If you have issues viewing or accessing this file contact us at NCJRS.gov.

PB 295 704

DOT HS 804 248

SD: ASAP ANALYTIC STUDY NO. 5/6 - 1976
AN ANALYSIS OF DRINKER DIAGNOSIS, REFERRAL, AND REHABILITATION ACTIVITY

M. D. OLSHAN
P. B. KRAUSE
V. W. ELLINGSTAD

HUMAN FACTORS LABORATORY
DEPARTMENT OF PSYCHOLOGY
UNIVERSITY OF SOUTH DAKOTA
VERMILLION, SD 57069

Contract No. DOT HS-045-1-061
Contract Amt. $2,096,521

PRINTED APRIL 1979
FINAL REPORT

cument is available to the U.S. public through the
National Technical Information Service,
Springfield, Virginia 22161

Prepared For
U.S. DEPARTMENT OF TRANSPORTATION
tional Highway Traffic Safety Administration
Washington, D.C. 20590

7481

This document is disseminated under the sponsorship of the Department of Transportation in the interest of information exchange. The United States Government assumes no liability for its contents or use thereof.

Technical Report Documentation Page

1. Report No.	2. Government Accession No.	3. Recipient's Catalog No.
DOT HS 804 248		

4. Title and Subtitle	5. Report Date
SD:ASAP Analytic Study No. 5/6 - 1976 An Analysis of Drinker Diagnosis, Referral, And Rehabilitation Activity	June, 1976
	6. Performing Organization Code
	8. Performing Organization Report No.

7. Author(s)	
M. D. Olshan, P. B. Krause, V. W. Ellingstad	

9. Performing Organization Name and Address	10. Work Unit No. (TRAIS)
Human Factors Laboratory Department of Psychology University of South Dakota Vermillion, SD 57069	11. Contract or Grant No. DOT-HS-045-1-061
	13. Type of Report and Period Covered Final Report 1/1/72 - 12/31/75
12. Sponsoring Agency Name and Address Office of Driver and Pedestrian Programs U. S. Department of Transportation, NHTSA 400 Seventh Street, S.W. Washington, D.C. 20590	14. Sponsoring Agency Code

15. Supplementary Notes

NCJRS
JAN 8 1981
ACQUISITIONS

16. Abstract

This study examines the activities of pre-sentence investigation, drinker diagnosis, alcohol treatment referral, and rehabilitation countermeasures of the South Dakota Alcohol Safety Action Project over the four year operational period from 1972 through 1975.

During the operational period, a total of 8,800 persons (76% of the DWI convictions) were referred by the courts to SD:ASAP for pre-sentence investigation and drinker diagnosis. Eighty per cent of the diagnosed cases were subsequently referred to some form of alcohol treatment/driver reeducation rehabilitation modality of which 60% ultimatley completed their assigned treatment program.

An analysis of the drinker diagnosis procedures showed the reliability (consistency) of the resulting drinker classes to be largely dependent on the person making the final diagnostic decision, but that the system could be easily improved by establishing standards for weighting the various pre-sentence investigation input variables.

DWI recidivism was used as a standard to evaluate the effectiveness of the rehabilitation programs and no evidence could be found that any of the treatment programs was effective in modifying drunk driving behavior.

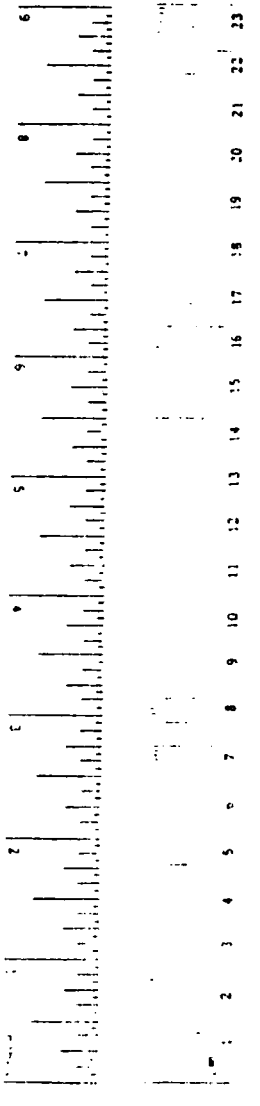
17. Key Words	18. Distribution Statement
Traffic Safety, ASAP, alcohol rehabilitation, DWI, pre-sentence investigation	

