BAC category. Inpatient modality populations appear to have the greatest proportion of high BAC level clients. NIAAA/ASAP Alcohol Centers and Type I, II, and III School client populations have BAC modes at the .15 to .19 level. The vast majority of all clients referred to modalities have BACs ranging from .10 to .24. Type I and III School populations have the greatest proportions of low BAC level clients, 25.6 and 25.2 percent of their clients having arrest BACs less than .15, respectively.

PRIOR ALCOHOL RELATED TRAFFIC OFFENSES

The prior alcohol related (A/R) traffic offense profiles are exhibited in Table 35. The inpatient treatment modality populations have the highest proportions of multiple A/R offenders. Only 27.2 percent of the clients referred to inpatient modalities have no prior A/R offenses. The next lowest proportion of persons without prior alcohol related offenses falls in the AA population (43 percent). Conversely, 92.8 percent of Type III School clients have had no previous A/R offenses. Prior alcohol related traffic offense information on individuals referred to chemotherapy was not available; therefore, no entries are made under chemotherapy. Caution is urged in interpreting these profiles since entries for some modalities are based on information from only one project.

PRIOR NON-ALCOHOL RELATED TRAFFIC OFFENSES

The profiles of individuals entering rehabilitation modalities for prior non-alcohol related traffic offenses are given in Table 36. Inpatient treatment modalities are populated by the highest proportion of multiple non-alcohol related offenders. Inpatient clients without prior non-alcohol related traffic offenses constitute 42.7 percent of that treatment population. Alcoholics Anonymous clients possessed the next lowest proportion of non-offenders, 52.4 percent of the Alcoholics Anonymous group had no prior non-alcohol related traffic offenses. Type I School clients are at the opposite end of the scale, only 25.8 percent of those individuals have prior non-alcohol related offenses. Outpatient clients have the next lowest proportion of previous arrests. Approximately 35 percent of these clients have prior arrest records.

TABLE 35. PRIOR ALCOHOL-RELATED TRAFFIC OFFENSES BY MODALITY CATEGORY

Prior Alcohol-Related Traffic Offenses	Modality Category							
	Type I School	Type II School	Type III School	Out-patient	AA	Chemo-therapy	In-patient	NIAAA/ ASAP Alcohol Centers
0	249 57.6	5799 52.3	1049 92.8	2295 66.0	295 43.0		102 27.2	2094 56.8
1	63 14.6	2952 26.6	68 6.0	637 18.3	217 31.6		113 30.1	978 26.5
2	26 6.0	1101 9.9	9 0.8	271 7.8	89 13.0		62 16.5	362 9.8
3	24 5.6	500 4.5	2 0.2	122 3.5	34 5.0		49 13.1	150 4.1
4	18 4.2	300 2.7	2 0.2	61 1.8	15 2.2		16 4.3	50 1.4
5	12 2.8	167 1.5	0 0.0	23 0.7	17 2.6		19 5.1	27 0.7
6	10 2.3	94 0.8	0 0.0	11 0.3	3 0.4		6 1.6	10 0.3
7	14 3.2	64 0.6	0 0.0	2 0.1	10 1.5		3 0.8	6 0.2
8	6 1.4	40 0.4	0 0.0	10 0.3	2 0.3		1 0.3	4 0.1
9	5 1.2	33 0.3	0 0.0	45 1.3	4 0.6		2 0.5	4 0.1
10	5 1.2	28 0.3	0 0.0	2 0.1	0 0.0		2 0.5	0 0.0
Total	432	11,078	1130	3479	686		375	3685
Data From	KS	OK TX SD UT	SD	KS SD OK	KS SD OK		KS SD OK	

Cell contents are: frequency
column percent

TABLE 36. PRIOR NON-ALCOHOL RELATED TRAFFIC OFFENSES BY MODALITY CATEGORY

Prior Non-Alcohol Related Traffic Offenses	Modality Category							
	Type I School	Type II School	Type III School	Out-patient	AA	Chemo-therapy	In-patient	NIAAA/ ASAP Alcohol Centers
0	328 74.2	6613 60.9	3332 64.8	3386 65.0	1583 52.4		753 42.7	1686 56.5
1	77 17.4	2255 20.8	1120 21.8	732 14.1	796 26.4		467 26.5	588 19.7
2	21 4.8	921 8.5	375 7.3	374 7.2	317 10.5		235 13.3	307 10.3
3	6 1.4	427 3.9	113 2.2	218 4.2	137 4.5		116 6.6	173 5.8
4	8 1.8	203 1.9	72 1.4	104 2.0	61 2.0		53 3.0	108 3.6
5	0 0.0	158 1.5	26 0.5	85 1.6	18 0.6		22 1.3	39 1.3
6	2 0.5	83 0.8	9 0.1	63 1.2	8 0.3		8 0.5	30 1.0
7	0 0.0	46 0.4	6 0.1	33 0.6	3 0.1		3 0.2	20 0.7
8	0 0.0	50 0.5	29 0.6	80 1.5	37 1.2		39 2.2	15 0.5
9	0 0.0	82 0.8	62 1.2	106 2.0	60 2.0		67 3.8	14 0.5
10	0 0.0	22 0.2	0 0.0	27 0.5	0 0.0		1 0.1	4 0.1
Total	442	10,860	5144	5208	3020		1764	2984
Data From	KS	MN SD OK UT	MN SD	KS SD MN TX OK	KS OK MN SD		KS OK MN SD	

Cell contents are: frequency
column percent

PRIOR CRIMINAL OFFENSES

It can be seen from Table 37 that outpatient clients exhibit the highest proportion of prior criminal offenders in their population (26.5 percent). Type II School clients with prior criminal offenses constitute the second highest proportion of any modality category (22 percent). The Type III School population has the lowest proportion of criminal offenders, only 10.8 percent of these clients exhibit prior criminal behavior. The second lowest proportion of criminal offenders (14 percent) populate Alcoholics Anonymous. Some caution should be exercised in reviewing prior criminal offense profiles since a relatively small number of projects had suitable data for the compilation of the profiles. Data for clients entering chemotherapy and NIAAA/ASAP Alcohol Centers were not available for inclusion into these profiles.

MORTIMER-FILKINS QUESTIONNAIRE DRINKER CLASSIFICATION PROFILES - ORIGINAL CRITERIA*

Client profiles based on the Mortimer-Filkins Questionnaire drinker classifications, employing original cutoff scores, are displayed by treatment modalities in Table 38. The Mortimer-Filkins categories are "non-problem drinkers," "possible problem drinkers" and "problem drinkers." The inpatient treatment program population includes the highest proportion of problem drinkers according to this classification. The inpatient population distribution is interesting in that, although the proportion of problem drinkers is highest (43.6 percent), the proportion of possible problem drinkers (18.5 percent) is lower than the proportion of non-problem drinkers (37.9 percent). The distribution of Alcoholics Anonymous clients is similar in that the possible problem drinkers (21.7 percent) comprises the smallest proportion of individuals in the distribution. For Alcoholics Anonymous clients, however, the proportion of non-problem drinkers (47.8 percent) is higher than the proportion of problem drinkers (30.6 percent). The Type I School population also has a unique distribution in that the majority of its clients (54.7 percent) fall into the possible problem category. The remainder of the Type I School population is distributed evenly between non-problem drinkers (22.4 percent) and

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*See a later section of this volume dealing with standardized diagnostic tests for an explanation of "original" and "revised" criteria.

TABLE 37. PRIOR CRIMINAL OFFENSES BY MODALITY CATEGORY

Prior Criminal Offenses	Modality Category							
	Type I School	Type II School	Type III School	Out-patient	AA	Chemo-therapy	In-patient	NIAAA/ ASAP Alcohol Centers
0	384 85.5	6658 78.0	4586 89.2	2162 73.5	2534 86.0		1414 79.2	
1	28 6.2	1069 12.5	382 7.4	356 12.1	246 8.3		167 9.4	
2	19 4.2	350 4.1	86 1.7	140 4.8	60 2.0		64 3.6	
3	4 0.9	147 1.7	20 0.4	73 2.5	9 0.3		24 1.3	
4	2 0.4	68 0.8	6 0.1	30 1.0	4 0.1		11 0.6	
5	1 0.2	49 0.6	3 0.1	28 1.0	5 0.2		6 0.3	
6	3 0.7	33 0.4	4 0.1	20 0.7	5 0.2		7 0.4	
7	0 0.0	20 0.2	0 0.0	15 0.5	8 0.3		0 0.0	
8	4 0.9	13 0.2	1 0.0	16 0.5	12 0.4		11 0.6	
9	4 0.9	65 0.8	2 0.0	43 1.5	6 0.2		14 0.8	
10	0 0.0	63 0.7	54 1.0	57 1.9	59 2.0		68 3.8	
Total	449	8535	5144	2940	2948		1786	
Data From	KS	MN SD	MN SD	KS SD MN	KS SD MN		KS SD MN	

Cell contents are: frequency
column percent

TABLE 38. MORTIMER-FILKINS QUESTIONNAIRE DRINKER CLASSIFICATION - ORIGINAL CRITERIA BY MODALITY CATEGORY

Mortimer-Filkins Questionnaire Drinker Classification - Original Criteria	Modality Category							
	Type I School	Type II School	Type III School	Out-patient	AA	Chemo-therapy	In-patient	NIAAA/ ASAP Alcohol Centers
Non-Problem Drinker	388 22.4	5353 57.2	3436 74.2	1655 49.3	258 47.8	497 48.9	131 37.9	
Possible Problem Drinker	946 54.7	2478 26.5	890 19.2	974 29.0	117 21.7	317 31.2	64 18.5	
Problem Drinker	395 22.8	1527 16.3	305 6.6	730 21.7	165 30.6	203 20.0	151 43.6	
Total	1729	9358	4631	3359	540	1017	346	
Data From	NH	SD UT	LA SD	LA SD	SD	LA	SD	

Cell contents are: frequency
column percent

problem drinkers (22.8 percent). The three remaining modality type populations represented in the table include non-problem drinkers in the highest proportions. Type III School clients contain the largest proportion of non-problem drinkers (74.2 percent). Since few projects reported data on the use of the Mortimer-Filkins Questionnaire, the cell contents are based on information from one or two sites only; therefore, care should be exercised in the interpretation of the information presented in this table.

MORTIMER-FILKINS QUESTIONNAIRE DRINKER CLASSIFICATION PROFILES - REVISED CRITERIA

It can be determined from Table 39 that the revised criteria used in determining drinker classification from the Mortimer Filkins Questionnaire severely alters the profiles of treatment modality populations. All modality populations with the exception of Type III School clients and chemotherapy clients now have the largest proportion of their clients classified as problem drinkers (77.6 percent of Type I School clients comprising the largest proportion). Chemotherapy clients are split fairly evenly among non-problem drinkers (37.7 percent), possible problem drinkers (26.8 percent) and problem drinkers (35.5 percent). Type III School clients are primarily non-problem drinkers with 70.4 percent of those individuals thus classified. The Type II School population also has a fairly large proportion of non-problem drinkers (41.5 percent). Again, since few projects are included in compiling this information, caution is required in its interpretation.

MORTIMER-FILKINS INTERVIEW DRINKER CLASSIFICATION PROFILES - ORIGINAL CRITERIA

Information pertaining to drinker classification profiles based on Mortimer Filkins interview scores (with the original classification criteria utilized) from two projects is presented in Table 40. Since only two projects contributed data to these particular profiles, the profiles are not completely indicative of the populations referred to each rehabilitation modality group. From the information available, it appears that inpatient treatment clients have the highest proportion of problem drinkers (64.7 percent) of any modality group population. Type III School clients, as would be expected, have the highest proportion of non-problem drinkers (82.6 percent) and the lowest proportion of

TABLE 39. MORTIMER-FILKINS QUESTIONNAIRE DRINKER CLASSIFICATION - REVISED CRITERIA BY MODALITY CATEGORY

Mortimer-Filkins Questionnaire Drinker Classification - Revised Criteria	Modality Category							
	Type I School	Type II School	Type III School	Out-patient	AA	Chemo-therapy	In-patient	NIAAA/ ASAP Alcohol Centers
Non-Problem Drinker	170 9.8	2785 41.5	796 70.4	1064 31.7	213 39.4	766 37.7	114 33.0	
Possible Problem Drinker	218 12.6	1082 16.1	180 15.9	591 17.6	45 8.3	545 26.8	17 4.9	
Problem Drinker	1341 77.6	2845 42.4	154 4.8	1704 50.7	282 52.2	723 35.5	215 62.1	
Total	1729	6712	1130	3359	540	2034	346	
Data From	NH	SD UT	LA SD	LA SD	SD	LA	SD	

Cell contents are: frequency
column percent

TABLE 40. MORTIMER-FILKINS INTERVIEW DRINKER CLASSIFICATION - ORIGINAL CRITERIA BY MODALITY CATEGORY

Mortimer-Filkins Interview Drinker Classification - Original Criteria	Modality Category							
	Type I School	Type II School	Type III School	Out-patient	AA	Chemo-therapy	In-patient	NIAAA/ ASAP Alcohol Centers
Non-Problem Drinker		3883 57.9	3773 82.6	1697 51.2	218 40.4	481 48.7	117 33.8	
Possible Problem Drinker		494 7.4	222 4.9	242 7.3	21 3.9	90 9.1	5 1.4	
Problem Drinker		2333 34.8	573 12.5	1373 41.5	301 55.7	416 42.1	224 64.7	
Total		6710	4568	3312	540	987	346	
Data from		SD	LA SD	LA SD	SD	LA	SD	

Cell contents are: frequency
column percent

problem drinkers (12.5 percent). Possible problem drinkers comprise the smallest proportion of all modality groups. The referral category group proportions for possible problem drinkers range from 1.4 percent (inpatient treatment) to 9.1 percent (chemotherapy). Since the two projects with available Mortimer-Filkins Interview data do not contribute clients to Type I Schools and NIAAA/ASAP Alcohol Centers, client profiles for these modality groups cannot be provided.

MORTIMER-FILKINS INTERVIEW DRINKER CLASSIFICATION PROFILES - REVISED CRITERIA

It is apparent from Table 41 that Type III School clients are the only treatment modality clientele with non-problem drinkers (based on Mortimer-Filkins Interview scores--revised criteria) comprising the majority of referrals. All other treatment modality populations for which data are available (Type I Schools and NIAAA/ASAP Alcohol Centers are absent from the profiles) are comprised primarily of problem drinkers. Inpatient treatment modality clients have the highest proportion of problem drinkers (68.5 percent), while the Type II School population has 54.0 percent problem drinkers--the lowest proportion of problem drinkers of all modality populations, excluding referrals to Type III Schools. Possible problem drinkers appear in only small proportions (20.8 percent being the highest) in any given modality group. Note again that only two projects contribute Mortimer-Filkins Interview data, thereby reducing the stability of these profiles across modality groups.

MORTIMER-FILKINS TOTAL SCORE DRINKER CLASSIFICATION PROFILES - ORIGINAL CRITERIA

Profiles of modality group populations based on Mortimer-Filkins total scores (Interview score plus Questionnaire score) are exhibited in Table 42, for the original scoring criteria. A profile for the Type I School population is not given due to lack of available information from projects operating Type I School modalities. Only three ASAP projects plus the NIAAA/ASAP Alcohol Centers contribute data to these profiles. The modality group population profiles are, therefore, not completely representative. The Type III School population is the only modality population with over half (68.0 percent) of its clients classified as non-problem drinkers. The proportion of non-problem drinkers in the Type III School category population is more than double the next largest

TABLE 41. MORTIMER-FILKINS INTERVIEW DRINKER CLASSIFICATION - REVISED CRITERIA BY MODALITY CATEGORY

Mortimer-Filkins Interview Drinker Classification - Revised Criteria	Modality Category							
	Type I School	Type II School	Type III School	Out-patient	AA	Chemo-therapy	In-patient	NIAAA/ ASAP Alcohol Centers
Non-Problem Drinker		2311 34.4	2319 50.8	827 25.0	177 32.8	165 16.7	107 30.9	
Possible Problem Drinker		778 11.6	949 20.8	450 13.9	15 2.8	150 15.2	2 0.6	
Problem Drinker		3621 54.0	1300 28.5	2035 61.4	348 64.4	672 68.1	237 68.5	
Total		6710	4568	3312	540	987	346	
Data from		SD	LA SD	LA SD	SD	LA	SD	

Cell contents are: frequency
column percent

TABLE 42. MORTIMER-FILKINS TOTAL SCORE DRINKER CLASSIFICATION - ORIGINAL CRITERIA BY MODALITY CATEGORY

Mortimer-Filkins Total Score Drinker Classification - Original Criteria	Modality Category							
	Type I School	Type II School	Type III School	Out-patient	AA	Chemo-therapy	In-patient	NIAAA/ ASAP Alcohol Centers
Non-Problem Drinker		2152 28.3	3116 68.0	859 24.2	25 4.6	295 29.7	17 4.9	293 23.1
Possible Problem Drinker		890 11.7	469 10.2	358 10.1	23 4.3	122 12.3	4 1.2	155 12.2
Problem Drinker		4551 60.0	997 21.8	2330 65.7	492 91.1	575 58.0	325 93.9	822 64.7
Total		7593	4582	3547	540	992	346	1270
Data From		SD TX	LA SD	LA TX SD	SD	LA	SD	

Cell contents are: frequency
column percent

non-problem drinker proportion of 29.7 percent referred to chemotherapy. The remaining modality referral populations are comprised of primarily problem drinkers: the proportion ranging from 58 percent (chemotherapy) to 93.9 percent (inpatient treatment). Possible problem drinkers comprise at the most 13.3 percent of any one rehabilitation group population (chemotherapy).

MORTIMER-FILKINS TOTAL SCORE DRINKER CLASSIFICATION PROFILES - REVISED CRITERIA

Mortimer-Filkins drinker classification profiles based on the revised criteria applied to total scores (Interview score plus Questionnaire score) for all modality populations, except Type I School clients, are presented in Table 43. These profiles indicate that the vast majority of clients referred to rehabilitation programs other than Type III Schools are problem drinkers. Inpatient clients have a higher proportion of problem drinkers than any other modality category--95.9 percent are classified problem drinkers. The proportion of problem drinkers in the Alcoholics Anonymous group is nearly as high as the proportion in the inpatient modalities. Problem drinkers constitute 95.4 percent of the Alcoholics Anonymous referrals. On the other hand, the majority of clients (53.6 percent) referred to Type III Schools are classified as non-problem drinkers. The proportion of non-problem drinkers referred to Type III Schools is extremely high considering the next largest proportion of non-problem drinkers in 18.5 percent (for individuals in Type II Schools). The highest proportion (14.4 percent) of possible problem drinkers occurs in the Type III School population. Some of the profiles presented here are not completely representative of various treatment populations since only three projects are represented in the table.

"JOHNS HOPKINS" QUESTIONS DRINKER CLASSIFICATION PROFILES

The New Orleans project and NIAAA/ASAP Alcohol Center were the only contributors to the "Johns Hopkins" Questions Drinker Classification profiles shown in Table 44. Therefore, all treatment modality groups are not represented in the table, and those that are represented may not be representative. As would be expected, proportions of early problem drinkers decrease as treatment intensity increases. The Type III School population has the highest proportion of early problem drinkers (74.5 percent), while chemotherapy modality

TABLE 43. MORTIMER-FILKINS TOTAL SCORE DRINKER CLASSIFICATION - REVISED CRITERIA BY MODALITY CATEGORY

Mortimer-Filkins Total Score Drinker Classification - Revised Criteria	Modality Category							
	Type I School	Type II School	Type III School	Out-patient	AA	Chemo-therapy	In-patient	NIAAA/ ASAP Alcohol Centers
Non-Problem Drinker		1402 18.5	2458 53.6	521 14.7	15 2.7	173 17.4	15 4.3	147 11.6
Possible Problem Drinker		750 9.9	658 14.4	338 9.5	10 1.9	122 12.3	2 0.6	146 11.5
Problem Drinker		5441 71.4	1466 32.0	2688 75.8	515 95.4	697 70.2	329 95.9	977 76.9
Total		7593	4582	3547	540	992	346	1270
Data From		SD TX	LA SD	LA TX SD	SD	LA	SD	

Cell contents are: frequency
column percent

TABLE 44. "JOHNS HOPKINS" QUESTIONS DRINKER CLASSIFICATION BY MODALITY CATEGORY

"Johns Hopkins" Questions Drinker Classification	Modality Category							
	Type I School	Type II School	Type III School	Out-patient	AA	Chemo-therapy	In-patient	NIAAA/ ASAP Alcohol Centers
Early Problem Drinker			2563 74.5	1078 59.6		497 50.1		129 62.5
Middle Problem Drinker			285 8.3	192 10.2		104 10.5		25 12.0
Late Problem Drinker			591 17.2	538 29.8		391 39.4		54 26.0
Total			3439	1808		992		208
Data From			LA	LA		LA		

Cell contents are: frequency
column percent

populations have the lowest proportion of problem drinkers (50.1 percent). It should be noted that at least half of the individuals in each modality population are classified as early problem drinkers. Chemotherapy clients have the highest proportion of late problem drinkers (39.4 percent). The largest representation of middle problem drinkers is observed in NIAAA/ASAP Alcohol Center referrals, where 12 percent of the clients are middle problem drinkers.

NATIONAL COUNCIL ON ALCOHOLISM DRINKER CLASSIFICATION PROFILES

The National Council on Alcoholism drinker classification profiles displayed in Table 45 are based on information from New Orleans only; therefore, it should be said that these profiles are only representative of the New Orleans rehabilitation modality populations. Population proportions of early problem drinkers decrease as treatment intensity increases from Type III School (48.4 percent) to outpatient treatment (39.9 percent) to chemotherapy (27.0 percent). Of the modality populations represented, outpatient treatment clients have the highest proportion of middle problem drinkers (49.0 percent) and the lowest proportion of late problem drinkers (11.1 percent). As would be expected, chemotherapy clients have the highest proportion of late problem drinkers (29.2 percent).

THREE CATEGORY SITE DRINKER CLASSIFICATION PROFILES

The referral profiles detailed in Table 46 are based on site drinker classifications for those sites utilizing three category drinker classifications. Chemotherapy clients are all considered problem drinkers; however, only one project utilizing three drinker classifications refers individuals to chemotherapy. Further problem drinkers are automatically referred to chemotherapy at that project. The inpatient treatment population has the next highest proportion of problem drinkers with 96.9 percent of the clients in this category. Not surprisingly, Type III School clients have the largest non-problem drinker proportion (33.8 percent), while Type II School clients have the highest mid-range problem drinker proportion (47.5 percent). The Type III School population has the most even distribution of non-problem drinkers, mid-range problem drinkers, and problem drinkers, with proportions of 33.8 percent, 34.4 percent, and 31.8 percent, respectively.

TABLE 45. NATIONAL COUNCIL ON ALCOHOLISM CATEGORY BY MODALITY CATEGORY

National Council on Alcoholism Category	Modality Category							
	Type I School	Type II School	Type III School	Out-patient	AA	Chemo-therapy	In-patient	NIAAA/ ASAP Alcohol Centers
Early Problem Drinker			1664 48.4	327 39.9		267 27.0		
Middle Problem Drinker			1353 39.3	402 49.0		434 43.8		
Late Problem Drinker			424 12.3	91 11.1		289 29.2		
Total			3441	820		990		
Data From			LA	LA		LA		

Cell contents are: frequency
column percent

TABLE 46. SITE DRINKER CLASSIFICATION FOR SITES USING THREE CATEGORY DRINKER CLASSIFICATION BY MODALITY CATEGORY

Site Drinker Classification for Sites Using Three Category Drinker Classification	Modality Category							
	Type I School	Type II School	Type III School	Out-patient	AA	Chemo-therapy	In-patient	NIAAA/ ASAP Alcohol Centers
Non-Problem Drinker		2033 25.6	2884 33.8	1728 19.5	9 0.3	0 0.0	3 0.2	131 9.8
Midrange Problem Drinker		5265 47.5	2941 34.4	2245 25.3	262 9.0	0 0.0	51 2.9	158 11.8
Problem Drinker		2983 26.9	2717 31.8	4897 55.2	2629 90.7	979 100.0	1693 96.9	1050 78.4
Total		11001	8542	8870	2900	979	1747	1339
Data From		MN SD OK UT	MN SD NO	LA OK MN SD	MN SD OK	LA	MN SD OK	

Cell contents are: frequency
column percent

TWO CATEGORY SITE DRINKER CLASSIFICATION PROFILES

Profiles of modality group populations based on two category site drinker classifications from three projects are shown in Table 47. On the basis of these profiles, outpatient treatment clients have the largest proportion of non-problem drinkers (75.9 percent). The Type II School population is the only other referral population with more than a fifty percent proportion (57.1 percent) of non-problem drinkers in its client distribution. The chemotherapy population is comprised totally of problem drinkers; however, the entire chemotherapy population consists of only eight individuals for these particular profiles. The Type I School population has the next largest problem drinker proportion with 93.6 percent of its clients classified as problem drinkers. Profiles for the Type III School clients and NIAAA/ASAP Alcohol Center clients are not applicable for two category site drinker classification schemes. It should also be noted that any one profile is compiled from information from, at most, two projects.

SUMMARY

Profiles of clients entering the rehabilitation modality groups are complicated by the absense of profile data elements from individual sites. Therefore, the summarization of such incongruous profile structures would need nearly the same degree of explication applied to the consideration of the individual profile variables. The reader, therefore, is urged to peruse carefully the individual profiles presented in the preceding section.

TABLE 47. SITE DRINKER CLASSIFICATION FOR SITES USING TWO CATEGORY DRINKER CLASSIFICATION BY MODALITY CATEGORY

Site Drinker Classification for Sites Using Two Category Drinker Classification	Modality Category							
	Type I School	Type II School	Type III School	Out-patient	AA	Chemo-therapy	In-patient	NIAAA/ ASAP Alcohol Centers
Non-Problem Drinker	142 6.5	1360 57.1		503 75.9	17 13.2	0 0.0	4 8.9	
Problem Drinker	2057 93.6	1024 43.0		160 24.1	112 86.8	8 100.0	41 91.1	
Total	2199	2384		663	129	8	45	
Data From	KS NH	TX		KS TX	KS	KS	KS	

Cell contents are: frequency
column percent

CLIENT FLOW

The specification of client flow (that is, the number of persons reaching various points in the arrest to rehabilitation sequence) is important for several reasons. First, client flow data provides a clear indication of the magnitude of the ASAP diagnosis and referral effort. Comparison of the numbers of individuals reaching various points in the arrest to rehabilitation sequence allows for an assessment of the effectiveness with which individuals are being processed. In this regard, client flow data provides a useful mechanism by which the efficacy of various mechanisms for encouraging participation in ASAP activities may be evaluated.

Client flow data presented in this section was obtained from NHTSA Appendix H Tables. Appendix H Tables are data tabulations submitted on a quarterly basis by each ASAP site to NHTSA. Data provided on the tables concern accidents, arrest activity, judicial operation, diagnostic activity, referral activity and rehabilitation activity. The Appendix H data received by the NHTSA is entered into a computer data base in order to improve accessibility for data analysis. A magnetic tape copy of the computerized Appendix H table data base obtained from the NHTSA was the basis for analyses presented in this section. Two of the Appendix H Tables were of interest in the present analyses. Table 10 provided arrest and conviction data. Table 11 provided data concerning diagnoses and referrals.

DIAGNOSES

The number of arrests, convictions and diagnoses made across all ASAP sites is shown for 1972, 1973, and 1974 in Table 48. Also presented in the table are the number of diagnoses conducted for each year expressed as a percent of the number of arrests and the number of convictions in the corresponding years. (The same data are presented in Appendix B for individual ASAP sites.) The reader will find it useful in the interpretation of the data in Table 48 to refer to the ASAP schedules presented previously in Figure 2. Reference to Figure 2 indicates that not all of the 35 sites were operating for the full 12 months of any year represented in Table 48. The number of sites contributing caseflow data to each of the years shown in the table, as well as the portion of the year for which data was contributed should be kept in mind when inspecting

TABLE 48. DIAGNOSES CONDUCTED BY YEAR

Year	Arrests	Convictions	Diagnoses	Diagnoses as a Percent of Arrests	Diagnoses as a Percent of Convictions
1972	122,026	68,067	48,676	39.9	71.5
1973	136,877	79,007	60,792	44.4	76.9
1974	127,670	72,218	59,314	46.5	82.1
Total	386,573	219,292	168,782	43.7	77.0

the table.

The data presented in Table 48 suggest a favorable trend concerning diagnostic subsystem operations across the three year period shown. Both arrests and convictions increased from 1972 to 1973 and then dropped off to a level between 1972 and 1973 for 1974. While diagnoses conducted also increased from 1972 to 1973 and then dropped off from 1973 to 1974, the reduction in the number of diagnoses made from 1973 to 1974 is not as significant as the drop off in arrests or convictions. These facts are shown graphically in the columns of Table 48 listing diagnoses as a percent of arrests and diagnoses as a percent of convictions. In both cases, there is a clearly increasing proportion of persons arrested and persons convicted subject to ASAP diagnoses. These trends could indicate an increased acceptance of ASAP diagnosis by court systems or an increase in the client processing capabilities of ASAP diagnostic subsystems or a combination of these two factors. In any case, the trend would appear to indicate an improvement in ASAP diagnostic subsystems with respect to the numbers of individuals processed.

The absolute magnitude of the number of diagnoses conducted as a percent of arrests and as a percent of convictions are also of interest. The number of diagnoses as a percent of the number of arrests provides an indication of subsystem performance unconfounded by mechanisms for referral to ASAP. The figures are, however, confounded by a number of influences not subject to ASAP control. Many individuals arrested never became available for ASAP diagnosis for reasons such as: charges dismissed as the result of bad arrests, cases dropped or plea bargained to reduce court backlog, cases lost between arrest and court appearance, etc. The number of diagnoses as a percent of convictions provides an indication of subsystem performance unconfounded by factors influencing arrests listed above, but is confounded by mechanisms for referral to ASAP. It will be remembered that several sites employed reduced or dropped charges as mechanisms for encouraging participation in ASAP programs (see Table 2). For these sites, those individuals actually convicted are generally not the persons subject to ASAP diagnosis. Despite this factor, a total of 77.0% of those convicted in the 1972 to 1974 period were subjected to diagnosis. While there is no standard to which this figure can be compared, it seem relatively high particularly when it is remembered that some sites employ mechanisms which generally exclude convicted individuals.

REFERRALS TO REHABILITATION

The number of referrals to rehabilitation for 1972, 1973 and 1974 is shown in Table 49. Also presented in the table are the number of referrals for each year expressed as a percentage of the number of arrests, the number of convictions and the number of diagnoses made for the corresponding year. (The same data are presented in Appendix B for individual ASAP sites.) Much the same trends are apparent for referrals as were apparent for diagnoses. The number of referrals increased from 1972 to 1973 and then dropped off from 1973 to 1974. Again, this drop off is not as significant as the drop off in arrests and convictions as evidenced by the increase across years in referrals expressed as a percentage of arrests and convictions. The relationship between the number of arrests, convictions, diagnoses and referrals for 1972, 1973 and 1974 is shown pictorially in Figure 9.

The figures most indicative of referral subsystem performance in Table 49 are the numbers of referrals expressed as a percent of diagnoses. A significant increase in this percent is evident from 1972 to 1973. The percent for 1973 and 1974 are essentially identical. These percents indicate that approximately one-third of those individuals subjected to diagnosis are not eventually referred to rehabilitation. The breakdown of those individuals subjected to diagnosis into referred and not referred categories by drinker classification,* presented in Table 50,**

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*The NHTSA requires reporting relative to drinker classification in Appendix H Tables to be made according to NHTSA drinker classification guidelines regardless of the diagnostic system employed by a site. (See Exhibit A.) Drinker classifications presented in Table 50 are according to NHTSA classification criteria.

**It may be noted that the sum of those individuals referred to rehabilitation and those individuals not referred to rehabilitation across drinker types does not equal the number of diagnoses made as shown in Table 48. Further, the sum of individuals referred to rehabilitation across drinker types does not equal the number of referrals shown in Table 49. These discrepancies were inherent in the magnetic tape copy of the computerized Appendix H data received from the NHTSA. These discrepancies were small, however, relative to total number of individuals included on the data file and further, there is no reason to believe they added any systematic bias to the data. It is the opinion of the authors that the
(continued on page 110)

TABLE 49. REFERRALS TO REHABILITATION BY YEAR

Year	Referrals	Referrals as a Percent of Arrests	Referrals as a Percent of Convictions	Referrals as a Percent of Diagnoses
1972	28,528	23.4	41.9	58.6
1973	43,475	31.8	55.9	71.5
1974	42,336	33.2	58.6	71.4
Total	114,339	29.6	52.1	67.7

FIGURE 9. CASE FLOW BY YEAR.

TABLE 50. REFERRALS TO REHABILITATION BY DRINKER TYPE BY YEAR

Year	Problem Drinkers			Non-Problem Drinkers			Unidentified Drinkers		
	Referred	Not Referred	Percent Referred	Referred	Not Referred	Percent Referred	Referred	Not Referred	Percent Referred
1972	14,425	1,238	92.3	8,098	5,815	58.2	6,756	4,979	57.6
1973	22,114	2,670	89.2	12,629	5,320	70.4	8,672	4,861	64.1
1974	22,758	2,759	89.2	13,644	3,011	81.9	5,600	4,754	54.1
Total	59,297	6,667	89.9	34,371	14,146	70.8	21,023	14,594	59.0

provides a useful adjunct to the interpretation of the proportion of individuals not referred to rehabilitation. (The same data are presented for individual sites in Appendix B.)

It may be observed that the proportion of Problem Drinkers referred to rehabilitation remained relatively constant (at around 90%) for the three year period shown. The percentage of Non-Problem Drinkers referred, however, increased significantly across years to 81.9% in 1974. The persons in the Unidentified Drinker classification are clearly less likely to be referred to rehabilitation than either Problem or Non-Problem Drinkers. No explanation for this phenomenon is readily apparent. Despite the unexplainably lower referral rate for Unidentified Drinkers, it seems reasonable to categorize the referral rates for Problem and Non-Problem Drinkers as relatively high. As was the case for diagnostic rate, however, there is no standard against which the rates may be compared.

The number of referred and not referred individuals by drinker type is shown pictorially for 1972, 1973, and 1974 in Figure 10.

CLIENT FLOW AS A FUNCTION OF MECHANISMS FOR REFERRAL TO ASAP

As noted previously, client flow data provide a mechanism for comparing the efficacy of various mechanisms for encouraging participation in diagnosis and referral procedures. The number of individuals diagnosed as a percent of individuals arrested and the number of individuals referred to rehabilitation as a percentage of individuals arrested, as discussed previously in this section, may be computed for groups of clients based on referral mechanisms. The relative magnitude of these percentages is, then, an indication of the relative efficacy of the mechanisms for referral to ASAP. The percentages are based on arrests rather than convictions so as to be unconfounded by referral mechanisms since it is, in fact, the efficacy of referral mechanisms being analyzed.

Shown in Table 51 are the number of diagnoses conducted and number of referrals to rehabilitation expressed as a percent of arrests for six categories of mechanisms for referral to ASAP. The six mechanism categories are

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**discrepancies, therefore, do not invalidate the conclusions drawn in this section.

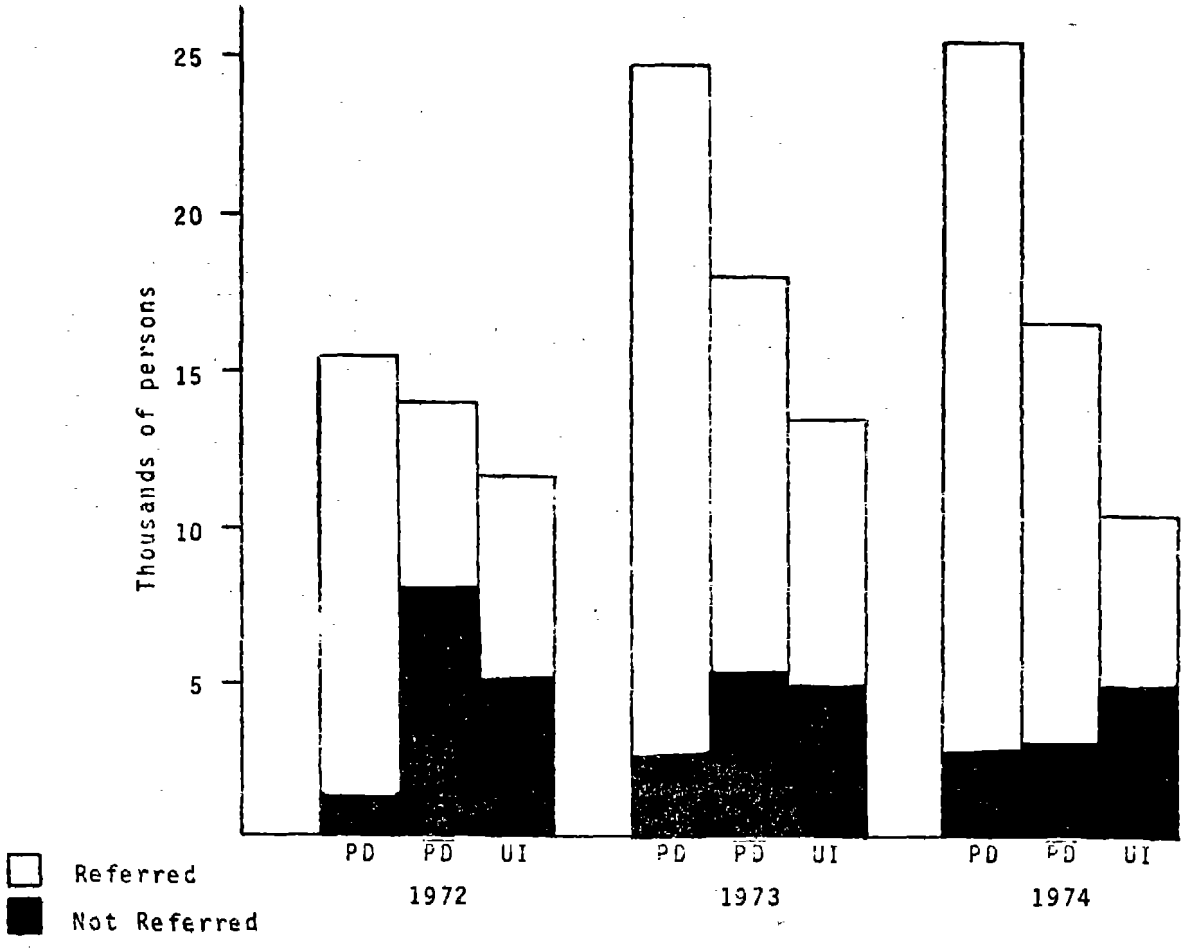

FIGURE 10. REFERRALS TO REHABILITATION BY DRINKER TYPE BY YEAR.

TABLE 51. ASAP CLIENT FLOW AS A FUNCTION OF REFERRAL MECHANISMS

Referral Mechanisms	Number of Arrests	Number of Diagnoses	Diagnoses as Percent of Arrests	Number of Referrals	Referrals as Percent of Arrests	Data From
Voluntary Referral	30,927	19,500	63.1	6175	20.0	AR, DE, ME
Probation Only	98,901	38,087	38.5	31,407	31.8	CO, IN, LA, MD, MI MN, NE, OH, OR
Probation + Other	152,426	59,508	39.0	54,257	35.6	CA, FL, IA, ID, MA MO, OK, PR, TX, UT VA, VT, WA, WI
Part of Sentence	58,683	20,042	34.2	16,525	28.2	CA, GA, NC, SD, WA
Reduced License Suspension	68,525	18,008	26.3	15,486	22.6	IA, NH, NY, PR, SC, UT, VT
Delayed Verdict or Sentence	141,230	65,757	46.6	38,672	27.4	AZ, FL, ID, MA, NC, NM, OK, SC, TX, UT, VA

formulated on the basis of mechanisms for encouraging participation in ASAP diagnosis and referral listed in Table 2 of the present volume. Because of the variety of mechanisms employed in combination with probation, it was necessary to consolidate these combinations in a "probation plus other" category. Because of the frequency with which multiple mechanisms for encouraging participation in ASAP diagnosis and referral are employed, some sites appear in more than one of the categories listed in Table 51.

Inspection of the diagnoses as a percent of arrests column of the table would appear to suggest voluntary diagnostic procedures were significantly more effective than any of the other procedures in terms of client acquisition. This result is, however, an artifact which may be explained in terms of the procedures employed for diagnosis by the sites in this category. Drinker diagnosis at the Arkansas project was based on records check information and did not require the consent or participation of the client. Drinker diagnosis at the Delaware project was, in fact, not voluntary but part of a court referred presentence investigation. The Delaware project was placed in the voluntary category because participation in rehabilitation recommended on the basis of the presentence investigation was voluntary. Of the remaining referral mechanism categories, it appears that a delayed verdict or sentence is a somewhat more effective mechanism than others and that a reduced license suspension is a somewhat less effective mechanism than others based on diagnoses as a percent of arrests.

Inspection of the referrals as a percent of arrests column provides a somewhat different perspective concerning the efficacy of the mechanisms. Voluntary systems and those employing reduced license suspensions as a mechanism for encouraging ASAP participation appear to be somewhat less effective than other referral mechanism categories. Probation in combination with other mechanisms appears to be the most effective method for encouraging client participation in referral to rehabilitation.

Since diagnosis without subsequent referral to rehabilitation is of limited utility, it would seem reasonable to weight the results presented in the referrals as a percent of arrests column more heavily than the results presented in the diagnoses as a percent of arrests column. On this basis, it appears that probation in combination with other mechanisms is the most effective method of encouraging participation in ASAP programs. Voluntary systems and reduced license suspensions would appear to be the least effective methods for encouraging partici-

pation in ASAP programs. The fact that reduced license suspensions appear to be little more effective in encouraging participation in rehabilitation than voluntary systems is somewhat surprising. It may be that individuals continue to drive subsequent to license suspension and view the absence of a drivers license as not particularly problematic.

Although the results presented above appear to suggest conclusions relative to the efficacy of various mechanisms to encourage participation in ASAP diagnosis and referral to rehabilitation, they should be viewed as tentative. As noted previously in this section, diagnoses or referrals presented as a percent of arrests tend to be confounded by factors beyond the control of ASAPs. If these confounding factors are operating differentially across the mechanism categories, then they could bias the results of the analysis.

COST OF DIAGNOSIS AND REFERRAL

The importance of accurate cost accounting of diagnosis and referral expenditures is obvious. Accurate cost figures are basic to the intelligent management of available funding. Accurate cost data is also prerequisite to the analysis of the relative cost effectiveness of various diagnosis and referral procedures. Finally, data concerning the cost of varieties of diagnosis and referral subsystems is critical to adequate planning of future diagnosis and referral subsystems.

Two potential sources of ASAP diagnosis and referral subsystem cost data are available: NHTSA Appendix H, Table 9, and annual analytic studies submitted by each site relative to their diagnosis and referral subsystems. Data provided concerning diagnosis and referral costs in Appendix H, Table 9, consisted of two line items: "Total Presentence Investigation" and "Total Probation Office." Each of these line items was supplemented by a "Salaries Only" subcategory. A number of difficulties in the application of this data to diagnosis and referral cost analyses exist. First, the data represent only expenditures of federal funds. The degree to which the federally funded portion of diagnosis and referral approximated total diagnosis and referral cost was not specified in the Appendix H data, and varied considerably from site to site. The degree to which probation office costs and diagnosis and referral costs overlapped also varied considerably. At some sites diagnosis and referral was conducted by probation officers and at others it was not. For these reasons it was determined that cost data provided in annual analytic studies would be more representative of true diagnosis and referral costs. In the case of annual analytic studies, each site was provided with the opportunity to include both federal and non-federal funds in cost accounting procedures and to specify costs in considerably greater detail than was possible in Appendix H, Table 9.

Diagnosis and referral cost data extracted from annual analytic studies is presented in Table 52. It is readily observable that cost data provided in annual analytic studies is far from complete. It is also apparent on the basis of the text of the analytic studies from which Table 52 data are extracted, that considerable variance exists in the component costs included in arriving at total diagnosis and referral costs as reported

TABLE 52. COST OF DIAGNOSIS AND REFERRAL

REGION	PROJECT CODE	ASAP SITE	1972 No.	1972 Cost per Case	1973 No.	1973 Cost per Case	1974 No.	1974 Cost per Case	Total No.	Total Cost per Case
I	2	Boston, MA								
	2	Maine			833	66.00				
	3	New Hampshire			1296	10.04	1879	8.45		
	1	Vermont							1729	92.89
II	1	Nassau Co., NY								
	4	Puerto Rico [1]			586	142.16	3279	39.95		
III	2	Baltimore, MD								
	4	Delaware			987	36.00	846	32.00		
	3	Fairfax Co., VA			2601	5.51				
IV	1	Charlotte, NC [3]			3904	16.63				
	2	Columbus, GA [2]	1617	113.33	1505	110.69				74.26
	2	Richland Co., SC	334	187.56	1562	72.68	1302	73.47	2698	87.28
	3	Tampa, FL			1972	5.36				
V	2	Cincinnati, OH	1395	45.31	1395	49.58	2330	17.37	5613	35.29
	3	Hennepin Co., MN	1570	33.43	3419	31.87	5724	24.60	10713	27.99
	2	Indianapolis, IN	1078	28.03	2016	32.56	1673	11.55	4768	25.16
	1	Washtenaw Co., MI								
	1	Wisconsin								
VI	1	Albuquerque, NM [4]			3785	19.33				
	3	New Orleans, LA	1125	64.77	1122	64.77			3198	80.61
	3	Oklahoma City, OK	793	128.11	1587	78.28	947	123.56	3327	104.15
	2	Pulaski Co., AR					953	77.82		
	3	San Antonio, TX			788	26.71			2370	33.95
VII	3	Kansas City, MO [4]	3345	11.21	5547	8.28	5310	6.33	14202	8.23
	2	Lincoln, NE			633	47.37	742	62.57	1939	
	4	Sioux City, IA			364	64.50	478	33.00		
	2	Wichita, KS	97	103.85	830	9.01	1842	9.33	1969	30.12
VIII	1	Denver, CO			2684	40.28				
	4	Salt Lake City, UT			2007	45.00	2310	40.11		
	3	South Dakota	1623	61.31	1927	74.79	2434	59.91	5991	64.92
IX	4	Los Angeles, CA [5]			8310	28.49	14336	27.93		
	3	Phoenix, AR [7]			4432	22.38				
X	4	Idaho			2855	50.95	2991	53.81		
	1	Portland, OR	3525	52.38						
	1	Seattle, WA	3001	35.34						

PROJECT CODE: 1 = First Nine Sites; 2 = Second Twenty Sites Not Extended; 3 = Second Twenty Sites Extended; 4 = Last Six Sites

[1] 1973 cost is for mid-1973 to mid-1974. 1974 cost is for last half of 1974.

[2] Cost is per case for in-depth investigations. Initial diagnosis and referral (client numbers tabled above) is based on arrest BAC and prior arrests only.

[3] Unweighted average of cost of five separate diagnostic systems.

[4] Cost is average per disposition. Various subsets of clients receive various components of diagnosis and referral process.

[5] Unweighted average of cost of three separate diagnostic systems.

[6] Regular diagnosis and referral cost only. In-depth cost is $64.00.

[7] Cost is for in-depth diagnosis. Cost for regular diagnosis and referral not provided.

in the studies. In effect, many of the difficulties which make Appendix H, Table 9, data unrepresentative of true diagnosis and referral costs are associated with the cost data provided in the annual analytic studies. The footnotes associated with Table 52 provide some indication of the variance in cost accounting procedures employed to arrive at total diagnosis and referral costs as presented in annual analytic studies.

Analysis concerning the relative cost of diagnosis and referral procedure categories as discussed earlier in the present volume were planned as part of the present section. Careful consideration of the data available for these analyses resulted in a decision to omit them. It was felt that any differences evident in the results of such analyses would be hopelessly confounded with differences in cost accounting procedures and as such, potentially misleading.

Although it is unlikely that the data presented in Table 52 will be of great use in the planning of future diagnosis and referral subsystems, it does suggest a clear need for better accounting procedures. It is essential that accurate and standardized cost accounting procedures be employed for cost data to be useful.

RELIABILITY AND VALIDITY OF DIAGNOSIS AND REFERRAL

As was noted in the introduction to the present volume, the objectives of ASAP diagnosis and referral are to identify those individuals in the drinking driving population in need of rehabilitation, i.e., those individuals with drinking problems, and to refer those individuals identified, to rehabilitation most appropriate to their needs. The validity of a diagnostic system may be viewed as the degree to which those individuals with problems are correctly identified as having problems. Encompassed in the concept of the validity of a diagnostic system is the reliability of a diagnostic system. The reliability of a diagnostic system may be viewed simply as the consistency with which individuals with the same severity of drinking problem are identified as having the same severity of problem. It can be seen then that a valid diagnostic system has as a prerequisite a reliable diagnostic system, but that a reliable diagnostic system does not insure a valid diagnostic system. [A diagnostic system can be consistently (reliably) wrong.] The concepts of the validity and reliability of a referral subsystem are similar to those for a diagnosis subsystem. A reliable referral system would always refer individuals in need of the same rehabilitation to the same rehabilitation. A valid referral system would, in addition to always referring individuals in need of the same rehabilitation to the same rehabilitation, always refer these individuals to the most appropriate rehabilitation. The present section is subdivided into two parts. The first of these deals with the reliability and validity of diagnosis and referral as reported in annual analytic studies dealing with diagnosis and referral submitted by the ASAP sites. The second subsection deals with the validity of several categories of diagnostic subsystems on the basis of analyses conducted with the master client file. Data available on the master client file are not, unfortunately, adequate to allow for analyses concerning the validity of referral subsystems.

RELIABILITY AND VALIDITY OF DIAGNOSIS AND REFERRAL - ANALYTIC STUDY ANALYSES

The results of annual analytic study analyses concerning the reliability and validity of ASAP diagnosis and referral subsystems have been reported previously.[14-15] The results of analyses reported in the analytic studies have generally been mixed. Some studies have reported reliable and valid diagnosis and referral subsystems while other studies (in approximately equal numbers) have reported unreliable and/or invalid diagnosis and referral subsystems. It has been difficult to draw conclusions based on analyses presented in the analytic studies for several reasons. First, many of the reported analyses designed to measure the reliability and validity of the diagnosis and referral subsystems have been less than adequate in design or execution. While the results of some analyses suggesting reliable and valid diagnoses and referral subsystems have been open to question, the converse has also been true. That is, the results of some analyses suggesting unreliable or invalid diagnosis and referral subsystems have been generated by analyses of such questionable quality than it is unwarranted to conclude that the subsystems are not reliable or valid based on the results. Interpretation of the results of adequate analyses has also been difficult. It has been virtually impossible to obtain adequate information from the analytic studies to determine characteristics common to those diagnosis and referral subsystems which appear reliable and valid on the basis of adequate analyses or to determine characteristics common to those diagnosis and referral subsystems which appear unreliable and/or invalid on the basis of adequate analyses or to determine characteristics which differentiate subsystems which appear reliable and valid from those which do not. The following subsection based on data from the master client file presents analyses designed to eliminate those problems noted above. Although the analyses presented are based on a subset of ASAP sites, there

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[14] Struckman, D. L., Spiegel, D. K., Olshan, M. D., Springer, T. J., and Sapp, J. H. Interim analysis of drinker diagnoses and rehabilitation countermeasures: 1973 analytic studies No. 5 and 6. Interim Report, Contract No. DOT-HS-191-3-759, Human Factors Laboratory, University of South Dakota, Vermillion, S. D., December, 1974.

[15] Struckman-Johnson, op. cit., p. 29.

are at least as many sites included in the analyses as there were sites which provided adequate analyses in analytic studies.

VALIDITY OF DIAGNOSIS - CLIENT FILE ANALYSES

In order to validate drinker diagnosis mechanisms, a relationship between the diagnosis and some external criterion measure must be established. The external criterion must, itself, be a valid indicator of the severity of the drinking problem existent in the ASAP population. The external criterion used here to validate the diagnosis mechanisms is recidivism rate. The use of recidivism rate as a criterion measure for establishing the predictive validity of diagnosis mechanisms is inherently related to the traffic safety concept of the ASAP program. Although recidivism analysis is not sufficient as an overall indicator of alcoholism or problem drinking, it is indicative of a problem involving drinking/driving behavior. It is reasonable to assume that the probability of an arrest for an A/R offense increases as a function of the frequency of occurrence of drinking/driving behavior. Therefore, individuals exhibiting high frequency of drinking/driving behavior would be expected to have a higher incidence of rearrest.