19. Security Classif. (of this report)	20. Security Classif. (of this page)	21. No. of Pages	22. Price
		158	

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



Approximate Conversions from Metric Measures

Symbol	When You Know	Multiply by	To Find	Symbol
		LENGTH		
mm	millimeters	0.04	inches	in
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

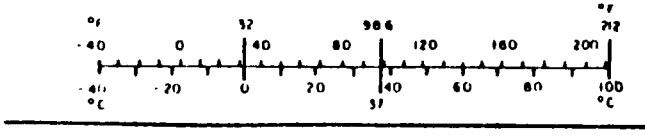


TABLE OF CONTENTS

Table of Contents (Continued) Page

LIST OF ILLUSTRATIONS

List of Illustrations (Continued)

LIST OF TABLES

List of Tables (Continued)

List of Tables (Continued)

List of Tables (Continued)

INTRODUCTION

The introduction of alcohol traffic safety countermeasures directed toward the re-education and rehabilitation of problem drinker drivers, in lieu of or in addition to traditional legal sanctions, has required that the traffic safety system be expanded to provide for the identification of those individuals requiring this type of intervention. Additionally, it has become necessary to develop procedures to match particular individuals to the forms of rehabilitative intervention most likely to effect change in their drinking-driving behavior. Thus, traffic safety agencies and the courts have assumed responsibility for a variety of diagnostic, referral, and even alcohol treatment activities traditionally thought of as belonging in the domain of medical and mental health treatment facilities.

DECISION/TREATMENT ORGANIZATION AND PROCEDURES

Within the South Dakota Alcohol Safety Action Project (SD:ASAP), responsibility for drinker diagnosis and referral functions rests with the Decision/Treatment Processes (D/TP) subsystem of the project. Since neither the court systems in the state nor other state and local agencies provided these services prior to the implementation of SD:ASAP, it was necessary in the development of the project to organize a special unit for this purpose. Thus the D/TP subsystem is administered by the SD:ASAP but functions within the context of the state-wide court system. This SD:ASAP subsystem is responsible for the conduct of presentence investigations (PSI) on all individuals convicted of Driving While under the Influence of alcohol (DWI) (and for whom a PSI is requested) within the courts of the state. As a consequence of this PSI activity, the D/TP subsystem effects a drinker-type diagnosis for every individual on whom the PSI is made and formulates re-education and rehabilitation recommendations on individuals for whom such countermeasures are considered appropriate.

Several structural and staffing changes in the D/TP subsystem were occasioned by the reorganization of the South Dakota court system on January 7, 1975. The reorganization combined the 10 circuit, 19 district-county, and 3 municipal courts into one unified statewide court system. In effect, all courts in South

Dakota (except tribal courts) became part of a single system organized into 9 judicial circuits (or districts). The geographic boundaries of these 9 districts are shown in Figure 1. To accomodate the new court system, a plan was formulated to reorganize the D/TP field offices so that there would be one field office in each judicial district.

The current D/TP subsystem consists of a central office located in Pierre, and nine field offices located throughout the State. The central office is staffed by the D/TP Coordinator and appropriate staff/clerical personnel, while each field office is staffed by one courtworker except for Sioux Falls with two courtworkers, and Rapid City which is currently manned by three courtworkers.

The basic responsibilities of the D/TP Coordinator are as follows:

1. Supervision of the activities of the courtworkers.
2. Obtaining Department of Motor Vehicles (DMV) drivers license records for inclusion in the PSI.
3. Scoring of Mortimer-Filkins Questionnaire and Interview.
4. Consolidation of all PSI information.
5. Rendering final drinker type diagnosis and making final treatment referral recommendations.
6. Preparing formal presentence investigation reports to the court.
7. Maintaining liaison with other SD:ASAP subsystems (Law Enforcement, Public Information and Education, and Evaluation) and cooperating referral agencies.

Each of the field office courtworkers is basically responsible for:

1. The conduct of the field investigations contributing to the overall PSI.
2. Maintaining liaison with the court(s) to which he is assigned.
3. Formulation of initial drinker diagnosis and referral recommendations.