Recidivism, or the occurrence of a rearrest for an alcohol related driving infraction, can be investigated by several different analytic methods, using several different expressions for recidivism. For example, recidivist proportions can be reported in tabular format comparing the number of recidivists to the number of non-recidivists. However, analysis of this type does not take into account the "time to recidivate" factor which can mask some of the relationships between severity of drinking problem and recidivism.

In order to take into account time-to-recidivate, the use of most analytic methods would necessitate the removal of some available information for the purpose of equating clients based on the length of time they were exposed to the recidivist event. In other words, clients would have to enter the system (at the time of initial alcohol related arrest) at approximately the same time and remain in the system for the same period of time. Employing this process, important information

would be of no use to the analysis. Cutler and Ederer[16] detailed an analytic method that employs information on all clients independent of their time of entry into the system. By using all available data, they were able to reduce the standard error involved in predicting survival* rates [for the purpose of this investigation survival rate (p) is simply 1 - q, where q is the proportion of clients recidivating] by at least one third.

In order to use survival rate analysis techniques, the date of initial arrest and the date of arrest must be available. Client file data for operational years 1972 through 1974 were used to obtain the necessary information. Of the thirteen ASAPs plus NIAAA agencies from which data were obtained, six ASAPs had information available on their client file suitable for use in the analysis. These six projects represent three of the four types of diagnostic mechanisms discussed previously. The Fairfax County, Virginia; New Hampshire; and South Dakota projects employed partially subjective diagnostic techniques. The Wichita/Sedgwick County and San Antonio projects used the NHTSA classification criteria and the Oklahoma City project made use of subjective classification criteria.

Before entering the survival rate analysis, clients were divided into drinker classification based upon the site classifications (see Appendix A). For each drinker classification and for each diagnosis mechanisms, the data entered into the survival rate analysis consisted of the number of clients available to recidivate for each time period (EB); the number of clients who recidivated after a given time period (RI); and the number of clients who left the system surviving during a given time period (W). The three year period, 1972 to 1974 was broken into twelve periods (quarters). Therefore, the total number of clients arrested during the three years would be EB_1 for time period 1.

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[16]Cutler, S. J. and Ederer, F. Maximum utilization of the life table method in analyzing survival. Journal of Chronic Diseases, 1968, 8, 699-712.

*The terms survival rates and recidivism rates are both used through the body of this text. Survival rate is defined as the proportion of clients who do not recidivate or 1 minus recidivism rate.

The number of clients arrested during the last quarter of the third year (time period 12) would be subtracted from EB_1 to yield EB_2. EB_3 through EB_{12} would be computed in a similar fashion. The number of recidivists for time period 1 (RI_1) is the number of clients rearrested within 1 quarter after their initial arrest. RI_2 would be the number of individuals rearrested between four and six months after their initial arrest; RI_{3-12} would be computed in the same manner. W_j is determined by the formula:

$$W_j = EB_j - RI_j - EB_{j+1} .$$

Three statistics are produced by the survival rate analysis: the cumulative proportion of individuals surviving at the end of any time period (CP); the standard errors (SE) in determining CP[17], and the effective sample size (ESS) for those exposed for a given number of time periods. These three statistics are necessary to test differences in survival proportions using the Student's t test and for determining the strength of statistical association (estimated ω^2) as described in Hays.[18]

Using the techniques described above, survival rate proportions for each drinker classification were tested against one another for each diagnosis mechanism and across diagnosis mechanisms. For those instances where projects with three drinker classes were combined with sites using two drinker classifications, the corresponding classification totals were added. Therefore, non-problem drinker ($\overline{PD}$) and problem drinker (PD) figures would be contributed to by all sites, while midrange problem drinker (MPD) figures would only be based on those sites with three drinker classifications.

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[17]Irwin, J.O. The standard error of an estimate of expectation of life, with special reference to expectation of tumourless life in experiments with mice. Journal of Hygiene, Cambridge, 1949, 47, 188.

[18]Hays, W.L. Statistics for the Social Sciences, Holt, Rinehart, and Winston, New York, 1973.

Survival rate tables for each diagnosis mechanism, broken by drinker classification, are presented in Tables 53 through 55. The accompanying survival plots for each classification are shown in Figures 11 through 13. The total survival rate table (survival rate statistics collapsed across diagnosis mechanisms) and the accompanying survival plot are presented in Table 56 and Figure 14 respectively. All of the survival rate analyses are based on eleven time periods instead of the available twelve time periods. This procedure was used to eliminate artifacts resulting from instability of the data during time period twelve. It was apparent from the survival plots that results for this time period tended to confuse rather than enhance the interpretation of all survival rate analyses.

Student's t tests performed on the eleven period data are summarized in Table 57. Results of the tests indicate that all diagnosis mechanisms are capable of discriminating between non-problem and problem drinkers. However, both the subjective and partially subjective mechanisms cannot unambiguously distinguish between the midrange problem drinkers and the non-problem drinkers (subjective) or problem drinkers (partially subjective). Since t values for each test are based on different sample sizes, the values can be easily inflated due to a large number of degrees of freedom. The estimated ω^2 statistic indicates the amount of association between the difference in survival proportions and the difference in the drinker classifications. This statistic was used to compare the strengths of the t values resulting from the analyses of the three diagnostic methods. It can be discerned from Table 57 that the NHTSA diagnostic mechanism is the most successful in discriminating between non-problem and problem drinkers. The estimated ω^2 statistic for the NHTSA procedure is .20 compared to .138 for the next highest estimated ω^2 (found for the partially subjective mechanism).

From the survival rate analysis it is difficult to assess the validity of diagnosis for midrange problem drinkers. Results of the survival rate analysis for the partially subjective mechanism are confounded by the fact that data from three projects were used in the makeup of that table. Therefore, to obtain a somewhat clearer understanding of what was actually occurring at the individual sites that comprise this class, it is necessary to refer to Table 58. The three projects that comprise the partially subjective category are Fairfax County, Virginia, New Hampshire, and South Dakota.

TABLE 53. PARTIALLY SUBJECTIVE DIAGNOSIS SURVIVAL RATES

Drinker Class	Period (INT)	Enrolled at Beginning of Interval (EB)	Recidivists During Interval (RI)	Withdrawn Surviving During Interval (W)	Proportion Recidivists (q)	Proportion Surviving (p)	Cumulative Proportion Surviving (CP)	Standard Error (SE)	Effective Sample Size (ESS)
Non-Problem Drinkers	1	5134	47	235	.0094	.9906	.9906	.0014	5016.53
	2	4852	64	276	.0136	.9864	.9772	.0021	2918.87
	3	4512	59	318	.0136	.9864	.9639	.0027	1807.40
	4	4135	55	392	.0140	.9860	.9505	.0032	1318.75
	5	3688	52	383	.0149	.9851	.9363	.0037	1052.71
	6	3253	44	302	.0142	.9858	.9231	.0042	800.07
	7	2907	30	398	.0111	.9889	.9128	.0045	633.39
	8	2479	30	528	.0135	.9865	.9005	.0050	534.15
	9	1921	22	683	.0139	.9861	.8879	.0056	437.80
	10	1216	10	450	.0101	.9899	.8790	.0062	258.19
	11	756	17	378	.0300	.9700	.8526	.0087	382.52
Midrange Problem Drinkers	1	4510	110	360	.0254	.9746	.9746	.0024	4330.01
	2	4040	90	399	.0234	.9766	.9518	.0033	2059.32
	3	3551	102	292	.0300	.9700	.9232	.0043	1597.70
	4	3157	77	333	.0257	.9743	.8995	.0049	1027.52
	5	2747	57	324	.0221	.9779	.8796	.0055	716.47
	6	2366	59	297	.0266	.9734	.8562	.0061	689.63
	7	2010	43	358	.0235	.9765	.8361	.0067	509.69
	8	1609	46	265	.0314	.9686	.8099	.0075	535.87
	9	1278	45	328	.0404	.9596	.7772	.0087	516.60
	10	905	34	330	.0459	.9541	.7415	.0102	421.17
	11	541	30	256	.0726	.9274	.6876	.0134	375.95
Problem Drinkers	1	6875	176	569	.0267	.9733	.9733	.0020	6590.54
	2	6130	201	557	.0344	.9656	.9399	.0030	3666.26
	3	5372	157	626	.0310	.9690	.9107	.0037	2197.73
	4	4589	133	643	.0312	.9688	.8823	.0043	1608.66
	5	3813	105	593	.0299	.9701	.8560	.0049	1203.05
	6	3115	84	505	.0293	.9707	.8308	.0055	950.20
	7	2526	74	489	.0324	.9676	.8039	.0061	835.56
	8	1963	48	477	.0278	.9722	.7815	.0068	592.92
	9	1438	38	440	.0312	.9688	.7571	.0076	521.20
	10	960	27	387	.0352	.9648	.7305	.0089	428.04
	11	546	23	284	.0569	.9431	.6889	.0119	379.37

TABLE 54. SUBJECTIVE DIAGNOSIS SURVIVAL RATES

Drinker Class	Period (INT)	Enrolled at Beginning of Interval (EB)	Recidivists During Interval (RI)	Withdrawn Surviving During Interval (W)	Proportion Recidivists (q)	Proportion Surviving (p)	Cumulative Proportion Surviving (CP)	Standard Error (SE)	Effective Sample Size (ESS)
Non-Problem Drinkers	1	377	3	10	.0081	.9919	.9919	.0046	372.01
	2	364	8	4	.0221	.9779	.9700	.0089	272.51
	3	352	5	4	.0143	.9857	.9562	.0107	122.54
	4	343	3	11	.0089	.9911	.9477	.0117	64.43
	5	329	6	2	.0183	.9817	.9303	.0135	99.24
	6	321	1	22	.0032	.9968	.9273	.0137	17.04
	7	298	1	23	.0035	.9965	.9241	.0141	17.58
	8	274	2	60	.0082	.9918	.9165	.0149	36.44
	9	212	1	64	.0056	.9944	.9114	.0157	22.42
	10	147	2	44	.0160	.9840	.8968	.0185	45.87
	11	101	1	54	.0135	.9865	.8847	.0219	27.84
Midrange Problem Drinkers	1	714	8	40	.0115	.9885	.9885	.0041	694.01
	2	666	8	26	.0123	.9877	.9764	.0058	354.61
	3	632	11	32	.0179	.9821	.9589	.0077	292.02
	4	589	11	39	.0193	.9807	.9404	.0094	214.41
	5	539	13	4	.0242	.9758	.9176	.0111	192.02
	6	522	8	27	.0157	.9843	.9032	.0120	106.92
	7	487	10	43	.0215	.9785	.8838	.0132	119.77
	8	434	3	99	.0078	.9922	.8769	.0137	41.97
	9	332	3	90	.0105	.9895	.8677	.0146	48.72
	10	239	0	74	.0000	1.0000	.8677	.0146	0.00
	11	165	4	84	.0325	.9675	.8395	.0198	80.40
Problem Drinkers	1	1705	60	74	.0360	.9640	.9640	.0046	1662.01
	2	1571	31	80	.0202	.9798	.9445	.0057	619.98
	3	1460	26	55	.0182	.9818	.9274	.0065	424.85
	4	1379	26	119	.0197	.9803	.9091	.0073	365.16
	5	1234	28	0	.0227	.9773	.8885	.0081	339.20
	6	1197	30	82	.0260	.9740	.8654	.0089	318.81
	7	1085	16	136	.0157	.9843	.8518	.0094	175.54
	8	933	15	220	.0182	.9818	.8363	.0100	177.51
	9	698	19	215	.0322	.9678	.8094	.0115	237.17
	10	464	11	180	.0294	.9706	.7856	.0132	164.35
	11	273	6	145	.0299	.9701	.7620	.0159	114.83

TABLE 55. NHTSA CRITERION DIAGNOSIS SURVIVAL RATES

Drinker Class	Period (INT)	Enrolled at Beginning of Interval (EB)	Recidivists During Interval (RI)	Withdrawn Surviving During Interval (W)	Proportion Recidivists (q)	Proportion Surviving (p)	Cumulative Proportion Surviving (CP)	Standard Error (SE)	Effective Sample Size (ESS)
Non-Problem Drinkers	1	1329	8	24	.0061	.9939	.9939	.0021	1317.00
	2	1297	20	48	.0157	.9843	.9783	.0041	940.53
	3	1229	14	80	.0118	.9882	.9668	.0050	457.69
	4	1135	22	82	.0201	.9799	.9473	.0064	477.74
	5	1037	16	101	.0162	.9838	.9320	.0074	293.12
	6	919	17	79	.0193	.9807	.9140	.0084	266.71
	7	823	9	107	.0117	.9883	.9033	.0091	141.02
	8	707	7	125	.0109	.9891	.8935	.0097	114.54
	9	575	4	160	.0081	.9919	.8862	.0103	76.18
	10	411	5	130	.0145	.9855	.8734	.0116	105.87
	11	276	1	121	.0046	.9954	.8694	.0122	30.87
Problem Drinkers	1	2351	45	0	.0191	.9809	.9809	.0028	2351.02
	2	2306	65	58	.0285	.9715	.9529	.0044	1440.34
	3	2183	68	120	.0320	.9680	.9223	.0056	990.58
	4	1995	58	126	.0300	.9700	.8946	.0065	688.89
	5	1811	34	176	.0197	.9803	.8770	.0070	389.96
	6	1601	43	209	.0287	.9713	.8518	.0078	456.48
	7	1349	23	216	.0185	.9815	.8360	.0083	261.62
	8	1110	25	243	.0253	.9747	.8149	.0091	295.28
	9	842	18	241	.0249	.9751	.7945	.0101	239.05
	10	583	7	214	.0147	.9853	.7829	.0109	122.79
	11	362	4	140	.0137	.9863	.7721	.0120	94.38

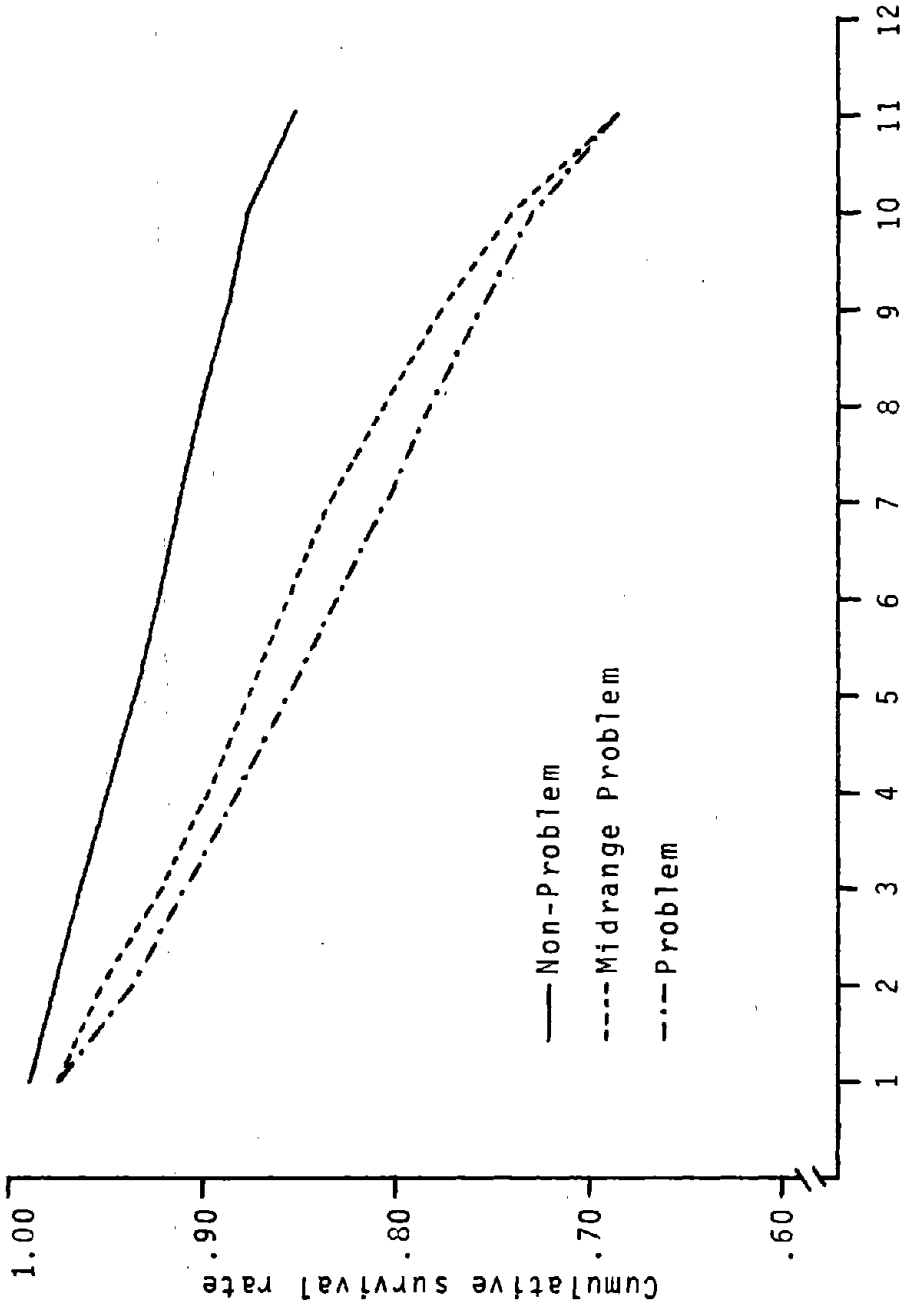

FIGURE 11. PARTIALLY SUBJECTIVE DIAGNOSIS SURVIVAL PLOT.

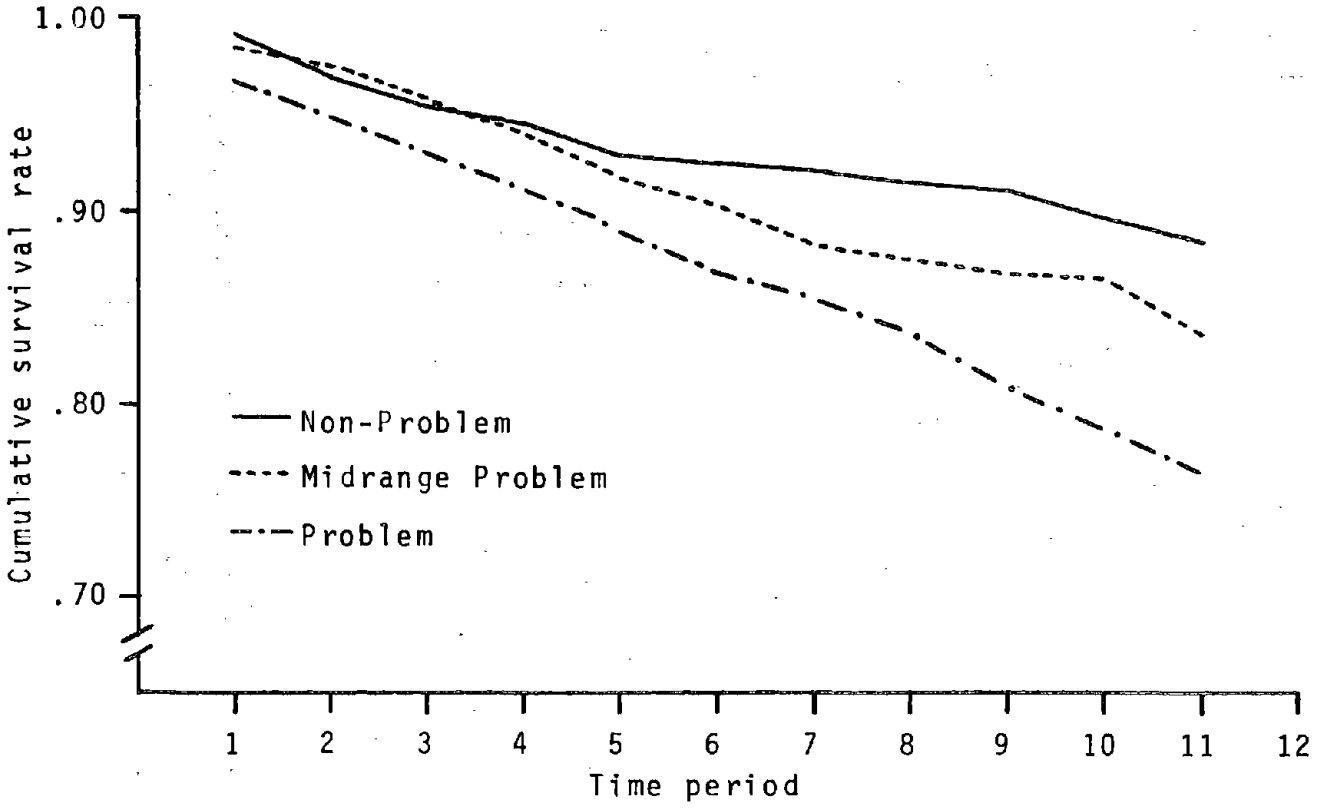

FIGURE 12. SUBJECTIVE DIAGNOSIS SURVIVAL PLOT.

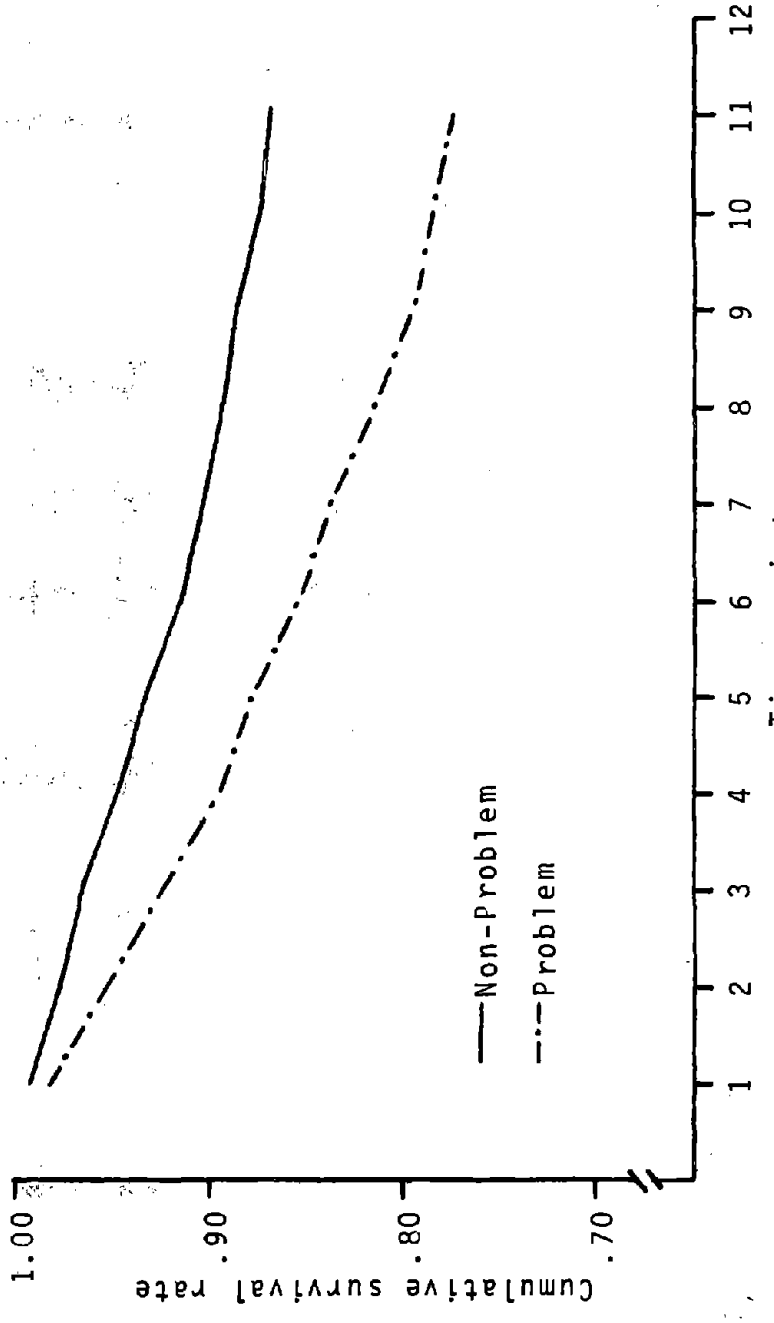

FIGURE 13. NHTSA CRITERION DIAGNOSIS SURVIVAL PLOT.