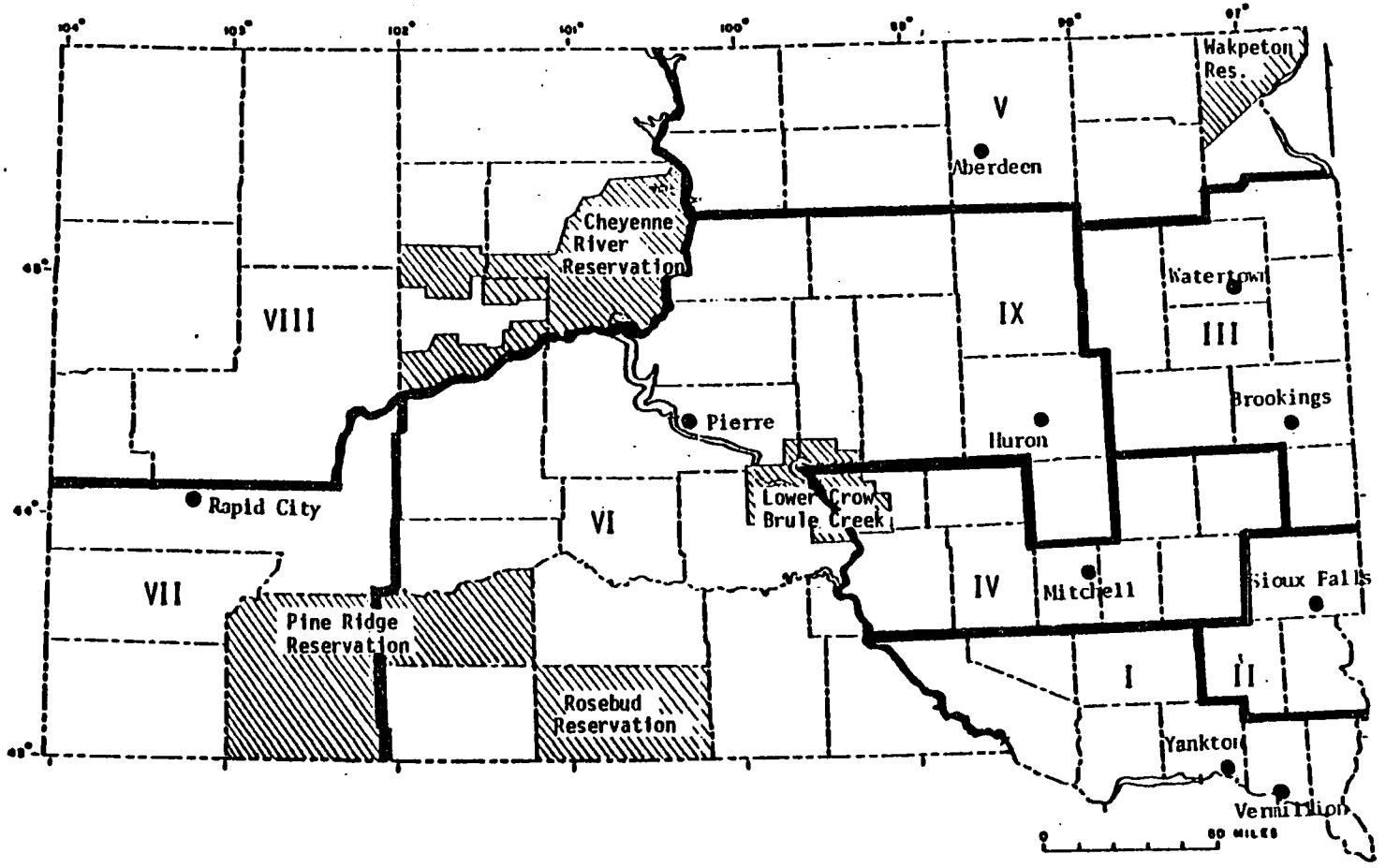


FIGURE 1. JUDICIAL CIRCUIT UNDER THE UNIFIED STATE COURT SYSTEM WHICH BECAME OPERATIONAL ON JANUARY 7, 1975

4. Conduct of Problem Drinker Driver Classes.

5. Conduct of courtworker counseling.

6. Arranging for the implementation of specific rehabilitation referrals ordered by the courts.

7. Conduct initial Life Activity Inventory interviews, and subsequent 6, 12 and 18 month follow-up interviews.

D/TP involvement with the traffic safety and court systems was initiated subsequent to convictions on a DWI charge. During the entire initial 3 year SD:ASAP operational period, only those persons convicted of DWI were potential candidates for entry into the D/TP subsystem. During the first half of 1975, however, a number of courts began referring persons charged with DWI, but convicted of a reduced charge such as reckless driving.