TABLE 56. ACROSS DIAGNOSIS SURVIVAL RATES

Drinker Class	Period (INT)	Enrolled at Beginning of Interval (EB)	Recidivists During Interval (RI)	Withdrawn Surviving During Interval (W)	Proportion Recidivists (q)	Proportion Surviving (p)	Cumulative Proportion Surviving (CP)	Standard Error (SE)	Effective Sample Size (ESS)
Non-Problem Drinkers	1	6840	58	269	.0086	.9914	.9914	.0011	6705.67
	2	6513	92	328	.0145	.9855	.9770	.0019	4135.73
	3	6093	78	402	.0132	.9868	.9641	.0023	2384.71
	4	5613	80	485	.0149	.9851	.9497	.0028	1868.09
	5	5054	74	486	.0154	.9846	.9351	.0032	1448.62
	6	4493	62	403	.0144	.9856	.9216	.0036	1090.58
	7	4028	40	528	.0106	.9894	.9118	.0039	693.90
	8	3460	39	713	.0126	.9874	.9003	.0043	685.65
	9	2708	27	907	.0120	.9880	.8895	.0047	539.79
	10	1774	17	624	.0116	.9884	.8792	.0053	415.88
	11	1133	19	553	.0222	.9778	.8597	.0068	471.57
Midrange Problem Drinkers	1	5224	118	400	.0235	.9765	.9765	.0021	5024.02
	2	4706	98	325	.0216	.9784	.9554	.0030	2398.21
	3	4183	113	324	.0281	.9719	.9286	.0038	1881.99
	4	3746	88	372	.0247	.9753	.9056	.0044	1227.28
	5	3286	70	328	.0224	.9776	.8853	.0050	893.52
	6	2888	67	324	.0246	.9754	.8636	.0055	792.97
	7	2497	53	401	.0231	.9769	.8436	.0060	623.24
	8	2043	49	384	.0265	.9735	.8213	.0066	583.13
	9	1610	48	418	.0343	.9657	.7932	.0076	578.96
	10	1144	34	404	.0361	.9639	.7645	.0087	455.77
	11	706	34	340	.0634	.9366	.7160	.0115	450.94
Problem Drinkers	1	10931	281	643	.0265	.9735	.9735	.0016	10609.61
	2	10007	297	695	.0307	.9693	.9436	.0023	5723.27
	3	9015	251	801	.0291	.9709	.9161	.0028	3611.99
	4	7963	217	888	.0289	.9711	.8896	.0032	2665.62
	5	6858	167	778	.0258	.9742	.8667	.0036	1926.32
	6	5913	157	796	.0285	.9715	.8420	.0040	1718.96
	7	4960	113	841	.0249	.9751	.8211	.0044	1271.34
	8	4006	88	940	.0249	.9751	.8006	.0048	1065.41
	9	2978	75	896	.0296	.9704	.7769	.0054	1001.06
	10	2007	45	781	.0278	.9722	.7553	.0061	726.29
	11	1181	33	569	.0368	.9632	.7275	.0076	620.62

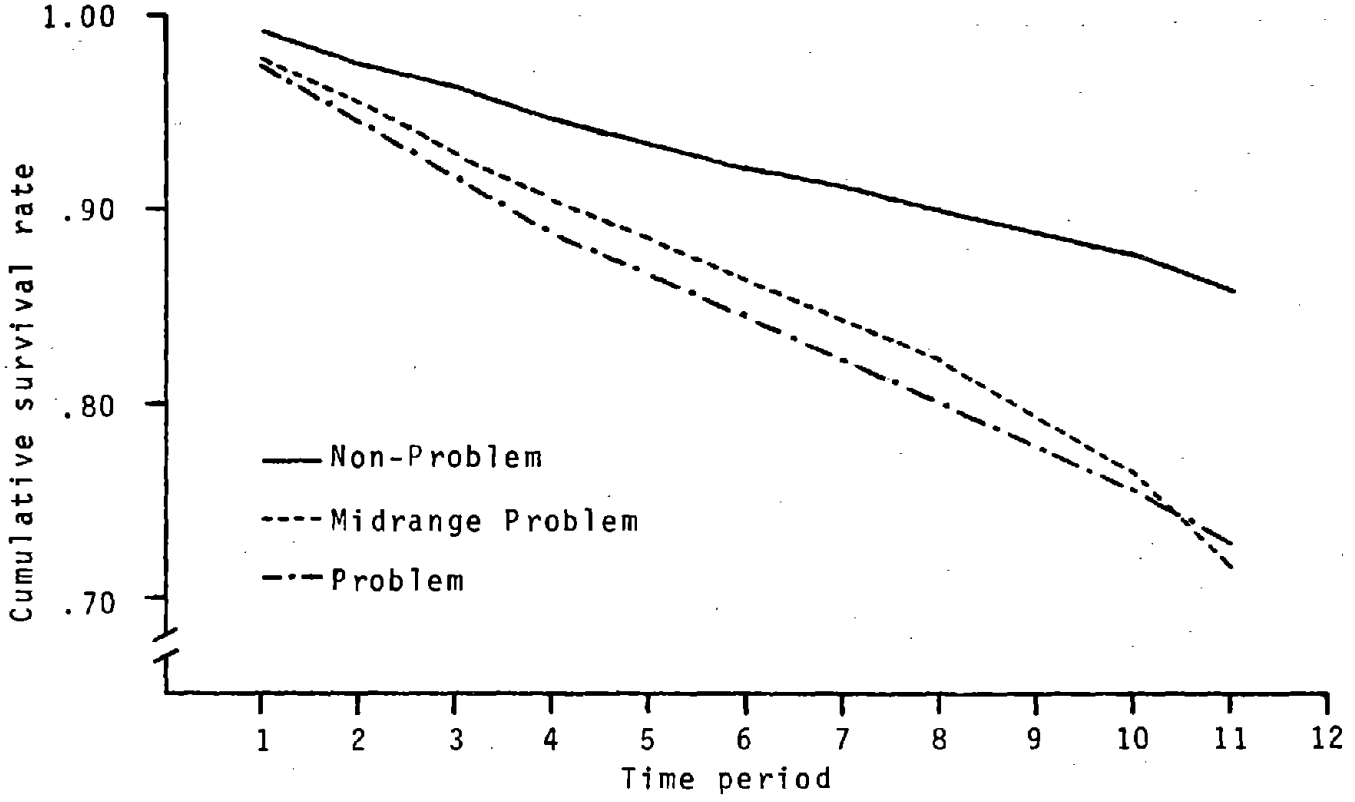

FIGURE 14. ACROSS DIAGNOSES SURVIVAL PLOT.

TABLE 57. SUMMARY OF t TEST RESULTS

Test	t	df	Estimated ω^2
PARTIALLY SUBJECTIVE DIAGNOSIS:			
Non-Problem Drinkers vs. Midrange Problem Drinkers	10.328*	757	.122
Midrange Problem Drinkers vs. Problem Drinkers	-.073	753	
Non-Problem Drinkers vs. Problem Drinkers	11.105*	760	.138
SUBJECTIVE DIAGNOSIS:			
Non-Problem Drinkers vs. Midrange Problem Drinkers	.653	106	
Midrange Problem Drinkers vs. Problem Drinkers	3.052*	193	.041
Non-Problem Drinkers vs. Problem Drinkers	4.534*	141	.120
NHTSA DIAGNOSIS:			
Non-Problem Drinkers vs. Problem Drinkers	5.686*	123	.200
ALL DIAGNOSES:			
Non-Problem Drinkers vs. Midrange Problem Drinkers	10.756*	921	.110
Midrange Problem Drinkers vs. Problem Drinkers	-.834	1070	
Non-Problem Drinkers vs Problem Drinkers	12.963*	1091	.133

*p < .002 (two-tailed)

TABLE 58. SITE RECIDIVISM RATES

Site	Drinker Class	No. Recidivists	No. Non-Recidivists	Recidivist %	χ^2	df
FAIRFAX CO.					122.973*	2
	Non-Problem Drinkers	109	2075	5.0		
	Midrange Problem Drinkers	116	1811	6.0		
	Problem Drinkers	419	2868	12.7		
NEW HAMPSHIRE					.872	1
	Non-Problem Drinkers	73	1172	5.9		
	Problem Drinkers	117	1608	6.8		
SOUTH DAKOTA					115.60*	2
	Non-Problem Drinkers	266	1442	15.6		
	Midrange Problem Drinkers	599	1990	23.1		
	Problem Drinkers	575	1292	30.8		
WICHITA					19.100*	1
	Non-Problem Drinkers	40	382	9.5		
	Problem Drinkers	164	691	19.2		
SAN ANTONIO					18.490*	1
	Non-Problem Drinkers	84	833	9.2		
	Problem Drinkers	228	1261	15.3		
OKLAHOMA CITY					16.216*	2
	Non-Problem Drinkers	34	343	9.0		
	Midrange Problem Drinkers	81	633	11.3		
	Problem Drinkers	268	1437	15.7		

*$p < .001$

From Table 58 it can be seen that South Dakota has a much higher recidivism rate for each drinker classification than New Hampshire and Fairfax County. This high recidivism rate is accounted for by the fact that rearrests as late as May, 1976, are included in the South Dakota client file. Therefore, more South Dakota clients are eligible for recidivism for a longer period of time. Whereas, only those clients from Fairfax County and New Hampshire who recidivated prior to 1975 are included in the file as recidivists, their respective recidivism rates would be expected to be lower than the recidivism rates for South Dakota. One would expect that the recidivist rate for South Dakota would be a more accurate representation of actual recidivism given that each client is eligible for recidivism for three full years. Therefore, the discrepancy between the survival rates for midrange problem drinkers and problem drinkers for the partially subjective mechanism appears to be an artifact of the data.

The lack of a difference in survival rates for non-problem drinkers and midrange problem drinkers for the subjective mechanism cannot be explained as an artifact since data for the subjective mechanisms analysis is from only one site. It can be surmised that the lack of discrimination between non-problem and midrange problem drinkers through subjective diagnosis by the Oklahoma City project is due to one of two possibilities. The first possibility is that the Oklahoma City rehabilitation program has differential affects on the clients with respect to their drinking problem severity, thereby causing the midrange problem drinkers to actually recidivate at a lower than expected rate. The second possibility is that diagnostic procedures used by the site are unable to differentiate between midrange problem drinkers and non-problem drinkers.

Although, as was mentioned previously, the reporting of recidivism rates in terms of raw proportions can mask some information, it is beneficial to observe these proportions in order to gain insight into recidivist activity on a by-project basis. Table 58 is a summary of these proportions for the sites with χ^2 statistics reported for each site. It is of interest to note that all tabulations, with the exception of New Hampshire, have significant χ^2 statistics ($p < .001$). This is indicative of differences in recidivism rates between drinker classifications when each site is considered individually. It is apparent from Table 58 that, with the one exception noted above, all sites do have

increasing rates of recidivism for increased severity of drinking problems, as diagnosed by the individual sites.

The non-significant difference in recidivism rates for New Hampshire cannot be defined precisely, but several explanations do exist. If the rehabilitation program employed by the site is indeed effective, then a decrease in recidivism rates for problem drinkers would be expected. The overall low level of recidivism rates for this site could be indicative of a low level of enforcement activity. This low level of enforcement would cause a low level of initial arrests as well as a low level of recidivist arrests. The third possibility is that the diagnosis method employed (partially subjective) cannot adequately discriminate between non-problem and problem drinkers. A likely explanation is that the problem drinker population is underrepresented in the ASAP population since individuals with prior alcohol related offenses are not processed by ASAP (see Appendix A, Volume I for detailed description of diagnosis mechanisms). Therefore, the ASAP population under investigation is not completely representative of the entire alcohol related arrest population, since the number of problem drinkers is limited by the fact that multiple alcohol related offenders are not even considered for diagnosis.

The investigation of recidivism (or survival) rates for the determination of the validity of diagnosis mechanisms is not a technique without fault. Since the whole ASAP process, from arrest through rehabilitation, is a complex system involving law enforcement personnel, the judiciary, the probation system, diagnosticians, and rehabilitation experts, the success or failure of a client, in terms of whether or not that client recidivates, is influenced by input from many sources. One of the most important subsystems to consider when comparing recidivism rates for drinker classifications and drinker diagnoses is the rehabilitation subsystem. A diverse range of treatment effects can confound interpretation of the survival rate analysis results. The investigation of treatment effectiveness is reported on in greater detail in Volume III of this report; however, some speculation concerning the consequences resultant from diagnosis/rehabilitation interactive effects on survival rate analysis is appropriate here.

Under ideal conditions, the investigation of diagnosis mechanism validity should be undertaken utilizing data based on ASAP clients who have not been exposed

to treatment.* It would be expected, under these ideal conditions, that significant differences between recidivism rates for each drinker classification would be found given a valid diagnostic procedure. Both statistical significance and practical significance would be anticipated. For confounded conditions, i.e., total or partial treatment effectiveness, several possible outcomes exist. Effective treatment would have the effect of substantially reducing drinking/driving behavior of all drinker types and low recidivism rates for all drinker classes would be expected. In addition to low recidivism rates across drinker classes, one would expect non-statistically significant different rates between drinker classes (see the above discussion of recidivism rates for the New Hampshire project).

Differentially effective treatments can also cause special problems in the interpretation of recidivism rates. If, for example, rehabilitation efforts reduced recidivism rates for problem drinkers and not for midrange problem drinkers, the recidivism comparison between these two classes would probably yield non-significant results. However, the likelihood remains that the recidivism rates for both midrange problem and problem drinkers would be significantly different from the recidivism rate for the non-problem drinkers. Negative treatment effect on midrange problem drinkers would also serve to narrow the recidivism rate differences between midrange problem and problem drinkers. In either instance described above, recidivism analysis results would probably appear on the surface to be highly similar.

Despite the limitations occurring in this type of analysis (and in light of the rehabilitation effectiveness results presented in Volume III of this report), useful results can be obtained and, with caution, interpreted. First of all, it appears that, for the purpose of discriminating non-problem and problem drinkers, all projects, with the exception of New Hampshire, have valid diagnostic mechanisms. It can also be said that diagnostic mechanisms based on NHTSA criteria seem to be the most effective mechanisms for this purpose. The categorization of persons into three drinker classifications appears

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*It should be noted that the quality and quantity of the data available to investigate validity under the ideal conditions were inhibitive to the actual accomplishment of the investigation.

to be less effective than two classification mechanisms since two of the three category systems could not adequately separate midrange problem drinkers from non-problem and problem drinkers. The one notable exception was the South Dakota project.

STANDARDIZED DIAGNOSTIC TESTS

The present section addresses the use of standardized diagnostic tests by the ASAP sites, provides a description of development of those most commonly employed, and presents several analyses based on the master client file, related to the efficacy of some of the tests designed for use in drinker diagnosis procedures. It was determined that the inclusion of the present section in this volume was important for several reasons. First, the drinker classification criteria provided by the NHTSA include diagnosis as a Problem Drinker on the basis of a standardized diagnostic test as one criterion for the identification of Problem Drinkers. (See Exhibit A presented in a previous section of this volume.) Possibly as a result of this criterion, all but six of the thirty-five sites did make use of some form of diagnostic test. Personal communication with diagnostic personnel at several sites, however, made it apparent that many diagnosticians were unaware of the development (or lack of development) associated with particular diagnostic instruments. Finally, very few of the annual analytic studies concerning diagnosis and referral at individual sites contained any analyses pertaining to the efficacy of the test or tests employed by the sites.

USE OF STANDARDIZED DIAGNOSTIC TESTS

This subsection essentially provides a summary of the use of diagnostic instruments by each of the thirty-five ASAP sites. The following subsection describes those tests identified as part of diagnostic subsystems in this section.

The use of six standardized tests is shown on a site by site basis in Table 59. It is readily apparent from the table that only the Mortimer-Filkins Questionnaire and Interview are used by more than a few ASAPs. A variety of instruments were classified in the "other" category.

In addition to the MAST, the Boston site made use of Cahalan's Quantity/Frequency Index. The New York project employed a modified (shortened) version of the MAST, a vocabulary test and the Gordon Personal Profile. In addition to the Mortimer-Filkins questionnaire and interview, the Lincoln project utilized the Western Personality Inventory in their diagnostic procedure. The Denver

TABLE 59. USE OF STANDARDIZED DIAGNOSTIC TESTS.

REGION	PROJECT CODE	ASAP SITE	Mortimer/Filkins Questionnaire	Mortimer/Filkins Interview	MAST	ALCADD	"Johns Hopkins" Questions	NCA Questions	Other	None
I	2	Boston, MA			X				X	
	2	Maine	X	X						
	3	New Hampshire	X							
	1	Vermont	X	X						
II	1	Nassau Co., NY			X				X	
	4	Puerto Rico								X
III	2	Baltimore, MD	X							
	4	Delaware	X	X						
	3	Fairfax Co., VA								X
IV	1	Charlotte, NC	X	X						
	2	Columbus, GA								X
	2	Richland Co., SC	X	X						
	3	Tampa, FL	X	X						
V	2	Cincinnati, OH	X	X						
	3	Hennepin Co., MN								X
	2	Indianapolis, IN	X	X						
	1	Washtenaw Co., MI								X
	1	Wisconsin								X
VI	1	Albuquerque, NM	X	X						
	3	New Orleans, LA	X	X			X	X		
	3	Oklahoma City, OK	X	X		X				
	2	Pulaski Co., AR							X	
	3	San Antonio, TX	X	X	X					
VII	3	Kansas City, MO	X							
	2	Lincoln, NE	X	X					X	
	4	Sioux City, IA	X	X						
	2	Wichita, KS	X	X						
VIII	1	Denver, CO							X	
	4	Salt Lake City, UT	X	X						
	3	South Dakota	X	X						
IX	4	Los Angeles, CA	X	X						
	3	Phoenix, AR							X	
X	4	Idaho				X				
	1	Portland, OR			X				X	
	1	Seattle, WA							X	
ASAP/NIAAA AC Clients			X	X	X		X	X		

PROJECT CODE: 1 = First Nine Sites; 2 = Second Twenty Sites Not Extended; 3 = Second Twenty Sites Extended; 4 = Last Six Sites

project made use of a site developed diagnostic instrument constructed from selected items on the Mortimer-Filkins questionnaire and interview, the MAST, and the Minnesota Multiphasic Personality Inventory (MMPI). The Phoenix project, like the Denver project, made use of a site developed questionnaire. The Portland, Oregon project employed the MAST for initial Problem Drinker screening. Suspected Problem Drinkers were referred for in-depth diagnosis which included the MMPI, the Jackson Personality Research Form, the California F Scale, and other tests developed by the site. The Washington project employed the Jackson Personality Research Form at some point in their diagnostic procedure.

The frequency with which the diagnostic instruments shown in Table 59 are employed in diagnostic procedures is shown graphically in Figure 15.

HISTORY AND DEVELOPMENT OF STANDARDIZED DIAGNOSTIC INSTRUMENTS

Mortimer-Filkins Questionnaire and Interview

The Mortimer-Filkins questionnaire and interview is a two part protocol containing a 58 item self administered questionnaire and a 58 item instrument designed to be administered in an interview setting. Although the authors of the protocol suggest that the instruments be used together, some ASAP sites have employed the questionnaire alone as indicated in Table 59. The questionnaire and interview each result in a numerical score which can be translated into a drinker classification: Non-Problem Drinker, Possible Problem Drinker, and Problem Drinker. Criteria are also available which allow for translation of the total questionnaire and interview score into the same three drinker classifications.

The protocol has been subject to far more developmental research than any of the other tests described in the present subsection.[19,20,21,22,23] High reliability

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[19]Mortimer, Filkins, Lower, Kerlan, Post, Mudge, and Rosenblatt, op. cit., p. 21.

[20]Mortimer, Filkins, and Lower, op. cit., p. 21.

[21]Kerlan, Mortimer, Mudge, and Filkins, op. cit., p. 21.

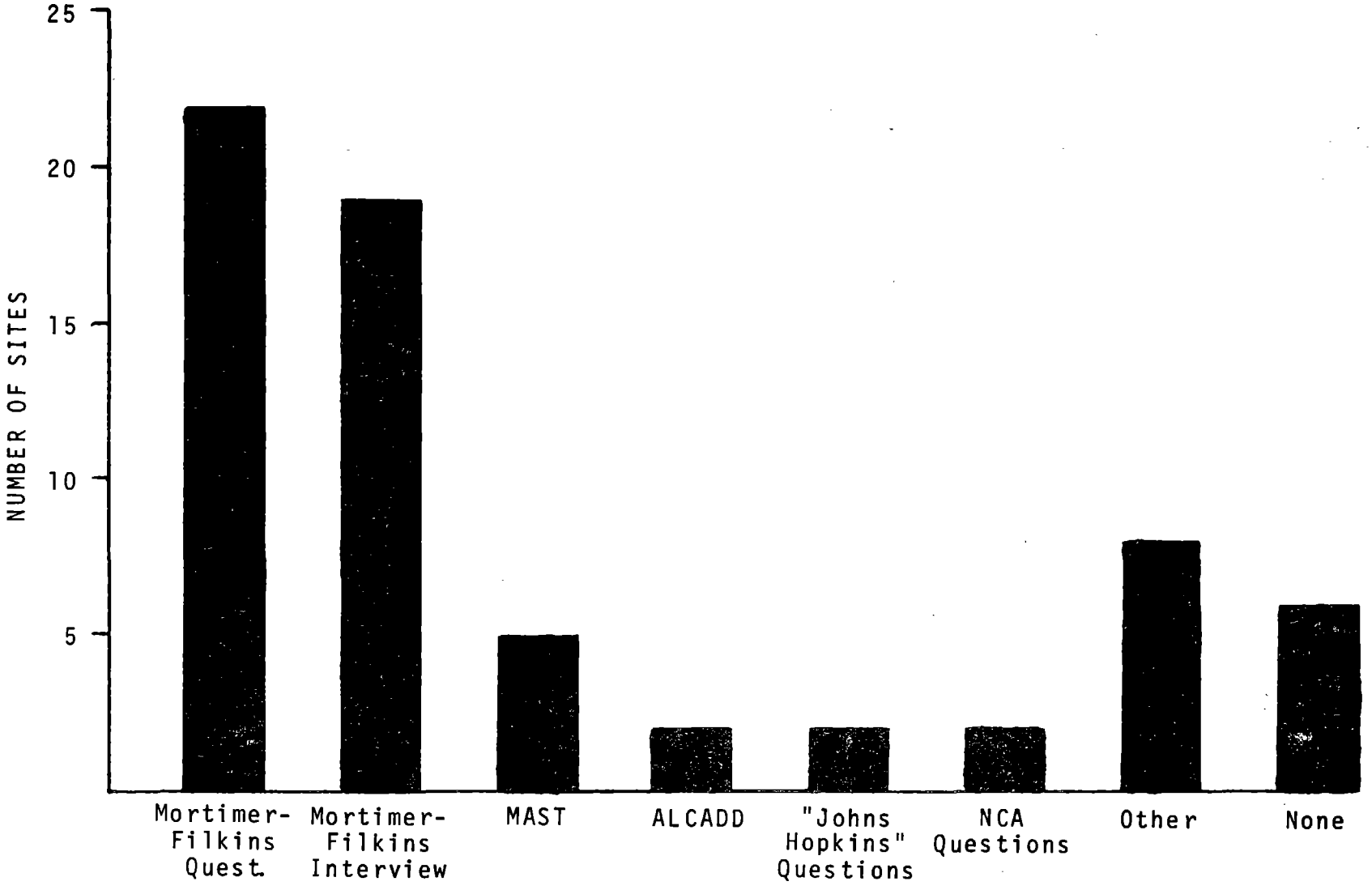

FIGURE 15. USE OF STANDARDIZED DIAGNOSTIC TESTS.

coefficients for both split-half and equivalent forms analyses were found. Analyses showed adequate discrimination between a normal population and "problem" drinkers drawn from alcohol rehabilitation agencies. A validation study employing a criterion variable based on arrest BAC, prior DWIs, and prior other alcohol related offenses was effected. The results of the analysis indicated reasonable agreement between the criteria and protocol, but suggested that the original criteria provided for translation of the instrument scores to drinker classifications were such that individuals were being underclassified, i.e., the severity of their drinking problems were being underestimated. Revised criteria designed to reduce the number of Non-Problem Drinkers were recommended by the authors. Analysis in a later portion of the present section are addressed to comparing the original and revised criteria for generation of drinker classifications based on instrument scores. The Mortimer-Filkins Questionnaire and Interview are reproduced in Appendix C.

Michigan Alcoholism Screening Test (MAST)

The MAST is a 25 item[24] or 24 item[25] interview protocol* which results in two drinker classifications: Non-Problem and Problem (or Non-Alcoholic and Alcoholic). The authors of the MAST indicate the terms Problem Drinker and Alcoholic are used synonymously in the text of reports concerning the instrument development. Concurrent validation studies reported that the MAST was able to adequately identify Problem Drinkers from known Problem Drinker

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[22]Mudge, Kerlan, Post, Mortimer, and Filkins, op. cit., p. 21.

[23]Filkins, Mortimer, Post, and Chapman, op. cit., p. 21.

[24]Selzer, M. L., The Michigan Alcoholism Screening Test: The Quest for a New Diagnostic Instrument. American Journal of Psychiatry, 127: 89-94, June, 1971.

[25]Selzer, M. L., Vanosdall, F. E., and Chapman, M. Alcoholism in a Problem Driver Group: A Field Trial of the Michigan Alcoholism Screening Test (MAST). Journal of Safety Research, 3: 176-181, December, 1971.

*The difference between the 25 item and 24 item protocols is the omission in the 24 question version of a non-scored item present in the 25 question version.

populations. Information concerning the numbers of Non-Problem drinkers incorrectly identified as Problem Drinkers has apparently not been reported in the literature, however. This reporting omission leaves some question concerning the validation studies. A shortened version of the MAST was published in 1972.[26] This "Brief MAST" was not a development of the MAST's original author and was validated only by comparison to the original MAST scores for a group of 122 persons completing both inventories. The results of the comparison indicated generally good agreement between the two tests. Data concerning the reliability of either MAST have not been reported. The original and the Brief MAST are reproduced in Appendix C.

ALCADD

The ALCADD is a 65 item self administered questionnaire published by Western Psychological Services, Beverly Hills, California. The test results in a Non-Problem Drinker or Alcoholic classification in addition to five scale scores: regularity of drinking, preference for drinking over other activities, lack of controlled drinking, rationalization of drinking and excessive emotionality. The split-half reliability coefficient reported for the instrument is 0.92. The test was validated by comparison of scores for a population diagnosed as Alcoholic, a group of "Social Drinkers" and a group of abstainers. Results of the analysis indicated that Alcoholics could be correctly diagnosed without a significant number of "Social Drinkers" or abstainers incorrectly identified as Problem Drinkers. Personal communication with Western Psychological Services indicated that there is no research concerning the ALCADD available in the open press. The ALCADD is reproduced in Appendix C.

"Johns Hopkins" Questions

An involved series of personal communications with personnel of the Johns Hopkins Hospital Alcohol Treatment Program, the Rutgers University Center for Studies on Alcohol Library, and the National Council on Alcoholism, among others, resulted in the acquisition of some unexpected information concerning the origin of the "Johns

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[26]Pokorny, A. D., Miller, B. A., and Kaplan, H. B. The brief MAST: A shortened version of the Michigan Alcoholism Screening Test. American Journal of Psychiatry, 129: 118-121, September, 1972.