Once an individual has been arrested for DWI, he is brought into the court system for arraignment. If convicted, he may be referred to a SD:courtworker for the initiation of the PSI.

DRINKER DIAGNOSIS

The PSI, which culminates in both drinker diagnosis and referral recommendations, is basically a two-part process involving both the courtworker and the D/TP central staff. The PSI is initiated by the courtworker who monitors the court calendar of each of the courts to which he is assigned. When an individual is convicted of DWI or a reduced charge and is referred for presentence investigation, the courtworker receives a copy of the arrest record and generally makes first contact with the defendant before he leaves the courtroom in order to make arrangements for the completion of a client interview and the administration of the Mortimer-Filkins Questionnaire. The name of the individual is then phoned to the D/TP Central Office in Pierre where a case folder is begun.

At this point, the D/TP office requests a copy of the individual's driver license jacket (previous traffic offense record) from the South Dakota Department of Motor Vehicles, and this information is added to the client's file.

The courtworkers field investigation basically consists of a series of interviews. The Mortimer-Filkins Questionnaire and Interview are administered to each client, and additional interviews with the client's family, friends, and employers are conducted at the discretion of the individual courtworker. The courtworker also contacts the local police departments for a check of any driving and criminal arrest history, and, may check any local social and/or health agencies with which the client may have come in contact.

Once the field investigative procedures have been completed, the courtworker reviews and summarizes the information obtained. On the basis of this information, a determination is made as to the severity of the client's problem with alcohol and an initial treatment referral recommendation is made. It should be noted that, although the courtworkers have the information contained in the Mortimer-Filkins Questionnaire and Interview available to them at the time they make their initial treatment recommendation, the actual scoring of these instruments is not made until the documents reach the D/TP central office.

When the courtworker completes the field portion of the PSI, the information obtained, along with his summary and initial treatment recommendation, are sent to the D/TP office. The D/TP office then scores the Mortimer-Filkins Questionnaire and Interview and collates all materials into the client's case file. Once all pertinent materials have been collected, scored, and inserted in the client's file, the D/TP Coordinator reviews the complete case file and determines the final drinker type classification and treatment referral recommendation.

In summary, the D/TP Coordinator has at his disposal to make the final referral recommendation, the following materials and information:

1. Current arrest report - (LE-1 Form)
2. Department of Motor Vehicles record check
3. Local law enforcement agency record check
4. Completed Mortimer-Filkins Questionnaire and Interview
5. Mortimer-Filkins Questionnaire and Interview scores

6. Summary of "outside" interviews (family, friends and employer)

7. Local social and/or health agency check (if appropriate)

8. Courtworker case summary

9. Courtworker's initial treatment referral recommendation

On the basis of all available information, the D/TP coordinator makes a final drinker type diagnosis and a final recommendation relative to referral. The drinker classification system utilized in the SD:ASAP represents an expansion of the National Highway Traffic Safety Administration (NHTSA) classification guidelines. Drinker Type 1 (Social Drinker) corresponds to the NHTSA category Non-problem Drinker. Drinker types 2 (Problem Drinker), 3 (Serious Problem Drinker), and 4 (Chronic Alcoholic) correspond to NHTSA category Problem Drinker. Cases for which too little information is available to determine drinker type (as well as cases for which drinker type was not communicated to evaluation) are coded as Unidentified. The principal variance between the SD:ASAP classification system and the NHTSA system is, therefore, simply accounted for by an expansion of the NHTSA Problem Drinker category to allow for a finer estimate of the seriousness of drinking problem.

An addition to the normal pre-sentence investigation procedure introduced in 1974, involved the incorporation of the Life Activities questionnaire in the PSI. Effective April 1, 1974 the Life Activities Inventory, currently employed by the Office of Driver and Pedestrian Programs for the evaluation of Short Term Rehabilitation, was administered as part of the PSI procedure. It must be noted, however, that although incorporated within the PSI, this instrument serves as a proxy measure to recidivism in the evaluation of rehabilitation effectiveness and is not utilized as a diagnostic indicator with respect to initial drinker type and subsequent treatment recommendations.