Hopkins" questions. In the December, 1939 issue of a magazine entitled Your Life, an article appeared by Robert V. Seliger, M.D. under the title "Do You Dare Take This Liquor Test?" Contained in the article were 35 yes or no type questions. (These 35 questions are reproduced in Appendix C.) Although the Johns Hopkins Complex was not involved in the development of the questions, they came to be known, over a period of time, as the John Hopkins Questions, apparently to the dismay of at least some individuals associated with Johns Hopkins. The same 35 questions were reprinted in a 1945 publication by Seliger titled "Alcoholics Are Sick People." The August 26, 1955 issue of U.S. News and World Report contained an article titled "What You Should Know About Drinking." In this article, 20 questions, similar to some of those in the original 35, were attributed to Seliger. These 20 questions are reproduced in Appendix C. A further revision of the 20 questions is apparently what is currently referred to most frequently as the "Johns Hopkins" Questions. These questions are also reproduced in Appendix C.

More significant to the present volume than the history of the questions is, however, the application of the questions. Persons contacted at both the Johns Hopkins Hospital Alcohol Treatment Program and the National Council on Alcoholism indicated that the questions were at best useful as a self diagnostic aid and certainly not designed as a screening device for problem drinking or alcoholism. It was also suggested that the criteria for defining alcoholism (three or more yes responses) resulted in a significant overclassification relative to true drinking problems.

National Council on Alcoholism (NCA) Questions

The NCA questions (reproduced in Appendix C) were created, to some extent, in reaction to overclassification relative to true drinking problems believed to exist in the "Johns Hopkins" questions. The 26 NCA questions were originally part of an industrial alcoholism pamphlet published by the NCA. They currently are printed by the NCA in a pamphlet entitled, "What Are the Signs of Alcoholism?" A yes answer to questions 1 through 8 indicates early stages of alcoholism, a yes response to questions 9 through 21 indicates middle stages of alcoholism, and a yes response to any of the last 5 questions indicates the beginning of the final stage of alcoholism. NCA personnel indicated emphatically that the 26 questions were not designed as an alcoholism screening test, but rather as an aid to self diagnosis. The NCA questions are apparently most commonly used currently as a device by which an individual may determine whether or not AA attendance is

appropriate. An individual is given the questions at his (her) first AA meeting and told to use his (her) answers to the questions as a guide in determining whether continued attendance would be beneficial.

CLIENT FILE ANALYSES OF STANDARDIZED DIAGNOSTIC TESTS

The amount of developmental research associated with the tests described in the previous subsection ranged from almost non-existent to extensive. Even the test subject to the most extensive developmental analysis (the Mortimer-Filkins Questionnaire and Interview) has not been subject to a predictive validity analysis. Since the immediate objective of ASAP rehabilitation is the reduction of drinking driving behavior, a diagnostic test must identify those individuals who will continue to drink and drive without the intervention of a rehabilitation. It is the degree to which a test can identify individuals in need of intervention that defines the predictive validity of the instrument. Since rearrest for an alcohol-related traffic offense is the only available measure of the frequency of drinking driving behavior, the measure of predictive validity is rearrest for an alcohol-related traffic offense. In order for a test to be predictively valid, then, it must be able to identify those individuals most likely to recidivate. The present subsection contains predictive validity analyses of the Mortimer-Filkins Questionnaire and Interview total score drinker classification and of the Mortimer-Filkins Questionnaire score drinker classification. Because data were not available for predictive validity analyses of any other diagnostic tests, the drinker classifications resulting from other tests were compared to Mortimer-Filkins drinker classifications.

Mortimer-Filkins Total Score Drinker Classification

Shown in Table 60 is the comparison of recidivism rates between drinker classifications based on Mortimer-Filkins Questionnaire and Interview total score according to original criteria. The χ^2 test indicates significant differences in the distributions of drinker classifications between recidivism status categories. While 13.5% of Non-Problem Drinkers are recidivists, 15.3% of Possible Problem Drinkers are recidivists and 22.9% of Problem Drinkers are recidivists. These results would appear to clearly indicate that the Mortimer-Filkins total score drinker classifications according to original criteria is predictive of recidivism. The discussion of the confounding effects of rehabilitation effectiveness presented in the section of this volume dealing with the validity of diagnosis,

TABLE 60. MORTIMER-FILKINS TOTAL SCORE DRINKER CLASSIFICATION - ORIGINAL CRITERIA BY RECIDIVIST STATUS

Mortimer-Filkins Total Score Drinker Classification - Original Criteria	Recidivist Status		Row Totals and Percent of Total
	Recidivist	Non-Recidivist	
Non-Problem	488 13.5 26.6	3125 86.5 39.1	3613 36.8
Possible Problem	163 15.3 8.9	906 84.7 11.4	1069 10.9
Problem	1181 22.9 64.5	3957 77.0 49.5	5138 52.3
Column Totals Percent of Total	1832 18.7	7988 81.3	9820

$\chi^2 = 134.775$, df = 2, $p < .001$

Cell contents are: frequency
row percent
column percent

Data from: San Antonio
South Dakota

however, also applies here. Again, the differences in recidivism rates presented in Table 60 may be due not only to differences in the severity of the drinking problems in the diagnostic categories but also to the effects of rehabilitation. Despite this caution, the differences in recidivism rates between drinker categories appear large enough to infer, somewhat cautiously, that the Mortimer-Filkins total score drinker classification is predictively valid.

Shown in Table 61 is an analysis identical to that presented in Table 60 except that the Mortimer-Filkins total score drinker classifications are based on the revised criteria. Again, differences in recidivism are statistically significant. The recidivism rates for Non-Problem and Problem Drinkers are slightly lower for the revised criteria and the recidivism rate for Possible Problem Drinkers is slightly higher for the revised criteria than for the original criteria. The differences in recidivism rates between drinker classification for the original and the revised criteria are probably not practically significant, however.

The crosstabulation of site drinker classification and Mortimer-Filkins total score drinker according to original criteria are shown for purposes of comparison in Table 62. A high degree of correspondence between the Mortimer-Filkins classification and the site classification is apparent for the Non-Problem categories and the Problem categories. Only 15% of those classified as Midrange Problem Drinkers according to site diagnosis are classified as Possible Problem Drinkers by the Mortimer-Filkins criteria. This result probably reflects the fact that Midrange Problem Drinkers represent 32.3% of all drinker types in site classifications, while Possible Problem Drinkers represent only 10.9% of all drinker types in the Mortimer-Filkins classification.

Shown in Table 63 is the crosstabulation of site drinker classification and Mortimer-Filkins total score drinker classification according to the revised criteria. The correspondence between Non-Problem classifications is somewhat less for the revised criteria than for the original criteria. This reduction may reflect a lack of correspondence between site drinker classifications based heavily on the original criteria* and a Mortimer-Filkins classification

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*New criteria were not available until after the majority of site diagnoses reflected in the table were made.

TABLE 61. MORTIMER-FILKINS TOTAL SCORE DRINKER CLASSIFICATION - REVISED CRITERIA BY RECIDIVIST STATUS

Mortimer-Filkins Total Score Drinker Classification - Revised Criteria	Recidivist Status		Row Totals and Percent of Total
	Recidivist	Non-Recidivist	
Non-Problem	309 12.1 16.8	2255 87.9 28.2	2564 26.1
Possible Problem	179 17.1 9.8	870 82.9 10.9	1049 10.7
Problem	1344 21.7 73.4	4863 78.3 60.9	6207 63.2
Column Totals Percent of Total	1832 18.7	7988 81.3	9820

$\chi^2 = 112.188$, df = 2, $p < .001$

Cell contents are: frequency
row percent
column percent

Data from: San Antonio
South Dakota

TABLE 62. SITE DRINKER CLASSIFICATION BY MORTIMER-FILKINS TOTAL SCORE DRINKER CLASSIFICATION - ORIGINAL CRITERIA

Site Drinker Classification	Mortimer-Filkins Total Score Drinker Classification - Original Criteria			Row Totals and Percent of Total
	Non-Problem	Possible Problem	Problem	
Non-Problem	3564 81.4 58.5	408 9.3 25.7	404 9.2 5.9	4376 30.1
Midrange Problem	1770 37.6 29.0	724 15.4 45.5	2209 47.0 32.2	4703 32.3
Problem	763 13.9 12.5	458 8.4 28.9	4256 77.7 62.0	5477 37.6
Column Totals Percent of Total	6097 41.9	1590 10.9	6869 47.2	14,556

Cell contents are: frequency
row percent
column percent

Data from: New Orleans
NIAAA/ASAP Alcohol Centers
San Antonio
South Dakota

TABLE 63. SITE DRINKER CLASSIFICATION BY MORTIMER-FILKINS TOTAL SCORE DRINKER CLASSIFICATION - REVISED CRITERIA

Site Drinker Classification	Mortimer-Filkins Total Score Drinker Classification - Revised Criteria			Row Totals and Percent of Total
	Non-Problem	Possible Problem	Problem	
Non-Problem	2916 66.6 65.9	648 14.8 38.7	812 18.6 9.6	4376 30.1
Midrange Problem	1088 23.1 24.6	682 14.5 40.7	2933 62.4 34.7	4703 32.3
Problem	419 7.2 9.5	344 6.3 20.5	4714 86.1 55.7	5477 37.6
Column Totals Percent of Total	4423 30.4	1674 11.5	8459 58.1	14,556

Cell contents are: frequency
row percent
column percent

Data from: New Orleans
NIAAA/ASAP Alcohol Centers
San Antonio
South Dakota

based on revised criteria. There is a greater correspondence between site and Mortimer-Filkins Problem Drinker classifications apparent for the revised criteria than was present for the original criteria. This may reflect site Problem Drinker diagnosis based on Mortimer-Filkins original classification criteria and additional information such as high arrest BAC which more closely corresponds to diagnosis based on total score-new criteria alone.

Mortimer-Filkins Questionnaire Score Drinker Classification

Because several sites employ the Mortimer-Filkins Questionnaire drinker classification alone, it was deemed appropriate that analyses conducted for Mortimer-Filkins total score drinker classification should also be conducted for the questionnaire classification alone. Shown in Table 64 is the comparison of recidivism rates between drinker classifications based on the Mortimer-Filkins Questionnaire classification employing original criteria. It is first apparent that the recidivism rates for all drinker classifications are higher than those shown in the analyses of total score classification. This difference may be explained in terms of the sites contributing data to the analyses. With the exception of South Dakota, those sites contributing data to the analyses are different. Differential probabilities of rearrest between sites contributing data to the analyses are a probable explanation of the discrepancies in total rearrest rates. Total rearrest rate, however, does not inhibit the interpretation of the analysis presented in Table 64. It is the relative recidivism rates of the questionnaire drinker classifications that is relevant. Although the χ^2 test indicates that differences in recidivism rates between drinker classifications are statistically significant, it may be seen that the recidivism rates for Non-Problem Drinkers and Problem Drinkers, according to questionnaire classification based on original criteria, are different by less than five percent. This result seems to indicate that the Mortimer-Filkins questionnaire drinker classification based on original criteria lacks predictive validity, and certainly indicates that the predictive validity of questionnaire drinker classification based on original criteria possesses less predictive validity than classification based on total score.

The results of the crosstabulation of Mortimer-Filkins questionnaire drinker classification based on revised criteria and recidivist status is shown in Table 65. It may be seen that the results are almost identical to the results for original criteria classification shown in the previous table. The results here suggest the

TABLE 64. MORTIMER-FILKINS QUESTIONNAIRE DRINKER CLASSIFICATION - ORIGINAL CRITERIA BY RECIDIVIST STATUS

Mortimer-Filkins Questionnaire Drinker Classification - Original Criteria	Recidivist Status		Row Totals and Percent of Total
	Recidivist	Non-Recidivist	
Non-Problem	2075 24.9 56.0	6277 75.1 61.0	8352 59.7
Possible Problem	1016 28.4 27.5	2559 71.6 24.9	3575 25.6
Problem	611 29.7 16.5	1447 70.3 14.0	2058 14.7
Column Totals Percent of Total	3702 26.5	10,283 73.5	13,985

$\chi^2 = 29.277$, df = 2, $p < .001$

Cell contents are: frequency
row percent
column percent

Data from: New Hampshire
South Dakota
Utah

TABLE 65. MORTIMER-FILKINS QUESTIONNAIRE DRINKER CLASSIFICATION - REVISED CRITERIA BY RECIDIVIST STATUS

Mortimer-Filkins Questionnaire Drinker Classification - Revised Criteria	Recidivist Status		Row Totals and Percent of Total
	Recidivist	Non-Recidivist	
Non-Problem	1357 23.9 36.6	4318 76.1 42.0	5675 40.6
Possible Problem	718 26.8 19.4	1959 73.2 19.1	2677 19.8
Problem	1627 28.9 43.9	4006 71.1 38.9	5633 40.3
Column Totals Percent of Total	3702 26.5	10,283 73.5	13,985

$\chi^2 = 36.105$, df = 2, $p < .001$

Cell contents are: frequency
row percent
column percent

Data from: New Hampshire
South Dakota
Utah

same conclusions as the previous analysis.

Because of the discrepancies in the predictive validity of the total score drinker classification and the questionnaire score drinker classification, it was deemed appropriate to crosstabulate questionnaire score and total score classifications. It was expected that this tabulation would be useful in the explanation of these results.

The crosstabulation of questionnaire score drinker classification and total score drinker classification for original and revised criteria are shown in Table 66 and 67 respectively. It is readily apparent that the correspondence between Non-Problem categories is relatively low in both tables. A significant proportion of those persons identified as Problem Drinkers on the basis of total scores are identified as Non-Problem Drinkers on the basis of questionnaire only scores. It would appear that the questionnaire score alone tends to classify a greater proportion of individuals who eventually recidivate as Non-Problem Drinkers than does the total score.

The crosstabulations of site drinker classification and Mortimer-Filkins Questionnaire drinker classifications based on original and revised criteria are shown in Tables 68 and 69 respectively. It may be seen in both tables that the questionnaire score tends to underclassify with respect to site drinker classification. This may reflect an awareness on the part of sites contributing data to the tables that the questionnaire score classification somewhat underestimates the severity of an individual's drinking problem in some cases and/or a diagnosis based heavily on Mortimer-Filkins <u>total</u> score.

<u>MAST</u>

Only 805 individuals in the entire master client file had scores for the MAST. All of these individuals were clients of the NIAAA/ASAP Alcohol Centers. None of the 805 individuals with MAST scores also had scores for the Mortimer-Filkins Questionnaire or Interview. As a result, the only data with which MAST scores could be compared was site drinker classification. The crosstabulation of site drinker classification and MAST drinker classification is shown in Table 70. A severe under-classification with respect to site drinker classification is apparent for the MAST classification. Of those classified as Non-Problem Drinkers by the MAST, 91.0% were classified as Problem Drinkers by site drinker classifications. This result casts some doubt on the MAST as a useful screening device in view of the apparent validity of site drinker diagnosis procedures described

TABLE 66. MORTIMER-FILKINS QUESTIONNAIRE DRINKER CLASSIFICATION - ORIGINAL CRITERIA BY MORTIMER-FILKINS TOTAL SCORE DRINKER CLASSIFICATION - ORIGINAL CRITERIA

Mortimer-Filkins Questionnaire Drinker Classification - Original Criteria	Mortimer-Filkins Total Score Drinker Classification - Original Criteria			Row Totals and Percent of Total
	Non-Problem	Possible Problem	Problem	
Non-Problem	4736 59.5 87.4	905 11.4 69.7	2313 29.1 41.4	7954 64.6
Possible Problem	632 23.2 11.7	340 12.5 26.2	1758 64.4 31.4	2730 22.2
Problem	50 3.1 0.9	54 3.3 4.2	1521 93.6 27.2	1625 13.2
Column Totals Percent of Total	5418 44.0	1299 10.6	5592 45.4	12,309

Cell contents are: frequency
row percent
column percent

Data from: New Orleans
South Dakota

TABLE 67. MORTIMER-FILKINS QUESTIONNAIRE DRINKER CLASSIFICATION - REVISED CRITERIA BY MORTIMER-FILKINS TOTAL SCORE DRINKER CLASSIFICATION - REVISED CRITERIA

Mortimer-Filkins Questionnaire Drinker Classification - Revised Criteria	Mortimer-Filkins Total Score Drinker Classification - Revised Criteria			Row Totals and Percent of Total
	Non-Problem	Possible Problem	Problem	
Non-Problem	2964 51.5 73.9	665 11.6 47.3	2123 36.9 30.8	5752 46.7
Possible Problem	754 34.2 18.8	353 16.0 25.1	1095 49.7 15.9	2202 17.9
Problem	295 6.8 7.4	387 8.9 27.5	3673 84.3 53.3	4355 35.4
Column Totals Percent of Total	4013 32.6	1405 11.4	6891 56.0	12,309

Cell contents are: frequency
row percent
column percent

Data from: New Orleans
South Dakota

TABLE 68. SITE DRINKER CLASSIFICATION BY MORTIMER-FILKINS QUESTIONNAIRE DRINKER CLASSIFICATION - ORIGINAL CRITERIA

Site Drinker Classification	Mortimer-Filkins Questionnaire Drinker Classification - Original Criteria			Row Totals and Percent of Total
	Non-Problem	Possible Problem	Problem	
Non-Problem	5247 87.8 49.2	634 10.6 14.8	98 1.6 4.2	5979 34.5
Midrange Problem	3179 59.4 29.8	1542 28.8 35.9	629 11.8 26.7	5350 30.9
Problem	2234 37.3 21.0	2120 35.4 49.3	1633 27.2 69.2	5987 34.5
Column Totals Percent of Total	10,660 61.6	4296 24.8	2360 13.6	17,316

Cell contents are: frequency
row percent
column percent

Data from: New Hampshire
New Orleans
Salt Lake City
South Dakota

TABLE 69. SITE DRINKER CLASSIFICATION BY MORTIMER-FILKINS QUESTIONNAIRE DRINKER CLASSIFICATION - REVISED CRITERIA

Site Drinker Classification	Mortimer-Filkins Questionnaire Drinker Classification - Revised Criteria			Row Totals and Percent of Total
	Non-Problem	Possible Problem	Problem	
Non-Problem	3685 61.6 51.0	1562 26.1 45.5	732 12.2 11.0	5979 34.5
Midrange	2089 39.0 28.9	1090 20.4 31.8	2171 40.6 32.6	5350 31.0
Problem	1455 24.3 20.1	779 13.0 22.7	3753 62.7 56.4	5987 34.6
Column Totals Percent of Totals	7229 41.7	3431 19.8	6656 38.4	17,316

Cell contents are: frequency
row percent
column percent

Data from: New Hampshire
New Orleans
Salt Lake City
South Dakota

TABLE 70. SITE DRINKER CLASSIFICATION BY MICHIGAN ALCOHOLISM SCREENING TEST (MAST)

Site Drinker Classification	MAST Drinker Classification		Row Totals and Percent of Total
	Non-Problem	Problem (Alcoholic)	
Non-Problem Drinker	35 94.6 8.8	2 5.4 0.5	37 4.6
Midrange Problem Drinker	1 33.3 0.3	2 66.7 0.5	3 0.4
Problem Drinker	362 47.3 91.0	403 52.7 99.0	765 95.0
Column Totals Percent of Total	398 49.4	407 50.6	805

Cell contents are: frequency
row percent
column percent

Data from: NIAAA/ASAP Alcohol Centers

in the previous section of this volume. The analysis sample is, however, small.

"Johns Hopkins" Questions

Although the "Johns Hopkins" questions are not designed as a screening device, it was felt that the comparison of drinker classification resulting from the test to the Mortimer-Filkins drinker classification and site drinker classification would be of some use since the questions were being employed as a screening device for some clients. Shown in Tables 71 and 72 respectively are the cross-tabulations of the "Johns Hopkins" questions drinker classification with Mortimer-Filkins total score drinker classifications based on the original and the revised criteria. Although the correspondence between the "Johns Hopkins" questions diagnosis and the Mortimer-Filkins total score diagnosis is not outstanding, if one ignores category labels and simply views each test as having three nameless severity categories, it is surprisingly high given the nature of the "Johns Hopkins" questions.

The crosstabulation of site drinker classification and "Johns Hopkins" questions diagnosis is shown in Table 73. As was the case in the comparison with the Mortimer-Filkins total score classification, the correspondence between the site drinker classification and the "Johns Hopkins" questions drinker classification is better than expected if category labels are ignored. It would seem that perhaps some of the reaction to the "Johns Hopkins" questions as an instrument which results in over-classifying may be the result of the labels applied to the diagnostic categories rather than actual results.

National Council on Alcoholism Questions

Analyses concerning the NCA questions fall in the same category as those for the "Johns Hopkins" questions. Although the NCA questions are not designed as a screening device, analyses comparing them to the Mortimer-Filkins total score drinker classification and site drinker classification provide useful information because some sites did employ them as screening devices. While both New Orleans and NIAAA/ASAP Alcohol Center clients received the NCA questions, the data for NIAAA/ASAP clients was not usable because of recording errors in the data as received from Stanford Research Institute.

The crosstabulations of NCA questions drinker classification and Mortimer-Filkins total score drinker classification for original and revised criteria are shown in

TABLE 71. "JOHNS HOPKINS" QUESTIONS DRINKER CLASSIFICATION BY MORTIMER-FILKINS TOTAL SCORE DRINKER CLASSIFICATION - ORIGINAL CRITERIA

"Johns Hopkins" Questions Drinker Classification	Mortimer/Filkins Total Score Drinker Classification - Original Criteria			Row Totals and Percent of Total
	Non-Problem	Possible Problem	Problem	
Early Problem	1968 74.0 89.7	276 10.4 72.1	416 15.6 40.7	2660 73.9
Middle Problem	114 37.5 5.2	54 17.8 14.1	136 44.7 13.3	304 8.4
Late Problem	112 17.6 5.1	53 8.3 13.8	470 74.0 46.0	635 17.6
Column Totals Percent of Total	2194 61.0	383 10.6	1022 28.4	3599

Cell contents are: frequency
row percent
column percent

Data from: New Orleans
NIAAA/ASAP Alcohol Centers

TABLE 72. "JOHNS HOPKINS" QUESTIONS DRINKER DIAGNOSES BY MORTIMER-FILKINS TOTAL SCORE DRINKER CLASSIFICATION - REVISED CRITERIA

"Johns Hopkins" Questions Drinker Classification	Mortimer-Filkins Total Score Drinker Classification - Revised Criteria			Row Totals and Percent of Total
	Non-Problem	Possible Problem	Problem	
Early Problem	1554 58.0 91.7	414 15.6 83.0	692 26.0 49.3	2660 73.9
Middle Problem	75 24.7 4.4	39 12.8 7.8	190 62.5 13.5	304 8.4
Late Problem	66 10.4 3.9	46 72.4 9.2	523 82.4 37.2	635 17.6
Column Totals Percent of Total	1695 47.1	499 13.9	1405 39.0	3599

Cell contents are: frequency
row percent
column percent

Data from: New Orleans
NIAAA/ASAP Alcohol Centers

TABLE 73. SITE DRINKER CLASSIFICATION BY "JOHNS HOPKINS" QUESTIONS DRINKER CLASSIFICATION

Site Drinker Classification	"Johns Hopkins" Questions Drinker Classification			Row Totals and Percent of Total
	Early Problem	Middle Problem	Late Problem	
Non-Problem	1494 91.0 58.0	93 5.7 32.5	54 3.3 9.1	1641 47.5
Midrange Problem	583 71.0 22.6	89 10.8 31.1	149 18.1 25.1	821 23.8
Problem	499 50.2 19.4	104 10.5 36.4	391 39.3 65.8	994 28.8
Column Totals Percent of Total	2576 74.5	286 8.3	594 17.2	3456

Cell contents are: frequency
row percent
column percent

Data from: New Orleans
NIAAA/ASAP Alcohol Centers

Tables 74 and 75 respectively. As was the case for the "Johns Hopkins" questions, there is a reasonable correspondence between the NCA questions diagnosis and the Mortimer-Filkins total score diagnosis for both original and revised criteria if category labels are ignored. It seems possible that the NCA questions are more adequate as a screening mechanism than was indicated by NCA personnel. It is important to note, however, that the data presented in Tables 74 and 75 are obtained from only one site and as such may not be representative.

New Orleans site drinker classification and NCA questions drinker classification are compared in Table 76. The correspondence between drinker diagnoses shown here is not as great as in the previous two tables. Largest discrepancies occur in the Problem Drinker category. The NCA questions would appear to be underclassifying in this instance. It should be, again, remembered that only one site is represented.

CONCLUSIONS

Analyses conducted concerning the predictive validity of the Mortimer-Filkins Questionnaire and Interview total score drinker classification appear to indicate that the classification does indeed possess demonstrable predictive validity. The use of either the original or revised criteria for determining drinker classification seems to result in only minor differences in predictive validity. Analyses concerning the predictive validity of the Mortimer-Filkins Questionnaire drinker classification appear to suggest that drinker classification based on the questionnaire only has considerably less predictive validity than classification based on total score.

Although other diagnostic instruments (with the exception of the MAST) appear to correspond to some extent with Mortimer-Filkins total score diagnosis and site drinker classifications, the absence of data with which to conduct predictive validity analyses makes conclusions difficult.

In summary, data available at this time support only the use of the Mortimer-Filkins Interview and Questionnaire total score as a drinker classification criteria. Future analyses may, however, provide support for the use of other diagnostic instruments.