Beginning July 1974, mechanisms were established to initiate follow-up interviews of individuals referred to rehabilitation in control groups, utilizing the Life Activities Inventory. Clients received follow-up interviews at 6, 12 and 18 month intervals subsequent to the initial PSI interview. This allows for the comparison

of pre-treatment and post-treatment scores to assess any changes in the client's life status. Each courtworker conducted approximately 15 six month, 15 twelve month and 15 eighteen month follow-up interviews per month. Interviews were conducted for all clients referred to inpatient modalities and for all clients selected for the control group. A randomly selected subset of cases referred to other treatment groups were also selected for follow-up interviews. The actual number of follow-up interviews conducted each month was dependent upon the number of new PSI's to be conducted, the number of courtworkers available for interviewing, the overall case-load for each courtworker, the number of clients available for the particular follow-up interview, and the geographic location of individual clients.

In December, 1975 SD:ASAP was selected as a site for the Office of Driver and Pedestrian Program Short Term Rehabilitation (STR) Evaluation Project. Since the administration of the Life Activities Inventory (designed specifically for the STR project) was already incorporated within the SD:ASAP operating procedures, the basic SD:ASAP system was not altered.

TREATMENT/CONTROL GROUP REFERRAL AND FOLLOW-UP

The final drinker classification and referral recommendation are incorporated into a formal summary of the PSI which is transmitted to the responsible courtworker for review. It is then presented to the court prior to the scheduled sentence date. The interval between conviction and sentencing (during which the PSI was conducted) is ordinarily of one to two weeks duration.

After receiving the formal PSI report, the court may accept all, part or none of the treatment recommendation. If the court does not accept any of the treatment recommendations, SD:ASAP's involvement with the client ends. If the judge accepts one or more of the treatment recommendations, the courtworker makes the arrangements necessary to initiate the particular form of re-education or rehabilitation to which the client is sentenced.* The courtworker at this point completes a sentence report form which is sent to the central D/TP office and entered into the client's case file.

---

*South Dakota does not have probation for DWI. All treatment referrals are made part of the judicial sentence rather than a condition of probation.

Subsequent to sentencing, the courtworker is responsible for following the client through his particular treatment program. If the client fails to comply with the terms of his sentence at any time, this non-compliance is brought to the attention of the court, at which time a bench warrant is generally issued. It is important to note that the SD:ASAP courtworkers are not officers of the court and do not serve in the capacity of probation officers. Instead, the entire D/TP subsystem serves as a cooperating agency whose services are made available to the courts.

It is important to note that referral to an ASAP affiliated treatment program is in addition to the normally imposed punitive sanctions. Depending on previous DWI offenses the state law allows for a range of jail sentence of up to three years, a fine of up to $500 and loss of driving privileges as may be determined by the court.

Table 1 shows the category of jail sentence and fine actually imposed on convicted DWIs, both for those referred to ASAP and for those not referred. The distribution of these punitive sanctions is approximately the same for both groups, that is, there is no evidence to indicate that the not referred group gets a harsher jail sentence and/or fine than do the ASAP referrals. Whatever fine is sentenced is seldom suspended; however, the most common jail sentence is 30 days (55% of the total cases) and it is almost always suspended. The jail sentence suspension is used as an incentive either to comply with ASAP or not to commit another drunk driving offense.

As of January 1, 1974 a change in operating procedure was established which allowed for the random selection of D/TP clients for inclusion in a rehabilitation control group. This procedure was applied to social, problem and serious problem drinkers who were <u>not</u> recommended for referral to inpatient treatment. In those courts participating in the control group procedure,* 20% of those individuals not diagnosed as chronic alcoholics or recommended for referral to inpatient treatment were assigned to a no-treatment control group. The actual selection was made by evaluation personnel and consisted of simple random assignment. This assignment was made subsequent to the conduct of all phases of the PSI, and after drinker-type diagnosis and referral recommendations

---

*Courts in Rapid City, Mitchell, Brookings, Huron, Vermillion, Yankton, and Sisseton adopted this procedure in 1974.