TABLE 74. NATIONAL COUNCIL ON ALCOHOLISM QUESTIONS DRINKER CLASSIFICATION BY MORTIMER-FILKINS TOTAL SCORE DRINKER CLASSIFICATION - ORIGINAL CRITERIA

National Council on Alcoholism Questions Drinker Classification	Mortimer/Filkins Total Score Drinker Classification - Original Criteria			Row Totals and Percent of Total
	Non-Problem	Possible Problem	Problem	
Early Problem	1340 81.6 62.4	140 8.5 39.2	163 9.9 18.4	1643 48.4
Middle Problem	719 53.9 33.5	179 13.4 50.1	436 32.7 49.2	1334 39.3
Late Problem	89 21.4 4.1	38 9.2 10.6	288 69.4 32.5	415 12.2
Column Totals Percent of Total	2148 63.3	357 10.5	887 26.1	3392

Cell contents are: frequency
row percent
column percent

Data from: New Orleans

TABLE 75. NATIONAL COUNCIL ON ALCOHOLISM DRINKER CLASSIFICATION BY MORTIMER-FILKINS TOTAL SCORE DRINKER CLASSIFICATION - REVISED CRITERIA

National Council on Alcoholism Questions Drinker Classification	Mortimer/Filkins Total Score Drinker Classification - Revised Criteria			Row Totals and Percent of Total
	Non-Problem	Possible Problem	Problem	
Early Problem	1114 67.8 66.5	226 13.8 47.7	303 18.4 24.4	1643 48.4
Middle Problem	503 37.7 30.0	216 16.2 45.6	615 46.1 49.4	1334 39.3
Late Problem	57 13.7 3.4	32 7.7 6.8	326 78.6 26.2	415 12.2
Column Totals Percent of Total	1647 49.4	474 14.0	1244 36.7	3392

Cell contents are: frequency
row percent
column percent

Data from: New Orleans

TABLE 76. SITE DRINKER CLASSIFICATION BY NATIONAL COUNCIL ON ALCOHOLISM QUESTIONS DRINKER CLASSIFICATION

Site Drinker Classification	National Council on Alcoholism Questions Drinker Classification			Row Totals and Percent of Total
	Early Problem	Middle Problem	Late Problem	
Non-Problem Drinker	1070 65.6 64.3	517 31.7 38.2	44 2.7 10.4	1631 47.4
Midrange Problem Drinker	327 39.9 19.7	402 49.0 29.7	91 11.1 21.5	820 23.8
Problem Drinker	267 27.0 16.0	434 43.8 32.1	289 29.2 68.2	990 28.8
Column Totals Percent of Total	1664 48.4	1353 39.3	424 12.3	3441

Cell contents are: frequency
row percent
column percent

Data from: New Orleans

APPENDIX A

Description of Client File Data Base

DESCRIPTION OF CLIENT FILE DATA BASE

The client file data base is an accumulation of demographic, presentence investigation, arrest history, penal sanction, and rehabilitation information for clients entering the ASAP system. A data base of this type allows for access to information on ASAP clients independent of their source of entry. Due to the nature of the ASAP program, client information is normally reported on a by-project basis. The development of the client file data base, however, allows for the descriptive reporting of client information at the national level. The client file data base also provides a useful data source for the across project evaluation of the ASAP system.

Fourteen ASAP projects were originally selected for inclusion in the client file data base on the basis of information obtained in site visits. These projects were determined to have the high quality data systems of use in across project analyses. The original projects selected were Fairfax County, Virginia; Hennepin County, Minnesota; Kansas City, Missouri; Los Angeles County, California; New Hampshire; New Orleans, Louisiana; Oklahoma City, Oklahoma; Phoenix, Arizona; Salt Lake City, Utah; San Antonio, Texas; South Dakota; Sioux City/Woodbury County, Iowa; Tampa/Hillsboro County, Florida; and Wichita/Sedgwick County, Kansas. In addition, data from NIAAA/ASAP companion grant alcohol centers was obtained from the Stanford Research Institute. Of the fourteen original projects selected, nine sites contributed data to the file used in compiling this report. The data file for the clients at the Sioux City/Woodbury County project was never received and therefore could not be included in the data base. Technical difficulties that arose during the development of the data base also prohibited the use of data from Phoenix (hardware incompatibilities), Kansas City (hardware incompatibilities), Los Angeles County (software development problems), and Tampa (software development problems) despite significant effort to overcome these difficulties.

When all information was received from a site, work was begun on the development of the client file for that site. This step was necessary since the information for some sites was processed on a case basis and not a client basis. The utilization of the client file approach allowed all of the information for an individual

to be contained in one record. To achieve this condition, those files with multiple records for individuals were condensed into single record files. The formation of the single record client files permitted progression to the creation of files to be accessed by standard statistical program packages. The statistical package used for most of the analyses performed in this report was PSTAT developed by Roald Buhler at Princeton University.

PSTAT files for each site were created to include all client information available from each particular project. When PSTAT files were created for each site, master files, comprised of thirty-three variables, were prepared for each of the sites. The master file data was consistent across all sites in terms of the information available and the coding schemes for each variable. The master list of thirty-three variables is presented in Table A-1. Data from some of the sites was transformed and compressed in order to obtain consistent data across sites. The transformations performed for these sites are shown in Tables A-2 through A-11. Variables not appearing in the tables did not require transformation.

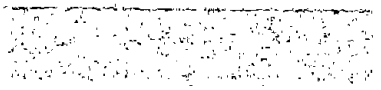

TABLE A-1. MASTER CLIENT FILE VARIABLE LIST

1. Site number
2. Drinker classification
3. Age
4. Sex
5. Race
6. Education
7. Income
8. Marital Status
9. Occupation
10. Prior alcohol related traffic offenses
11. Prior non-alcohol related traffic offenses
12. Prior criminal offenses
13. Arrest BAC
14. Mortimer-Filkins questionnaire score (raw)
15. Mortimer-Filkins interview score (raw)
16. Mortimer-Filkins total score (raw)
17. Johns Hopkins test score (raw)
18. Mortimer-Filkins questionnaire classification (original cutoffs)
19. Mortimer-Filkins interview classification (original cutoffs)
20. Mortimer-Filkins total classification (original cutoffs)
21. Mortimer-Filkins questionnaire classification (revised cutoffs)
22. Mortimer-Filkins interview classification (revised cutoffs)
23. Mortimer-Filkins total classification (revised cutoffs)
24. National Council on Alcoholism drinker classification
25. Johns Hopkins drinker classification
26. Rehabilitation referral - program 1
27. Rehabilitation referral - program 2
28. Rehabilitation referral - program 3
29. Recidivist/non-recidivist flag
30. Arrest month
31. Recidivist month (if applicable)
32. Time to rearrest (if applicable)
33. MAST test drinker classification

TABLE A-2. FAIRFAX COUNTY CODING

Master File Variable	Site File Variable
Drinker Class:	
Non-Problem Drinker	Social Drinker
Midrange Problem Drinker	Potential Problem Drinker
Problem Drinker	Problem Drinker
Race:	
White	White
Black	Negro
Other	Indian (American) Chinese Japanese Others
Education:	
Less than grade 8	8th grade or less
High School	High School (incomplete) High School (completed)
Some college or business or trade school	Vocational training College (1-3 years)
College degree	College (completed)
Post college	Post graduate
Occupation:	
White collar-professional management, etc.	Professional & technical workers Managers and administrators Health Services
White collar-sales, clerical, etc.	Sales workers Clerical workers

Table A-2. Fairfax County Coding (continued)

Master File Variable	Site File Variable
Occupation (continued):	
Blue collar-skilled	Crafts, trades and laborers Commercial cleaning and maintenance Food services Personal services Protective services Private household services
Blue collar-unskilled	Unskilled laborers Farmers, farm workers

TABLE A-3. HENNEPIN COUNTY CODING

Master File Variable	Site File Variable
Drinker Class:	
Non-Problem Drinker	Non-Problem Drinker
Midrange Problem Drinker	Problem Non-Alcoholic
Problem Drinker	Problem Alcoholic
Marital Status:	
Single/widowed	Single
Married	Married
Separated/divorced	Separated/divorced
Education:	
Less than grade 8	Grade school
High School	High School
Some college or business or trade school	College
College degree	College degree

TABLE A-4. NEW HAMPSHIRE CODING

Master File Variable	Site File Variable
Drinker Class:	
Non-Problem Drinker	School not required
Problem Drinker	School graduate School drop out No show at school
Education:	
Less than grade 8	Less than grade 8
High School	Grades 8-12
Some college or business or trade school	Grades 13-15
College degree	Grade 16
Post college	More than grade 16
Income:	
Less than $2000	Not employed $0-$25/week
$2001 - $6000	$26-$50/week $51-$75/week $76-$100/week $101-$125/week
$6001 - $10,000	$126-$150/week $151-$175/week $176-$200/week
$10,000 - $15,000	More than $200/week
Marital Status:	
Single/widowed	Single Widower

Table A-4. New Hampshire Coding (continued)

Master File Variable	Site File Variable
Marital Status (continued):	
Married	Married
Divorced/separated	Divorced Separated
Occupation:	
White collar-professional, management, etc.	Professional, technical & kindred Managers, officers, and proprietors (including farmers)
White collar-sales, clerical, etc.	Sales workers
Blue collar-skilled	Craftsmen, foremen, & kindred Operatives and kindred Private household workers Service workers Professional drivers Military
Blue collar-unskilled	Laborers
Students, housewives, retired, etc.	Students Housewives Retired
Unemployed	Unemployed

TABLE A-5. NEW ORLEANS CODING

Master File Variable	Site File Variable
Drinker Class:	
Non-Problem Drinker	Social Drinker
Midrange Problem Drinker	Excessive Drinker
Problem Drinker	Problem Drinker
Education:	
Less than grade 8	Less than grade 7
High School	Grade 8-11 High School complete
Some college or business or trade school	1-3 years college Business or trade school
College degree	College complete
Post college	Post graduate
Income:	
Less than $2000	Less than $2000
$2000 - $6000	$2000 - $3999 $4000 - $5999
$6001 - $10,000	$6000 - $7999 $8000 - $9999
$10,000 - $15,000	$10,000 - $14,999
Greater than $15,000	$15,000 - $24,999 Greater than $25,000
Marital Status:	
Single/widowed	Single Widowed

Table A-5. New Orleans Coding (continued)

Master File Variable	Site File Variable
Marital Status (continued):	
Married	Married
Divorced/separated	Separated Divorced
Occupation:	
White collar-professional, management, etc.	Professional, technical & kindred Managers and administrators
White collar-sales, clerical, etc.	Sales workers Clerical and kindred workers
Blue collar-skilled	Craftsmen, foremen & kindred Operatives, except transport Transport equipment operatives Farmers and farm managers Private household workers
Blue collar-unskilled	Laborers, except farm Service workers, except household Farm laborers and foremen
Unemployed	Unemployed

TABLE A-6. OKLAHOMA CITY CODING

Master File Variable	Site File Variable
Drinker Class:	
Non-Problem Drinker	Social Drinker
Midrange Problem Drinker	Indeterminate Drinker
Problem Drinker	Problem Drinker
Race:	
White	White
Black	Black
Other	American Indian Mexican American Oriental Other
Education:	
Less than grade 8	Years completed < 8
High School	Years completed 8-12
Some college or business or trade school	Years completed 13-15
College degree	Years completed 16
Post college	Years completed > 16
Income:	
Less than $2000	$0 $1 - $1500 $1501 - $3000
$2001 - $6000	$3001 - $4500 $4501 - $6000

Table A-6. Oklahoma City Coding (continued)

Master File Variable	Site File Variable
Income (continued):	
$6001 - $10,000	$6001 - $7500 $7501 - $9000 $9001 - $10,000
$10,001 - $15,000	$10,001 - $12,000 $12,001 - $14,000
Greater than $15,000	$14,001 - $16,000 $16,001 - $18,000 $18,001 - $20,000 $20,001 - $49,999 Greater than $50,000
Marital Status:	
Single/widowed	Single Widowed
Married	Married Common law
Separated/divorced	Separated Divorced
Occupation:	
White collar-professional, management, etc.	Professional or management
White collar-sales, clerical, etc.	Clerk or white collar
Blue collar-skilled	Craftsman or service
Blue collar-unskilled	Labor
Students, housewives, retired, etc.	Housewife student retired
Unemployed	Unemployed

TABLE A-7. SALT LAKE CITY CODING

Master File Variable	Site File Variable
Drinker Class:	
Non-Problem Drinker	Social Drinker
Midrange Problem Drinker	Problem Drinker
Problem Drinker	Alcoholic
Race:	
White	White
Black	Negro
Other	Mexican Indian Oriental Other
Education:	
Less than grade 8	Less than 7 years school 7-9 years school
High School	10-11 years school High School graduate
Some college or business or trade school	1-3 years college
College degree	College graduate
Post college	Professional
Income:	
Less than $2000	Less than $2000
$2000 - $6000	$2000 - $3999 $4000 - $5999
$6001 - $10,000	$6000 - $7999 $8000 - $9999

Table A-7. Salt Lake City Coding (continued)

Master File Variable	Site File Variable
Income (continued):	
$10,001 - $15,000	$10,000 - $11,999 $12,000 - $13,999
Greater than $15,000	$14,000 - $15,999 Greater than $16,000
Marital Status:	
Single/widowed	Single Widowed
Married	Married
Separated/divorced	Separated Divorced
Occupation:	
White collar-professional, management, etc.	Executives, professionals Business managers Administrative personnel
White collar-sales, clerical, etc.	Clerical, sales workers
Blue collar-skilled	Skilled manual employees Machine operators
Blue collar-unskilled	Unskilled employees
Unemployed	Welfare

TABLE A-8. SAN ANTONIO CODING

Master File Variable	Site File Variable
Drinker Class:	
Non-Problem Drinker	Social Drinker
Problem Drinker	Problem Drinker
Income:	
Less than $2000	No income Less than $2000
$2001 - $6000	$2000 - $3999 $4000 - $5999
$6001 - $10,000	$6000 - $7999 $8000 - $9999
$10,001 - $15,000	$10,000 - $14,999
Greater than $15,000	$15,000 - $24,999 $25,000 or more
Education:	
Less than grade 8	Years completed less than 8
High School	Years completed 8-12
Some college or business or trade school	Years completed 13-15
College degree	Years completed 16
Post college	Years completed more than 16

TABLE A-9. SOUTH DAKOTA CODING

Master File Variable	Site File Variable
Drinker Class:	
Non-Problem Drinker	Social Drinker
Midrange Problem Drinker	Problem Drinker
Problem Drinker	Serious Problem Drinker Chronic Alcoholic
Race:	
White	White
Black	Black
Other	Oriental Latin Indian Other
Education:	
Less than grade 8	None 7 or less years
High School	8-11 years 12 years
Some college or business or trade school	Business or trade school 1-3 years college
College degree	4 years college
Post college	Post graduate
Income:	
Less than $2000	$2000 or less
$2001 - $6000	$2000 - $3999 $4000 - $5999

Table A-9. South Dakota Coding (continued)

Master File Variable	Site File Variable
Income (continued):	
$6001 - $10,000	$6000 - $7999 $8000 - $9999
$10,001 - $15,000	$10,000 - $14,999
Greater than $15,000	$15,000 - $24,999 $25,000 +
Marital Status:	
Single/widowed	Single Widowed
Married	Married Common law Divorced, remarried
Separated/divorced	Separated Divorced
Occupation:	
White collar-professional, management, etc.	Professional workers Managers, small businessmen, etc. Teachers
White collar-sales, clerical, etc.	Sales worker Clerical and communication Government paid
Blue collar-skilled	Craftsmen Operatives Transport operatives Farmers and farm managers Service workers Private household workers
Blue collar-unskilled	Laborers Farm laborers and foremen

Table A-9. South Dakota Coding (continued)

Master File Variable	Site File Variable
Occupation (continued):	
Students, housewives, retired, etc.	Disabled Retired Student Housewife
Unemployed	Unemployed Penintentiary

TABLE A-10. WICHITA CODING

Master File Variable	Site File Variable
Drinker Class:	
Non-Problem Drinker	Social Drinker
Problem Drinker	Problem Drinker
Education:	
Less than grade 8	High School incomplete
High School	High School graduate
Some college; business or trade school	Some college Business, trade school, etc.
College degree	College graduate
Marital status:	
Single/widowed	Single
Married	Married
Separated/divorced	Other
Income:	
Less than $2000	Under $1000
$2001 - $6000	$1000 - $4999
$6001 - $10,000	$5000 - $9999
$10,001 - $15,000	$10,000 - $14,999
Greater than $15,000	$15,000 - $24,999 Greater than $25,000

Table A-10. Wichita Coding (continued)

Master File Variable	Site File Variable
Occupation:	
White collar-professional management, etc.	Professional or management
White collar-sales, clerical, etc.	Clerk or other white collar
Blue collar-skilled	Craft or service
Blue collar-unskilled	Labor
Student, housewife, retired, etc.	Retired
Unemployed	Unemployed

TABLE A-11. NIAAA/ASAP ALCOHOL CENTER CODING

Master File Variable	Site File Variable
Drinker Class:	
Non-Problem Drinker	Social Drinker
Midrange Problem Drinker	Excessive Drinker
Problem Drinker	Problem Drinker
Race:	
White	White
Black	Black
Other	Oriental Mexican American Puerto Rican Other Spanish American American Indian/Alaskan Native
Education:	
Less than grade 8	None 1-4 years school 5-6 years school 7 years school
High School	8 years school 9-11 years school 12 years school
Some college or business or trade school	Vocational, business or trade 1-3 years college
College degree	4 years college
Post college	Graduate school

Table A-11. NIAAA/ASAP Alcohol Center Coding (continued)

Master File Variable	Site File Variable
Marital Status:	
Single/widowed	Never married Widowed
Married	Married
Separated/divorced	Separated Divorced
Income:	
Less than $2000	$0/month Less than $250/month
$2001 - $6000	$251 - $499/month
$6001 - $10,000	$500 - $835/month
$10,001 - $15,000	$836 - $1250/month
Greater than $15,000	$1251 - $1699/month $1700 - $2500/month Greater than $2500/month
Occupation:	
White collar-professional, management, etc.	Professional, technical & kindred Managers and administrators
White collar-sales, clerical, etc.	Sales workers Clerical and kindred workers
Blue collar-skilled	Craftsmen Operatives Transport operatives Farmers and farm managers Service workers Private household workers
Blue collar-unskilled	Laborers Farm laborers and foremen

Table A-11. NIAAA/ASAP Alcohol Center Coding (continued)

Master File Variable	Site File Variable
Occupation (continued):	
Students, housewife, retired, etc.	Student Housewife
Unemployed	None

APPENDIX B

Client Flow for Each ASAP Site

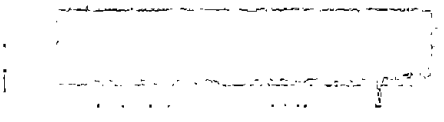

TABLE B-1. DIAGNOSES MADE ACCORDING TO APPENDIX H.

SITE	1972					1973					1974					TOTAL				
	Number of Diagnoses	Number of A/R Traffic Arrests	Diagnoses as Percentage of Arrests	Number of A/R Convictions	Diagnoses as Percentage of Convictions	Number of Diagnoses	Number of A/R Traffic Arrests	Diagnoses as Percentage of Arrests	Number of A/R Convictions	Diagnoses as Percentage of Convictions	Number of Diagnoses	Number of A/R Traffic Arrests	Diagnoses as Percentage of Arrests	Number of A/R Convictions	Diagnoses as Percentage of Convictions	Number of Diagnoses	Number of A/R Traffic Arrests	Diagnoses as Percentage of Arrests	Number of A/R Convictions	Diagnoses as Percentage of Convictions
Albuquerque	2428	3685	65.9	535	453.8	2362	4108	69.7	572	500.3						5290	7794	67.9	1107	477.8
Charlotte	950	4362	21.8	2225	42.7	1963	3963	49.5	1725	113.8						2913	8325	35.0	3950	73.7
Denver	2072	6423	32.3	4354	47.6	3920	9794	40.0	6505	60.3						5992	16217	36.9	10859	55.2
Nassau County	0	4120	0	2872	0	0	0	0	0	0						0	4120	0	2872	0
Portland	2071	4358	47.5	2430	85.2	0	0	0	0	0						2071	4358	47.5	2430	85.2
Seattle	3053	9783	31.2	6347	48.1	0	0	0	0	0						3053	9783	31.2	6347	48.1
Washtenaw Co.	1016	1226	82.9	599	169.6	0	0	0	0	0						1016	1226	82.9	599	169.6
Wisconsin	793	885	89.6	738	107.5	0	0	0	0	0						793	885	89.6	738	107.5
Baltimore	402	4052	9.9	2806	14.3	1305	4550	28.7	3160	41.3	869	4777	18.2	3288	26.4	2576	13379	11.0	9254	27.8
Boston	215	816	26.3	252	85.3	681	0	0	0	0	784	0	0	0	0	1680	816	26.3	252	85.3
Cincinnati	1387	2906	47.7	1645	84.3	1895	3642	52.0	2428	78.0	2304	3841	60.0	3442	66.9	5586	10389	53.6	7515	74.3
Columbus	163	3722	4.4	1557	10.5	145	3460	4.2	1522	9.5	109	3154	3.5	1395	7.8	417	10336	4.0	4474	9.3
Fairfax	2367	2943	80.4	5080	46.6	2725	3777	72.1	463	588.6	3257	3531	92.2	504	646.2	8349	10251	81.4	6047	49.8
Hennepin County	1570	5196	30.2	2720	57.7	3419	7393	46.2	3503	97.6	5724	8325	68.8	3472	164.9	10713	20914	51.2	9695	57.8
Indianapolis	1074	4430	24.2	1657	64.8	2017	5075	39.7	3293	61.3	1812	6073	29.8	3856	47.0	4903	15578	31.5	8806	30.2
Kansas City	3345	5055	66.2	2456	136.2	5854	5547	105.5	2407	243.2	5310	5144	103.2	1681	315.9	14509	15745	92.1	6544	130.5
Lincoln	562	926	60.7	296	189.9	633	1625	39.0	1110	57.0	873	1979	44.1	1005	86.9	2068	4530	45.6	2411	166.9
Maine	235	2401	9.8	1663	14.1	512	2375	21.6	1300	39.4	561	2317	24.2	1199	46.8	1308	7093	18.4	4162	31.4
New Hampshire	319	5528	5.8	3322	9.6	995	7703	12.9	5338	18.6	1663	8544	19.4	5458	30.5	2977	21775	13.7	14118	22.1
New Orleans	1110	4242	26.2	2008	55.3	1106	4518	24.5	1829	60.5	946	3550	26.6	1337	70.8	3162	12310	25.7	5174	76.9
Oklahoma City	798	3708	21.5	1423	56.1	1587	4887	32.5	3393	46.8	534	4746	11.3	2940	18.2	2919	13341	21.9	7756	22.9
Phoenix	10095	9795	103.0	3377	298.9	8871	8671	100.0	2176	407.7	9758	9759	100.0	2545	383.4	28724	28425	101.0	8098	353.8
Pulaski Co.	5690	5759	97.2	4582	122.2	5226	5383	97.1	5755	109.9	4743	5052	93.9	4243	111.8	15569	16194	96.1	13580	244.4
Richland Co.	186	2698	6.9	1213	15.3	927	2911	31.8	887	104.5	1302	3165	41.1	774	168.2	2415	8744	27.5	2874	76.6
San Antonio	761	5346	14.2	2224	34.2	994	5061	19.6	2943	33.8	850	4336	19.6	2029	41.9	2605	14743	17.7	7196	13.5
South Dakota	1706	3086	55.3	2422	70.4	1741	3084	56.5	2099	82.9	2505	4784	52.4	3051	82.1	5952	10954	54.3	7572	78.6
Tampa	1114	0	0	0	0	0	8034	0	5673	0	0	7831	0	6050	0	1114	15865	7.0	12723	8.8
Vermont	486	886	54.9	711	68.4	687	1148	59.8	982	70.0	1302	1056	123.3	844	154.3	2475	3090	80.1	2537	98.6
Wichita	309	1225	25.2	492	62.8	554	1409	39.3	1159	47.8	668	1162	57.5	737	90.6	1531	3796	40.3	2388	64.1
Delaware	550	1642	33.5	704	78.1	1102	3016	36.5	1643	67.1	971	2982	32.6	1621	59.9	2623	7640	34.3	3968	66.1
Idaho	891	3260	27.3	1948	45.7	2749	6896	39.9	5995	45.9	2991	7719	38.7	7119	42.0	6631	17875	37.0	15062	44.0
Los Angeles	243	3797	6.4	2612	9.3	3619	7391	49.0	5653	64.0	3845	8097	47.5	5789	66.4	7707	19285	40.0	14054	54.8
Puerto Rico	0	1279	0	0	0	332	4827	6.9	1213	27.4	3279	8074	40.6	3203	102.4	3611	14180	25.5	4416	81.8
Sioux City	103	270	38.1	144	71.5	364	573	63.5	401	90.8	478	722	66.2	533	89.7	945	1565	60.4	1078	87.7
Salt Lake City	702	2215	31.7	653	107.5	2007	5856	34.3	3880	51.7	1876	6950	27.0	4103	45.7	4585	15021	30.5	8638	53.1
TOTAL	48676	122026	39.9	68067	71.5	60792	136877	44.4	79007	76.9	59314	127670	46.5	72218	82.1	168782	386573	43.7	219292	77.0

TABLE B-2. REFERRALS MADE ACCORDING TO APPENDIX H.

SITE	1972				1973				1974				Total			
	Number of Referrals	Referrals as Percentage of Arrests	Referrals as Percentage of Convictions	Referrals as Percentage of Diagnoses	Number of Referrals	Referrals as Percentage of Arrests	Referrals as Percentage of Convictions	Referrals as Percentage of Diagnoses	Number of Referrals	Referrals as Percentage of Arrests	Referrals as Percentage of Convictions	Referrals as Percentage of Diagnoses	Number of Referrals	Referrals as Percentage of Arrests	Referrals as Percentage of Convictions	Referrals as Percentage of Diagnoses
Albuquerque	2083	56.5	389.3	85.8	2345	57.1	410.0	91.8					4428	56.8	400.0	83.7
Charlotte	333	7.6	15.0	35.1	1349	34.0	78.2	68.7					1682	20.2	42.6	57.7
Denver	2035	31.7	46.7	98.2	3840	39.2	59.0	98.0					5875	36.2	54.1	98.0
Nassau County	0	0	0	0	0	0	0	0					0	0	0	0
Portland	993	22.6	40.5	47.5	0	0	0	0					993	22.6	40.4	47.5
Seattle	1792	18.3	28.2	58.7	0	0	0	0					1792	18.3	28.2	58.7
Washtenaw Co.	595	48.5	99.3	58.6	0	0	0	0					595	48.5	99.3	58.5
Wisconsin	809	91.4	109.6	102.3	0	0	0	0					809	91.4	109.6	102.3
Baltimore	366	9.0	13.0	91.0	1280	28.1	40.5	98.1	775	16.2	23.6	89.2	2421	10.4	26.2	94.9
Boston	215	26.3	85.3	100.0	681	0	0	100.0	784	0	0	100.0	1680	265.9	666.7	100.0
Cincinnati	1306	47.7	84.3	99.9	1095	52.0	73.0	100.0	2304	60.0	66.9	100.0	5585	53.8	74.3	100.0
Columbus	119	3.2	7.6	73.0	119	3.4	7.8	82.1	108	3.4	7.7	99.1	346	3.5	7.7	83.0
Fairfax	2367	80.4	46.4	100.0	2672	70.7	577.1	98.1	2422	68.6	480.6	74.4	7461	72.8	44.5	89.4
Hennepin Co.	1455	28.0	53.5	92.7	3114	42.1	83.9	91.1	5159	62.0	148.6	90.1	9728	46.9	52.9	91.6
Indianapolis	627	14.2	37.8	58.4	1165	23.0	35.4	57.8	1634	26.9	42.4	90.2	3426	22.0	21.1	69.6
Kansas City	1985	39.3	80.8	59.3	5854	105.5	243.2	100.0	4405	85.6	262.0	83.9	12244	77.8	118.1	84.4
Lincoln	367	39.6	124.0	65.3	373	23.0	33.6	58.9	517	26.1	51.4	59.2	1257	27.7	65.0	69.8
Maine	235	9.8	14.1	100.0	512	21.6	30.4	100.0	465	20.1	38.8	82.9	1212	17.1	29.1	92.7
New Hampshire	202	3.7	6.1	63.3	560	7.3	13.5	56.3	985	11.5	19.9	59.2	1747	9.0	13.9	58.7
New Orleans	426	10.0	21.2	38.4	558	12.4	33.5	50.5	553	15.6	41.4	58.5	1537	12.5	37.4	48.6
Oklahoma City	594	15.0	41.7	74.4	1354	27.7	39.9	95.3	431	9.1	14.7	80.7	2379	17.8	18.6	81.5
Phoenix	1794	18.3	53.1	17.8	1528	17.2	70.2	17.2	2118	21.7	83.2	21.7	5440	25.5	29.3	8.3
Pulaski County	2709	47.0	59.1	48.4	839	15.6	17.6	16.1	924	18.3	21.8	19.5	4472	27.6	70.2	28.7
Richland County	144	5.3	11.9	77.4	726	24.9	81.8	78.3	1300	41.1	160.0	99.8	2170	24.7	68.0	89.2
San Antonio	711	13.3	32.0	93.4	944	18.7	37.1	95.0	833	19.2	41.1	99.0	2488	16.9	12.8	95.5
South Dakota	1344	43.2	55.1	78.2	1555	50.4	71.1	89.3	2373	49.6	77.8	94.7	5262	48.5	69.5	88.4
Tampa	337	0	0	30.3	0	0	0	0	0	0	0	0	337	0	0	0
Vermont	403	54.5	67.9	99.4	697	59.8	73.0	100.0	1302	123.3	154.3	100.0	2472	80.0	98.4	99.8
Wichita	223	10.2	45.3	72.2	418	29.7	36.1	75.5	447	38.5	60.7	66.9	1088	20.7	45.6	71.1
Delaware	23	1.4	3.3	4.2	253	8.4	15.4	23.0	215	7.2	13.3	22.1	491	6.4	12.4	18.7
Idaho	839	25.2	42.1	92.0	2682	30.9	48.7	97.6	2900	37.4	40.6	96.0	6392	33.7	161.1	243.7
Los Angeles	209	5.5	8.0	85.6	3475	47.0	61.5	96.0	3760	46.4	65.0	97.8	7443	30.5	53.0	96.6
Puerto Rico	0	0	0	0	328	6.8	27.0	98.8	3279	40.6	102.4	100.0	3607	25.4	81.7	99.9
Sioux City	99	36.7	66.8	96.1	362	63.2	80.3	99.5	477	66.1	80.5	99.8	938	50.9	67.0	99.2
Salt Lake City	669	30.2	102.5	95.3	2007	34.3	51.7	100.0	1876	27.0	45.7	100.0	4552	30.3	52.7	99.5
TOTAL	28528	22.4	41.9	58.6	43475	31.9	55.0	71.5	42336	33.2	58.6	71.4	114339	29.6	52.1	67.7

TABLE B-3. REFERRALS BY DRINKER TYPE.

SITE	1972									1973								
	Problem Drinker			Non-Problem Drinker			Unidentified			Problem Drinker			Non-Problem Drinker			Unidentified		
	Number Recommended for Referral	Number Not Recommended for Referral	Percent Recommended for Referral	Number Recommended for Referral	Number Not Recommended for Referral	Percent Recommended for Referral	Number Recommended for Referral	Number Not Recommended for Referral	Percent Recommended for Referral	Number Recommended for Referral	Number Not Recommended for Referral	Percent Recommended for Referral	Number Recommended for Referral	Number Not Recommended for Referral	Percent Recommended for Referral	Number Recommended for Referral	Number Not Recommended for Referral	Percent Recommended for Referral
Albuquerque	892	175	83.6	780	129	85.8	411	41	90.9	1097	352	75.7	764	97	88.7	484	68	87.7
Charlotte	149	1	99.3	23	9	71.8	148	0	100.0	768	33	95.9	403	85	82.6	178	26	87.3
Denver	1342	20	98.5	193	5	97.5	500	12	97.7	3205	14	99.6	145	41	78.0	490	25	95.1
Nassau County	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Portland	0	0	0	0	0	0	983	269	78.5	0	0	0	0	0	0	0	0	0
Seattle	1696	133	92.7	55	1064	4.9	41	64	39.0	0	0	0	0	0	0	0	0	0
Washtenaw Co.	403	73	84.7	185	68	73.1	9	29	23.7	0	0	0	0	0	0	0	0	0
Wisconsin	321	0	100.0	478	0	100.0	0	91	0	0	0	0	0	0	0	0	0	0
Baltimore	186	0	100.0	30	31	49.2	150	4	97.4	655	0	100.0	315	23	93.2	310	2	99.4
Boston	68	2	97.1	0	0	0	147	79	65.0	0	0	0	0	0	0	681	0	100.0
Cincinnati	639	1	99.8	738	0	100.0	9	0	100.0	931	0	100.0	929	0	100.0	35	0	100.0
Columbus	114	40	74.0	5	4	55.6	0	0	0	119	20	85.6	0	5	0	0	0	0
Fairfax	463	0	100.0	1185	0	100.0	719	0	100.0	1141	3	99.7	869	0	100.0	662	21	96.9
Hennepin Co.	1048	21	98.0	354	81	81.4	53	13	80.3	2176	109	95.2	639	150	81.0	299	46	86.7
Indianapolis	286	0	100.0	342	102	77.0	0	289	0	553	0	100.0	612	855	41.7	0	0	0
Kansas City	1141	4	99.7	898	2	99.8	537	406	56.9	1809	19	99.0	1607	11	99.4	2177	31	98.6
Lincoln	224	83	73.0	132	38	77.6	11	9	55.0	261	185	58.5	112	75	59.9	0	0	0
Maine	227	2	99.1	1	0	100.0	0	0	0	318	0	100.0	0	0	0	194	0	100.0
New Hampshire	202	0	100.0	0	0	0	0	117	0	560	0	0	0	0	0	0	435	0
New Orleans	306	41	88.2	120	643	15.7	0	0	0	324	13	96.1	234	535	30.4	0	0	0
Oklahoma City	314	45	87.5	128	25	83.7	152	23	86.9	902	80	91.9	152	41	78.8	300	45	87.0
Phoenix	1198	223	83.7	501	2365	17.5	95	383	19.9	417	381	52.3	878	2360	27.1	233	638	26.8
Pulaski Co.	488	70	87.5	298	0	100.0	1923	2821	40.5	513	194	30.1	81	0	100.0	245	3192	7.1
Richland Co.	79	6	92.9	50	21	70.4	15	8	65.2	172	59	74.4	300	120	71.4	254	16	94.1
San Antonio	343	15	95.8	368	35	91.3	0	0	0	587	26	95.8	346	24	93.5	11	0	100.0
South Dakota	1075	15	98.6	243	338	41.8	16	13	55.2	1140	26	97.8	412	157	72.4	4	1	80.0
Tampa	218	208	51.2	0	488	0	276	0	100.0	0	0	0	0	0	0	0	0	0
Vermont	161	0	100.0	247	3	98.8	75	0	100.0	302	0	100.0	324	0	100.0	61	0	100.0
Wichita	130	12	91.5	111	34	76.6	13	11	54.2	284	58	83.0	127	42	75.1	7	36	16.3
Delaware	21	20	51.2	0	250	0	2	257	0.8	162	43	79.0	9	594	1.5	82	212	27.9
Idaho	170	14	92.4	299	22	93.1	351	35	90.9	689	21	97.0	1141	20	98.3	852	26	97.0
Los Angeles	105	2	98.1	27	30	47.4	76	3	96.2	1629	34	98.0	784	83	90.4	1062	37	96.6
Puerto Rico	0	0	0	0	0	0	0	0	0	136	0	100.0	192	0	100.0	0	4	0
Salt Lake City	360	0	100.0	265	28	90.4	44	0	100.0	1070	0	100.0	887	0	100.0	50	0	100.0
Sioux City	56	2	96.6	43	0	100.0	0	2	0	194	0	100.0	167	2	98.8	1	0	100.0
Total	14425	1238	92.3	8098	5815	58.2	6756	4979	57.6	22114	2670	89.2	12629	5320	70.4	8672	4861	64.1

Table B-3. Referrals by Drinker Type (Continued).

SITE	1974									Total								
	Problem Drinker			Non-Problem Drinker			Unidentified			Problem Drinker			Non-Problem Drinker			Unidentified		
	Number Recommended for Referral	Number Not Recommended for Referral	Percent Recommended for Referral	Number Recommended for Referral	Number Not Recommended for Referral	Percent Recommended for Referral	Number Recommended for Referral	Number Not Recommended for Referral	Percent Recommended for Referral	Number Recommended for Referral	Number Not Recommended for Referral	Percent Recommended for Referral	Number Recommended for Referral	Number Not Recommended for Referral	Percent Recommended for Referral	Number Recommended for Referral	Number Not Recommended for Referral	Percent Recommended for Referral
Albuquerque										1989	527	79.1	1544	226	87.2	895	109	89.1
Charlotte										917	34	96.4	426	94	81.9	326	26	92.6
Denver										4547	34	99.3	338	46	88.0	990	37	96.4
Nassau Co.										0	0	0	0	0	0	0	0	0
Portland										0	0	0	0	0	0	983	269	78.5
Seattle										1696	133	92.7	55	1064	4.9	41	64	39.0
Washtenaw Co.										403	73	84.7	185	68	73.1	9	29	23.7
Wisconsin										321	0	100.0	478	0	100.0	0	91	0
Baltimore	482	0	100.0	119	0	100.0	198	8	96.1	1323	0	100.0	464	54	89.6	658	14	97.9
Boston	0	0	0	0	0	0	784	0	100.0	68	2	97.1	0	0	0	1612	79	95.3
Cincinnati	1628	0	100.0	636	0	100.0	40	0	100.0	3198	1	99.9	2303	0	100.0	84	0	100.0
Columbus	108	0	100.0	0	0	0	0	0	0	341	60	85.0	5	9	55.6	0	0	0
Fairfax	1104	0	100.0	269	0	100.0	1049	836	55.6	2708	3	99.9	2323	0	100.0	2430	857	73.9
Hennepin Co.	4768	451	91.4	380	62	86.0	92	52	63.9	7992	581	93.2	1373	293	82.4	444	111	80.0
Indianapolis	897	83	91.5	737	95	88.6	0	0	0	1736	83	95.4	1690	1052	61.6	0	289	0
Kansas City	1563	317	83.1	1928	356	84.4	914	232	79.8	4513	340	93.0	4633	369	92.6	3628	669	84.4
Lincoln	323	282	53.4	194	70	73.5	0	0	0	808	550	59.5	436	183	70.5	11	9	55.0
Maine	373	96	79.5	0	0	0	92	0	100.0	918	98	90.4	1	0	100.0	286	0	100.0
New Hampshire	985	0	100.0	0	0	0	0	678	0	1747	0	100.0	0	0	0	0	1230	0
New Orleans	319	35	90.1	234	358	39.5	0	0	0	949	89	91.4	588	1536	27.7	0	0	0
Oklahoma City	296	46	86.5	30	26	53.6	105	21	83.3	1512	171	89.8	310	92	77.1	557	89	86.2
Phoenix	134	155	46.4	1931	1326	59.3	53	65	44.9	1749	769	69.5	3310	6051	35.4	381	1086	26.0
Pulaski Co.	643	1065	37.6	121	0	100.0	160	2585	5.8	1644	2329	41.4	500	0	100.0	2328	8598	21.3
Richland Co.	277	0	100.0	797	1	99.9	226	1	99.6	528	65	89.0	1147	142	89.0	495	25	95.2
San Antonio	528	12	97.8	306	5	98.4	0	0	0	1458	53	96.5	1020	64	94.1	11	0	100.0
South Dakota	1524	34	97.8	405	6	98.5	2	2	100.0	3739	75	98.0	1060	501	67.9	22	16	57.9
Tampa	0	0	0	0	0	0	0	0	0	219	208	51.2	0	488	0	276	0	100.0
Vermont	885	0	100.0	397	0	100.0	20	0	100.0	1348	0	100.0	968	3	99.7	156	0	100.0
Wichita	371	91	80.3	64	85	43.0	12	44	21.4	785	161	83.0	302	161	65.2	32	91	26.0
Delaware	169	38	81.6	15	534	2.7	31	184	14.4	352	101	77.7	24	1378	1.7	115	653	15.0
Idaho	965	33	96.7	1301	39	97.1	624	29	95.6	1824	68	96.4	2741	61	97.1	1827	90	95.3
Los Angeles	1873	20	98.9	690	48	93.5	1197	17	98.6	3607	56	98.5	1502	161	90.3	2335	57	97.6
Puerto Rico	1146	0	100.0	2133	0	100.0	0	0	0	1282	0	100.0	2325	0	100.0	0	4	0
Sioux City	288	1	99.7	188	0	100.0	1	0	100.0	538	3	99.4	398	2	99.5	2	2	50.0
Salt Lake City	1109	0	100.0	769	0	100.0	0	0	0	2539	0	100.0	1921	28	98.6	94	0	100.0
Total	22758	2759	89.2	13644	3011	81.9	5600	4754	54.1	59297	6667	89.9	34371	14146	70.8	21028	14594	59.0

APPENDIX C

Standardized Diagnostic Tests

MORTIMER-FILKINS QUESTIONNAIRE

Name_____

QUESTIONNAIRE (FORM A)

INSTRUCTIONS. Before you begin, please print your name at the top of this page.

Please answer every question. Do not spend too much time on any one question. We would like your first impressions, so try to answer with the first thing that comes to mind. Answer each question in the order in which it appears. Mark an "X" or check (✓) for the TRUE (yes) /False (no) questions. Where you are asked to answer with a number, (how many) please put the number in the space provided. If the event never happened to you, mark zero (0). There are no right or wrong answers. Give the answer which seems most correct to you. Are there any questions now?

Go to the next page and begin.

Mortimer-Filkins Questionnaire (continued)

FOR OFFICE USE ONLY
CASE ID
_____
DATE _____

220

1. What is your present marital status?

   1. single
   2. separated
   3. divorced
   4. widowed
   5. married

   Enter number here - - - - - - - - - - - - - - - (#) 221

2. With whom do you live?

   1. alone
   2. with friend(s)
   3. with relative(s)
   4. with wife (husband)
   5. with ex-wife (ex-husband)

   Enter number here - - - - - - - - - - - - - - - (#) 222

IF YOU HAVE NEVER BEEN MARRIED SKIP TO QUESTION NUMBER 6	TRUE (yes)	FALSE (no)	
3. How many times have you and your wife (husband) seriously considered divorce in the last two years? - (#)			223
4. Does (did) your wife (husband) often threaten you with divorce? - - - - - - - - - - - - - - - -	( )	( )	224
5. Would you say that your wife's (husband's) general health is (was) very good? - - - - - - -	( )	( )	225
6. Are you employed now? - - - - - - - - - - - - - - -	( )	( )	226
7. Do you smoke?- - - - - - - - - - - - - - - - - - - -	( )	( )	227
8. About how many packs of cigarettes do you smoke per week?- - - - - - - - - - - - - - - - - -	(#)		228
9. Were you ever arrested?- - - - - - - - - - - - - -	( )	( )	229

Mortimer-Filkins Questionnaire (continued)

Questionnaire	Page 2 TRUE (yes)	FALSE (no)	
10. Are your relatives upset with the way you live?	( )	( )	230
11. Is your income sufficient for your basic needs?	( )	( )	231
12. Are you bothered by nervousness (irritable, fidgety or tense)?- - - - - - - - - - - - - - - -	( )	( )	232
13. My judgment is better than it ever was- - - - -	( )	( )	233
14. Have you recently undergone a great stress (such as something concerning your job, your health, your finances, your family, or a loved one)? -	( )	( )	234
15. I am apt to take disappointments so badly that I cannot put them out of my mind- - - - - - - -	( )	( )	235
16. I have long periods of such great restlessness that I cannot sit long in a chair - - - - - - - -	( )	( )	236
17. Are you often sad or down in the dumps? - - - -	( )	( )	237
18. I have had periods in which I carried on activities without knowing later what I had been doing-	( )	( )	238
19. Do you have a lot of worries? - - - - - - - - -	( )	( )	239
20. I have trouble sleeping - - - - - - - - - - - -	( )	( )	240
21. I am moderate in all my habits- - - - - - - - -	( )	( )	241
22. Do you feel that you have abnormal problems?- -	( )	( )	242
23. I have lived the right kind of life - - - - - -	( )	( )	243
24. My home life is as happy as it should be- - - -	( )	( )	244
25. Does drinking help you make friends?- - - - - -	( )	( )	245
26. Much of the time I feel as if I have done something wrong or evil - - - - - - - - - - - -	( )	( )	246
27. Do you think that creditors are much too quick to bother you for payments? - - - - - - - - - - -	( )	( )	247
28. I wish I could be as happy as others seem to be	( )	( )	248
29. I sometimes feel that I am about to go to pieces-	( )	( )	249
30. Do you usually perspire at night? - - - - - - -	( )	( )	250
31. I often feel uncomfortable and down in the dumps	( )	( )	251
32. About <u>how many</u> years has it been since your last out-of-town vacation? (If you have never taken one, write "9") - - - - - - - - - - - - - - -	(#	)	252
33. I am a high-strung person - - - - - - - - - - -	( )	( )	253
34. I am satisfied with the way I live- - - - - - -	( )	( )	254

Mortimer-Filkins Questionnaire (continued)

	Questionnaire	TRUE (yes)	FALSE (no)	
35.	Have you ever had your driver's license suspended or revoked?- - - - - - - - - - - - - - - - -	( )	( )	255
36.	About <u>how many</u> times have you asked for help for your problems (personal, family, marriage, money, or emotional)? - - - - - - - - - - - - - - -	(#	)	256
37.	Is there a history of alcoholism in your family?	( )	( )	257
38.	Do you have a relative who is an excessive drinker? -	( )	( )	258
39.	Are you often depressed and moody? - - - - - - -	( )	( )	259
40.	I often feel as if I were not myself- - - - - - -	( )	( )	260
41.	I am often afraid I will not be able to sleep -	( )	( )	261
42.	Do you often feel afraid to face the future?- -	( )	( )	262
43.	Drinking seems to ease personal problems- - - -	( )	( )	263
44.	<u>How many</u> drinks can you handle and still drive well? -	(#	)	264
45.	In the last year, <u>how many</u> times have you drunk more than you could handle, but still been a good driver when you got behind the wheel?- - -	(#	)	265
46.	I wish people would stop telling me how to live my life -	( )	( )	266
47.	I often am afraid without knowing why I am afraid	( )	( )	267
48.	At times I think I am no good at all- - - - - -	( )	( )	268
49.	Do you feel sinful or immoral?- - - - - - - - -	( )	( )	269
50.	A drink or two gives me energy to get started -	( )	( )	270
51.	Does drinking help you work better? - - - - - -	( )	( )	271
52.	My daily life is full of things that keep me interested -	( )	( )	272
53.	I often have feelings of vague restlessmess- -	( )	( )	273
54.	My friends are much happier than I am- - - - -	( )	( )	274
55.	I often pity myself- - - - - - - - - - - - - - -	( )	( )	275
56.	Would you say that 4 or 5 drinks affect your driving? -	( )	( )	276
57.	I feel tense and anxious most of the time- - -	( )	( )	277
58.	Are you often bored and restless?- - - - - - -	( )	( )	278

MORTIMER-FILKINS INTERVIEW

INTERVIEW (FORM B)

INSTRUCTIONS

The following paragraph is a suggested explanation to offer an offender as to why the interview is being conducted. Rather than reading the material try to put it into your own words: "One purpose of the court's sentence is to try to keep the offense from happening again, and if possible, to try to eliminate the causes of the problem. If this can be done, it will be in your best interest as well as those of others. This interview will be used to find the extent of, and situations surrounding your drinking. Your answers will be used to help the court in deciding what kinds of sentencing will be most helpful. Your frankness and cooperation are important for finding the most fair and effective way of dealing with you."

TO THE INTERVIEWER:

RECORDING THE RESPONSES. Use a RED pen or pencil to mark the items for ease of scoring. For each item record your judgment:

1. Draw a line through Y if yes, N if no.
2. Where a space "___" is provided place appropriate number or check.
3. In the last column:
   a. Draw a vertical line "(|)" through the parentheses if the question is not asked (NA)*.
   b. Write (R) if client refuses to respond.

*All questions should be asked unless preceded by an expression such as "(If yes)" indicating that the question is to be asked only in the event of a certain answer to the previous question.

CASE ID.
#_____ 320

How far have you gone in school?	(|) or (R)
1. None 2. 7 grades or less 3. 8-11 grades 4. 12 grades or diploma 5. Completed business or trade school 6. 1-3 yrs. college 7. 4 yrs. college 8. Post-graduate work 9. Not known	
(Put # in space at right) ___	( ) 321

Mortimer-Filkins Interview (continued)

		(|) or (R)	
● How is your general health?			
1. better than average or very good, excellent 2. average or good 3. less than average, fair, poor, bad			
(Put # in space at right) - - - - - - - - - - - -	___	( )	322
(If less than average): What are the problems?			
_____			
_____			
Person complains of:			
a. being tired or fatigued - - - - - - -	Y N	( )	323
b. general weakness - - - - - - - - - - -	Y N	( )	324
c. just feeling bad all over - - - - - -	Y N	( )	325
d. weight loss or inability to eat - - -	Y N	( )	326
e. inability to concentrate - - - - - -	Y N	( )	327
f. difficulty sleeping - - - - - - - - -	Y N	( )	328
g. increased irritability - - - - - - -	Y N	( )	329
h. difficulty doing his job or taking care of his home - - - - - - - - - -	Y N	( )	330
● Do you have a chronic disease or illness? - - - -	Y N	( )	331
● Have you had any of the following?			
a. fatty liver - - - - - - - - - - - - - - - -	Y N	( )	332
b. cirrhosis - - - - - - - - - - - - - - - -	Y N	( )	333
c. pain and/or weakness of legs - - - - - -	Y N	( )	334
d. anemia - - - - - - - - - - - - - - - - - -	Y N	( )	335
e. convulsions or epilepsy - - - - - - - - -	Y N	( )	336
f. diabetes - - - - - - - - - - - - - - - - -	Y N	( )	337
g. ulcers or stomach problems - - - - - - -	Y N	( )	338
h. mental or emotional illness - - - - - - -	Y N	( )	339
i. any severe bleeding problems - - - - - -	Y N	( )	340
j. pancreatitis - - - - - - - - - - - - - - -	Y N	( )	341
Other mentioned _____	Y N	( )	342

		(|) or (R)
• Are you disabled or do you have any physical defects?	Y N	( ) 343
(If yes): What?_____		
_____		
The handicap limits his adjustment or ability to perform:		
a. in his job situation	Y N	( ) 344
b. in friendships or in a social setting	Y N	( ) 345
c. in his family situation	Y N	( ) 346
The person has made an adequate emotional adjustment to the handicap.	Y N	( ) 347
The person is using the handicap as an excuse for drinking or as an excuse for family or job problems.	Y N	( ) 348
• Have you had a serious injury or illness in the past?	Y N	( ) 349
(If yes): What was its nature?_____		
_____		
Are you completely well from this (these)?	Y N	( ) 350

ASK THE NEXT QUESTION ONLY IF THIS CONTACT RESULTED FROM AN ARREST

• What were you doing that called you to the attention of the police?		
_____		
_____		
Specific behaviors mentioned:		
a. drunk or impaired driving	Y N	( ) 351
b. car accident	Y N	( ) 352
c. asleep in or near car	Y N	( ) 353
d. fighting or argument	Y N	( ) 354
e. staggering	Y N	( ) 355
f. molesting or bothering people	Y N	( ) 356
g. noise making	Y N	( ) 357
i. other_____		( ) 358

Mortimer-Filkins Interview (continued)

Interview

(|) or (R)

IN THE FOLLOWING QUESTIONS EXCLUDE THE ARREST LEADING TO THIS CONTACT, IF ANY

- Have you ever been arrested for driving under the influence of liquor or for impaired driving? Y N ( ) 359
  (If yes): How many times? #___ ( ) 360
- Have you ever been arrested for being drunk and disorderly or for public intoxication? Y N ( ) 361
  (If yes): How many times? #___ ( ) 363
  Was driving related to any of these? Y N ( ) 364
  (If yes): In how many instances? #___ ( ) 366
- Have you ever been arrested for reckless driving? Y N ( ) 367
  (If yes): How many times? #___ ( ) 368
  Was this ever reduced from the original charge? Y N ( ) 369
  (If yes): What was the original charge?_____
  (Was the original charge DUIL or impaired? Y N ( ) 370
- Have you ever been arrested for anything else? Y N ( ) 371
  (If yes): How many times and for what?_____

  Kinds of offenses:
  Crimes involving property #___ ( ) 372
  Crimes of personal assault #___ ( ) 373
  Crimes involving sex #___ ( ) 374
  Other (list)_____
  _____

QUESTIONS A, B, C ARE TO BE ASKED IF OFFENDER HAS A PREVIOUS RECORD (Arrests other than the one leading to this contact)

- A. How old were you at the time of your first arrest? (yrs.)___ ( ) 376
- B. How long has it been since your last arrest? (yrs.)___ ( ) 378
- C. Are you currently on probation? Y N ( ) 379
  (If yes): Is non-drinking part of the probation? Y N ( ) 380

Mortimer-Filkins Interview (continued)

Interview

		(|) or (R)
● While driving have you ever been stopped by police but not ticketed, when you knew you had been drinking too much?	Y N	( ) 421
● Has your driver's license ever been suspended or revoked?	Y N	( ) 422
(If yes): How many times?	#___	( ) 423
Was drinking related to the suspension(s) or revocation(s)?	Y N	( ) 424
● Do you have a valid license now?	Y N	( ) 425
● Do you feel that drinking is causing any problems in your life?	Y N	( ) 426

(If yes): Can you tell me what these problems are?

_____

_____

Problems mentioned:

a. marriage	Y N	( ) 427
b. job or employment	Y N	( ) 428
c. health	Y N	( ) 429
d. court	Y N	( ) 430
● Do you feel that you always drink like a social drinker?	Y N	( ) 431

(If no): How do you differ from the social drinker? (frequency and amount)

Differs from a social drinker in the following ways:

a. drinks more frequently	Y N	( ) 432
b. drinks greater quantity when he drinks	Y N	( ) 433
c. feels worse after drinking	Y N	( ) 434
d. has a compulsion to drink	Y N	( ) 435
e. drinks at unusual times	Y N	( ) 436
f. other_____	Y N	( ) 437

Mortimer-Filkins Interview (continued)

		(|) or (R)
● Do you ever find that you drink more than you had intended to drink?	Y N	( ) 438
● Do you usually drink every day?	Y N	( ) 439
(If no): How many days a week do you usually drink?	#___	( ) 440
(If every day record 7, if less than once a week record 1; if weekends only record 8)		
● Do you usually drink four or more drinks at one sitting?	Y N	( ) 441
● What kind of drinks are these?_____		( ) 442
_____ (double martini, boilermaker, straight shots, etc.)		
● Where do you usually do your drinking?		
a. own home	Y N	( ) 443
b. friend's home	Y N	( ) 444
c. party	Y N	( ) 445
d. bar or lounge	Y N	( ) 446
e. restaurant	Y N	( ) 447
f. other (list)_____	Y N	( ) 448
● With whom do you usually drink?		
a. alone	Y N	( ) 449
b. spouse	Y N	( ) 450
c. casual drinking companions	Y N	( ) 451
d. friends	Y N	( ) 452
e. other	Y N	( ) 453
● Have you gone on a drinking spree or binge in the last five years?	Y N	( ) 454
● Do you ever get the feeling that you "NEED" or "REALLY WANT" a drink?	Y N	( ) 455
(If yes): When do these feelings occur?_____		
Has it ever happened after you have gone to bed?	Y N	( ) 456

Mortimer-Filkins Interview (continued)

		(|) or (R)	
Do you ever feel this way before noon?	Y N	( )	457
Client states he needs a drink when:			
a. angry	Y N	( )	458
b. depressed	Y N	( )	459
c. lonely	Y N	( )	460
d. happy	Y N	( )	461
e. tense or nervous	Y N	( )	462
f. with friends	Y N	( )	463
g. things go wrong	Y N	( )	464
h. at parties	Y N	( )	465
i. at certain times of day	Y N	( )	466
j. other (list)_____	Y N	( )	467
• Have you ever hidden a bottle of liquor?	Y N	( )	468
• Do you drink to feel less self-conscious and more at ease around people?	Y N	( )	469
• Do you ever feel that it is easier to start something after you have had a drink?	Y N	( )	470
• Does drinking sometimes give you courage or self-confidence?	Y N	( )	471
• Do you feel more quarrelsome or angry after you have had several drinks?	Y N	( )	472
• Have you been told that you become rowdy or noisy when you have had too much to drink?	Y N	( )	473
• Have you ever destroyed property or gotten into a physical fight when you were drinking?	Y N	( )	474
• Have you ever thought about cutting down on drinking?	Y N	( )	475
• Have you ever felt bad or guilty about drinking?	Y N	( )	476
• Have any of your friends or members of your family suggested that you watch or cut down on drinking?	Y N	( )	477
• Have you ever been treated for drinking?	Y N	( )	478
(If yes): When?_____			

Mortimer-Filkins Interview (continued)

		(|) or (R)
• Have you ever taken medicine or pills other than aspirin to help sober up?	Y N	( ) 479
• Have you ever found that you cannot remember or wonder what you did the night before when you were drinking?	Y N	( ) 480
• Did you ever fall or seriously injure yourself when you were drinking?	Y N	( ) 521
• After drinking the night before, have you ever decided not to go to work the next morning?	Y N	( ) 522
(If yes): How many times a year does this happen?	#___	( ) 523
• Have you ever found that your hands shake and tremble in the morning?	Y N	( ) 524
• Have you ever vomited or been sick to your stomach, not while drinking, but the morning after drinking?	Y N	( ) 525
• Do you ever drink in the morning before breakfast or before going to work?	Y N	( ) 526
• Do you feel that your health would be better if you decreased or stopped drinking?	Y N	( ) 527
• Do you ever take tranquilizers, anti-depressants or pep-up pills?	Y N	( ) 528
• Have you ever been told that your drinking was injuring your liver?	Y N	( ) 529
• Have you ever had bad stomach or abdominal pain?	Y N	( ) 530
(If yes): Did this occur after drinking?	Y N	( ) 531

(|)
or
(R)

- What is your marital status? (read choices to person)

  1. married
  2. single
  3. widowed
  4. separated
  5. divorced

  (Put # in space at right) ___ ( ) 532

- IF MARRIED

  How long have you been married? (yrs.)___ ( ) 534

  Have you ever been married before? Y N ( ) 535

  (If yes): How many times? #___ ( ) 536

  Do you and your (present) wife/husband get along pretty well? Y N ( ) 537

  Do you ever have arguments about drinking? Y N ( ) 538

  Do you have any children at home? Y N ( ) 539

  (If yes): Do you have any serious problems with them? Y N ( ) 540

  Are there any (other) family problems? Y N ( ) 541

  (If yes): What?_____ ( ) 542

Mortimer-Filkins Interview (continued)

		(I) or (R)	
● IF SINGLE			
Have you ever been married?	Y N	( )	543
(If yes): How many times?	#___	( )	544
Do you:			
1. go out mainly with one person	Y N	( )	545
2. go out with several people in a casual way	Y N	( )	546
3. not go out with anyone	Y N	( )	547
Do you find that you drink more than your friends?	Y N	( )	548
Has drinking interfered with any marriage plans?	Y N	( )	549
● IF WIDOWED			
How long have you been widowed?	(yrs.)___	( )	551
Have you been married more than once?	Y N	( )	552
(If yes): How many times?	#___	( )	553
Are there any children at home?	Y N	( )	554
(If yes): Do you have any serious problems with them?	Y N	( )	555
Has your drinking increased since you lost your wife/husband?	Y N	( )	556
Are you alone most of the time?	Y N	( )	557
● IF SEPARATED OR DIVORCED			
How many times were you married?	#___	( )	558
Were there any children?	Y N	( )	559
(If yes): Do you have any serious problems with them?	Y N	( )	560
Did you have family arguments over drinking?	Y N	( )	561
Has your drinking increased since the separation or divorce?	Y N	( )	562
Are you alone most of the time?	Y N	( )	563

Mortimer-Filkins Interview (continued)

		(|) or (R)	
• Have you ever been fired?	Y N	( )	564
(If yes): Why?_____			
• Are you presently employed?	Y N	( )	565
(If respondent is female and answers negatively, ask if she considers herself a housewife or homemaker. If she is a housewife, ask her the "If Employed" questions that follow.)			
• IF EMPLOYED			
What is your present job? (title plus description) _____			
_____ (such as carpenter, clerk in grocery store, housewife, etc.)		( )	567
How long have you had this job? (yrs.)___		( )	569
How good do you think your work is at your present job?			
1. excellent			
2. good			
3. fair or poor			
(Put # in space at right) ____		( )	570
• IF UNEMPLOYED			
How long have you been unemployed? (yrs.)___		( )	572
Why are you unemployed?_____			
Reason for unemployment:			
a. laid off previous job	Y N	( )	573
b. fired	Y N	( )	574
c. strike	Y N	( )	575
d. illness	Y N	( )	576
e. other_____	Y N	( )	577
Did drinking contribute to your job loss?	Y N	( )	578

		(|) or (R)
● Have you had any problems with your job(s) in the last 3 years?	Y N	( ) 579
(If yes): What kinds of problems are (were) they?		
1. occasional friction with fellow workers or boss	Y N	( ) 580
2. frequent friction with fellow workers or boss	Y N	( ) 621
3. occasional trouble with work	Y N	( ) 622
4. serious difficulty doing work, or accidents	Y N	( ) 623
5. occasional absence	Y N	( ) 624
6. frequent absences	Y N	( ) 625
7. difficulty finding employment	Y N	( ) 626
8. other_____	Y N	( ) 627
● What is your main source of support?		
0. none		
1. salary		
2. income other than salary		
3. family/friend		
4. savings, pension		
5. disability benefits, social security		
6. unemployment insurance		
7. public assistance		
8. other_____		
(Put # in space at right)	___	( ) 628

Mortimer-Filkins Interview (continued)

Interview

(|) or (R)

- About how much was your total family income in the past year? (gross)

  1. $ 2,000 or less
  2. 2,000 - 3,999
  3. 4,000 - 5,999
  4. 6,000 - 7,999
  5. 8,000 - 9,999
  6. 10,000 -14,999
  7. 15,000 -24,999
  8. 25,000 +

  (Put # in space at right) #___ ( ) 629

  How many children and adults are living on this income?

  1. children #___ ( ) 630
  2. adults (18+) #___ ( ) 632

- How many large debts do you have? #___ ( ) 633

- Do you have close friends that you can confide in?

  1. has no friends Y N ( ) 634
  2. has only casual acquaintances Y N ( ) 635
  3. has close friends (one or more) Y N ( ) 636

- Would you describe yourself as being lonely a good deal of the time? Y N ( ) 637

- Do you feel that your life is difficult to manage and you are not sure how to straighten it out? Y N ( ) 638

- Do you feel that you are a problem drinker? Y N ( ) 639

(|) or (R)

INTERVIEWER'S INITIAL DIAGNOSIS
(THIS SECTION CAN BE FILLED IN AFTER THE INTERVIEW IS OVER)

- Drinking pattern:
  - Has person previously exhibited a pattern of controlled drinking? Y N ( ) 640
  - How experienced is this person at drinking? (select a value from 1, very inexperienced, to 5, very experienced) #___ ( ) 641
- Interviewer's conclusions
  - Do you feel that this drinking situation was unique and unlikely to happen again? Y N ( ) 642
  - Did the client give you evidence of a past behavior pattern of heavy drinking? Y N ( ) 643
  - Do you feel that without any therapeutic intervention he is likely to repeat this drinking behavior within the next 5 years? Y N ( ) 644
- Problem diagnosis:
  1. person has no problems related to drinking
  2. person has a temporary drinking problem
  3. person has a long-standing drinking problem

  (Put # in space at right) #___ ( ) 645
- Interviewer's physical observation of client:
  1. looks older than stated age Y N ( ) 646
  2. looks ill Y N ( ) 647
  3. has a hand tremor Y N ( ) 648
  4. has bloodshot or glassy eyes Y N ( ) 649
  5. has a flushed face Y N ( ) 650
  6. has language difficulty Y N ( ) 651
  7. appears to be markedly below average in intelligence Y N ( ) 652
  8. nicotine stains or blisters on fingers Y N ( ) 653

MICHIGAN ALCOHOLISM SCREENING TEST (MAST)

1.	Do you feel you are a normal drinker?	yes___ no___
2.	Have you ever awakened the morning after some drinking the night before and found that you could not remember a part of the evening?	yes___ no___
3.	Does your wife (or parents) ever worry or complain about your drinking?	yes___ no___
4.	Can you stop drinking without a struggle after one or two drinks?	yes___ no___
5.	Do you ever feel guilty about your drinking?	yes___ no___
6.	Do friends or relatives think you are a normal drinker?	yes___ no___
7.	Are you always able to stop drinking when you want to?	yes___ no___
8.	Have you ever attended a meeting of Alcoholics Anonymous (AA)?	yes___ no___
9.	Have you gotten into physical fights when drinking?	yes___ no___
10.	Has drinking ever created problems between you and your wife?	yes___ no___
11.	Has your wife (or other family members) ever gone to anyone for help about your drinking?	yes___ no___
12.	Have you ever lost friends or girlfriends because of your drinking?	yes___ no___
13.	Have you ever gotten into trouble at work because of drinking?	yes___ no___
14.	Have you ever lost a job because of drinking?	yes___ no___
15.	Have you ever neglected your obligations, your family, or your work for two or more days in a row because you were drinking?	yes___ no___

Michigan Alcoholism Screening Test (MAST) (continued)

16.	Do you ever drink in the morning?	yes___ no___
17.	Have you ever been told you have liver trouble? Cirrhosis?	yes___ no___
18.	Have you ever had Delirium Tremens (D.T.'s), severe shaking, heard voices or seen things that weren't there after heavy drinking?	yes___ no___
19.	Have you ever gone to anyone for help about your drinking?	yes___ no___
20.	Have you ever been in a hospital because of drinking?	yes___ no___
21.	Have you ever been a patient in a psychiatric hospital or in a psychiatric ward of a general hospital where drinking was part of the problem?	yes___ no___
22.	Have you ever been seen at a psychiatric or mental health clinic, or gone to a doctor, social worker, or clergyman for help with an emotional problem in which drinking had played a part?	yes___ no___
23.	Have you ever been arrested, even for a few hours, because of drunk behavior? How many times?	yes___ no___
24.	Have you ever been arrested for drunk driving, driving while intoxicated or driving under the influence of alcoholic beverages? How many times?	yes___ no___

BRIEF MICHIGAN ALCOHOLISM SCREENING TEST (MAST)

1.	Do you feel you are a normal drinker?	yes___ no___
2.	Do friends or relatives think you are a normal drinker?	yes___ no___
3.	Have you ever attended a meeting of Alcoholics Anonymous (AA)?	yes___ no___
4.	Have you ever lost friends or girlfriends/boyfriends because of drinking?	yes___ no___
5.	Have you ever gotten into trouble at work because of drinking?	yes___ no___
6.	Have you ever neglected your obligations, your family, or your work for two or more days in a row because you were drinking?	yes___ no___
7.	Have you ever had delirium tremens (DT's), severe shaking, heard voices or seen things that weren't there after heavy drinking?	yes___ no___
8.	Have you ever gone to anyone for help about your drinking?	yes___ no___
9.	Have you ever been in a hospital because of drinking?	yes___ no___
10.	Have you ever been arrested for drunk driving or driving after drinking?	yes___ no___

ALCADD TEST

1.	I like to swim.	yes___ no___
2.	I am a good dancer.	yes___ no___
3.	I like to read detective stories.	yes___ no___
4.	I enjoy watching a football game.	yes___ no___
5.	I would rather go to a dinner or banquet than drink.	yes___ no___
6.	Drinking speeds up life for me.	yes___ no___
7.	I need a drink or two to get started in my work.	yes___ no___
8.	I often take a drink or two in the middle of the afternoon.	yes___ no___
9.	I drink only to join the fun.	yes___ no___
10.	I drink at regular times.	yes___ no___
11.	I drink because I am unlucky in love.	yes___ no___
12.	I would rather go to a dance than drink.	yes___ no___
13.	Drinking puts me at ease with people.	yes___ no___
14.	I control my drinking at all times.	yes___ no___
15.	I prefer to dine in restaurants which serve drinks.	yes___ no___
16.	I often have the desire to take a drink or two.	yes___ no___
17.	I have good reasons for getting drunk.	yes___ no___
18.	A drink or two is the best way to get quick energy or pep.	yes___ no___
19.	Drinking has changed my personality a good deal.	yes___ no___
20.	I drink entirely too much.	yes___ no___

ALCADD Test (continued)

21.	Drinking disturbs my sleep.	yes___ no___
22.	I drink to get over my feelings of inferiority.	yes___ no___
23.	I drink about a pint or more of whiskey a week.	yes___ no___
24.	I drink because I am unhappy or sad.	yes___ no___
25.	I drink because I like to drink and want to drink.	yes___ no___
26.	I would rather attend a lecture or concert than drink.	yes___ no___
27.	I drink much more now than five years ago.	yes___ no___
28.	Some of my best friends are heavy drinkers.	yes___ no___
29.	I drink to make life more pleasant.	yes___ no___
30.	I take a drink or two before a date.	yes___ no___
31.	A drink or two before a conference, interview, or social affair helps me very much.	yes___ no___
32.	I often go to a cheaper neighborhood to do my drinking.	yes___ no___
33.	I get drunk about every pay-day.	yes___ no___
34.	I drink because it braces or lifts me up.	yes___ no___
35.	I need the friendship I find in drinking places.	yes___ no___
36.	It is necessary for some people to drink.	yes___ no___
37.	After a few drinks, I swear easily.	yes___ no___
38.	When I am sober, I feel bored and restless.	yes___ no___

ALCADD Test (continued)

39.	I drink whenever I have the chance.	yes___ no___
40.	I drink to ease my pain.	yes___ no___
41.	I go on a bender or binge at least once a month.	yes___ no___
42.	I usually pass out after I start drinking.	yes___ no___
43.	I often have pleasant burning sensations in my throat.	yes___ no___
44.	I drink too fast.	yes___ no___
45.	I often have blackouts when I am drinking.	yes___ no___
46.	I drink because it takes away my shyness.	yes___ no___
47.	I get high about once or twice a week.	yes___ no___
48.	I drink often at irregular times.	yes___ no___
49.	I take a drink or two when I feel happy.	yes___ no___
50.	I drink to relax.	yes___ no___
51.	I need a drink or two in the morning.	yes___ no___
52.	I drink to forget my sins.	yes___ no___
53.	I take a drink or two every day.	yes___ no___
54.	I would rather drink alone than with others.	yes___ no___
55.	I drink to forget my troubles.	yes___ no___
56.	My family thinks I drink too much.	yes___ no___
57.	I go on a week-end drunk now and then.	yes___ no___
58.	People who never drink are dull company.	yes___ no___
59.	My friends think I am a heavy drinker.	yes___ no___

ALCADD Test (continued)

60.	My father is (or was) a heavy drinker.	yes___ no___
61.	I would rather go to a movie than drink.	yes___ no___
62.	I go on a spree every few months and stay drunk for a few days.	yes___ no___
63.	All people who drink get drunk at some time or another.	yes___ no___
64.	A spree gives me a wonderful feeling of release and freedom.	yes___ no___
65.	Almost from the very first drink I took, I had a strong craving for alcohol which nearly always led to my getting drunk.	yes___ no___

ORIGINAL THIRTY-FIVE QUESTIONS
BY ROBERT V. SELIGER, M.D.

1.	Do you require a drink the next morning?	yes___ no___
2.	Do you prefer to drink alone?	yes___ no___
3.	Do you lose time from work due to drinking?	yes___ no____
4.	Is your drinking harming your family in any way?	yes___ no___
5.	Do you need a drink at a definite time daily?	yes___ no___
6.	Do you get the inner shakes unless you continue drinking?	yes___ no___
7.	Has drinking made you irritable?	yes___ no___
8.	Does it make you careless of your family's welfare?	yes___ no___
9.	Have you become jealous of your husband or wife since drinking?	yes___ no___
10.	Has drinking changed your personality?	yes___ no___
11.	Does it cause you body complaints?	yes___ no___
12.	Does it make you restless?	yes___ no___
13.	Does it cause you to have difficulty in sleeping?	yes___ no___
14.	Has it made you more impulsive?	yes___ no___
15.	Have you less self-control since drinking?	yes___ no___
16.	Has your initiative decreased?	yes___ no___
17.	Has your ambition decreased?	yes___ no___
18.	Do you lack perseverance in pursuing a goal since drinking?	yes___ no___

Original Thirty-five Questions by Robert V. Seliger, M.D. (continued)

19. Do you drink to obtain social ease? (In shy, timid, self-conscious individuals.) yes___ no___

20. Do you drink for self-encouragement? (In persons with feelings of inferiority.) yes___ no___

21. To relieve marked feelings of inadequacy? yes___ no___

22. Has your sexual potency suffered since drinking? yes___ no___

23. Do you show marked dislikes and hatreds? yes___ no___

24. Has your jealousy, in general, increased? yes___ no___

25. Do you show marked moodiness as a result of drinking? yes___ no___

26. Has you efficiency decreased? yes___ no___

27. Has drinking made you more sensitive? yes___ no___

28. Are you harder to get along with? yes___ no___

29. Do you turn to an inferior environment while drinking? yes___ no___

30. Is drinking endangering your health? yes___ no___

31. Is it affecting your peace of mind? yes___ no___

32. Is it making your home life unhappy? yes___ no___

33. Is it jeopardizing your business? yes___ no___

34. Is it clouding your reputation? yes___ no___

35. Is drinking disturbing the harmony of your life? yes___ no___

REVISED VERSION OF QUESTIONS
BY ROBERT V. SELIGER, M.D.

1.	Do you need a drink at a definite time every day?	yes___ no___
2.	Do you prefer to drink alone?	yes___ no___
3.	Do you, in the morning, crave a "hair of the dog that bit you"?	yes___ no___
4.	Is your drinking harming your family in any way?	yes___ no___
5.	Do you get the inner shakes unless you continue drinking?	yes___ no___
6.	Is your drinking hurting your reputation?	yes___ no___
7.	Do you lose time from work due to drinking?	yes___ no___
8.	Has it make you careless of your family's welfare?	yes___ no___
9.	Have you, since drinking, become jealous of your husband or wife?	yes___ no___
10.	Has yourinitiative, ambition, or perseverance decreased?	yes___ no___
11.	Do you drink to relieve feelings of inadequacy?	yes___ no___
12.	Has your drinking made you more sensitive?	yes___ no___
13.	Is it endangering your health?	yes___ no___
14.	Do you turn to an inferior environment while drinking?	yes___ no___
15.	Do you show marked moodiness as a result of your drinking?	yes___ no___
16.	Has your drinking made you harder to get along with?	yes___ no___
17.	Is it making your home life unhappy?	yes___ no___

Revised Version of Questions By Robert V. Seliger, M.D. (continued)

18.	Is it jeopardizing your job, or hurting your business or professional career?	yes___ no___
19.	Has it made you irritable?	yes___ no___
20.	Is it affecting your peace of mind?	yes___ no___

"JOHNS HOPKINS" QUESTIONS

1.	Do you lose time from work due to drinking?	yes___ no___
2.	Is drinking making your home life unhappy?	yes___ no___
3.	Do you drink because you are shy with other people?	yes___ no___
4.	Is drinking affecting your reputation?	yes___ no___
5.	Have you ever felt remorse after drinking?	yes___ no___
6.	Have you gotten into financial difficulties as a result of drinking?	yes___ no___
7.	Do you turn to lower companions and an inferior environment when drinking?	yes___ no___
8.	Does your drinking make you careless of your family's welfare?	yes___ no___
9.	Has your ambition decreased since drinking?	yes___ no___
10.	Do you crave a drink at a definite time daily?	yes___ no___
11.	Do you want a drink the next morning?	yes___ no___
12.	Does drinking cause you to have difficulty in sleeping?	yes___ no___
13.	Has your efficiency decreased since drinking?	yes___ no___
14.	Is drinking jeopardizing your job or business?	yes___ no___
15.	Do you drink to escape from worries or trouble?	yes___ no___
16.	Do you drink alone?	yes___ no___
17.	Have you ever had a complete loss of memory as a result of drinking?	yes___ no___

"Johns Hopkins" Questions (continued)

18. Has your physician ever treated you for drinking? yes___ no___

19. Do you drink to build up your self-confidence? yes___ no___

20. Have you ever been to a hospital or institution on account of drinking? yes___ no___

NATIONAL COUNCIL ON ALCOHOLISM QUESTIONS

1.	Do you occasionally drink heavily after a disappointment, a quarrel, or when the boss gives you a hard time?	yes___ no___
2.	When you have trouble or feel under pressure, do you always drink more heavily than usual?	yes___ no___
3.	Have you noticed that you are able to handle more liquor than you did when you were first drinking?	yes___ no___
4.	Did you ever wake up on the "morning after" and discover that you could not remember part of the evening before, even though your friends tell you that you did not "pass out"?	yes___ no___
5.	When drinking with other people, do you try to have a few extra drinks when others will not know it?	yes___ no___
6.	Are there certain occasions when you feel uncomfortable if alcohol is not available?	yes___ no___
7.	Have you recently noticed that when you begin drinking you are in more of a hurry to get the first drink than you used to be?	yes___ no___
8.	Do you sometimes feel a little guilty about your drinking?	yes___ no___
9.	Are you secretly irritated when your family or friends discuss your drinking?	yes___ no___
10.	Have you recently noticed an increase in the frequency of your memory "blackouts"?	yes___ no___
11.	Do you often find that you wish to continue drinking after your friends say they have had enough?	yes___ no___
12.	Do you usually have a reason for the occasions when you drink heavily?	yes___ no___

National Council on Alcoholism Questions (continued)

13.	When you are sober, do you often regret things you have done or said while drinking?	yes___ no___
14.	Have you tried switching brands or following different plans for controlling your drinking?	yes___ no___
15.	Have you often failed to keep the promises you have made to yourself about controlling or cutting down on your drinking?	yes___ no___
16.	Have you ever tried to control your drinking by making a change in jobs, or moving to a new location?	yes___ no___
17.	Do you try to avoid family or close friends while you are drinking?	yes___ no___
18.	Are you having an increasing number of financial and work problems?	yes___ no___
19.	Do more people seem to be treating you unfairly without good reason?	yes___ no___
20.	Do you eat very little or irregularly when you are drinking?	yes___ no___
21.	Do you sometimes have the "shakes" in the morning and find that it helps to have a little drink?	yes___ no___
22.	Have you recently noticed that you cannot drink as much as you once did?	yes___ no___
23.	Do you sometimes stay drunk for several days at a time?	yes___ no___
24.	Do you sometimes feel very depressed and wonder whether life is worth living?	yes___ no___
25.	Sometimes after periods of drinking, do you see or hear things that aren't there?	yes___ no___
26.	Do you get terribly frightened after you have been drinking heavily?	yes___ no___

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