TABLE 1. CATEGORY OF JAIL AND FINE IMPOSED BY THE COURT FOR ASAP REFERRALS AND NON-REFERRALS (1972 - 1974)

JAIL

	Referred		Not Referred	
0 days	4588	(93.5)	776	(92.6)
1 - 10 days	83	(1.7)	11	(1.3)
11 - 20 days	21	(0.4)	2	(0.2)
21 - 30 days	157	(3.2)	29	(3.5)
31 - 40 days	6	(0.1)	0	(0.0)
41 - 50 days	3	(0.1)	2	(0.2)
51 - 60 days	27	(0.6)	7	(0.8)
More Than 60 Days	20	(0.5)	11	(1.3)
TOTAL	4905		838	

FINE

	Referred		Not Referred	
$0	1163	(23.6)	216	(25.7)
$1 - $75	342	(6.9)	41	(4.9)
$76 - $125	1186	(24.1)	181	(21.5)
$126 - $175	1559	(31.7)	313	(37.3)
$176 - $225	260	(5.3)	51	(6.1)
$226 - $275	369	(7.5)	31	(3.6)
$276 - $325	24	(0.5)	2	(0.2)
More Than $325	18	(0.4)	6	(0.7)
TOTAL	4921		840	

had been formulated by the D/TP central office. Upon notice of random assignment to the control group, the D/TP office withheld the PSI summary and referral recommendation and transmitted an abbreviated PSI summary and notice of control group assignment to the responsible courtworker and judge. Courts participating in this procedure agreed to withhold any form of re-education or rehabilitation referral for those clients selected for the control group.

REHABILITATION/RE-EDUCATION RESOURCES

SD:ASAP funds two short term re-education modalities, Driver Improvement School (DIS) and Problem Drinker Driver Classes (PDDC). A third SD:ASAP funded modality, Courtworker Counseling, receives so few referrals from the courts that it is of little practical significance from the standpoint of evaluation. All other referral resources are community based outpatient and inpatient treatment facilities and local chapters of Alcoholics Anonymous (AA). SD:ASAP neither funds nor controls these community alcohol treatment facilities. However, a large number of agencies have voluntarily agreed to accept court referrals and have, in general, cooperated with SD:ASAP in arranging these referrals.

A referral system utilizing a large number of autonomous and geographically dispersed treatment agencies presents certain problems for evaluation. It is extremely difficult to obtain information about the precise nature and exact duration of treatment or even the qualification of therapists. This difficulty is compounded when SD:ASAP referrals are exposed to several treatment programs each conducted by a different agency.

With the above mentioned complications in mind, the basic treatment modalities receiving SD:ASAP referrals are described below. Although each of the rehabilitation modalities involve approaches to the treatment of alcohol problems, a common characteristic of each of the SD:ASAP treatment counter-measures except DIS is an explicit orientation toward AA principles.

Individual treatment summary tables can be found in the Appendix.

Problem Drinker Driver Classes

PDDC is an alcohol safety school designed primarily for problem drinkers, although a substantial number of

non-problem drinkers are referred to this modality. PDDC is conducted by SD:ASAP courtworkers with strong AA orientation and experience working with alcoholics and persons with less advanced drinking problems. For problem drinkers recommended for more intensive treatment, PDDC serves as a transition modality. When appropriate, PDDC instructors attempt to abate client hostility toward further treatment and to encourage client acceptance of alcohol dependency. Thus PDDC is often recommended in combination with other modalities such as AA and out-patient treatment.

For all participants, whether or not recommended for additional treatment, PDDC functions as a short term re-education modality with the stated objective of preparing the convicted individual to determine whether his or her drinking pattern is that of a problem drinker or alcoholic, and to create awareness of the consequences of alcohol abuse. PDDC is organized into four sessions, one 1½ hour session per week. The average session size is approximately 9, with a range of from 3 or 4 to 17 or 18. The typical approach of the courtworker/instructors is to combine didactic instruction with group discussion. There is usually one film shown per session.

SD:ASAP implemented a new PDDC curriculum beginning in July, 1975. The new curriculum is basically the Vermont ASAP Crash School workbook adapted for use in South Dakota. The organization of PDDC remained unchanged except for the addition of a formal one hour, individual counseling session for selected clients.

Driver Improvement School

DIS is a re-education program designed primarily for the non-problem drinker (SD:ASAP classification 1, social drinker). It is a one session course, lasting approximately 1½ hours, and is taught by the SD:ASAP courtworkers. The course can best be characterized as a didactic/instructional presentation of factual information primarily in a lecture format. Although group discussion is encouraged within the course, this type of interchange tends to be restricted to the factual content of the course materials and not directed toward resolution of social/emotional problems of participants. Because of the didactic orientation of DIS and because few problem drinkers are referred to this modality, DIS does not perform the function of a transition modality as does PDDC.

Inpatient Treatment

A total of 13 inpatient alcohol treatment programs were available for SD:ASAP-identified and court-referred problem drinkers during the 4 year operational period. These programs served strictly as referral resources within the state, and did not receive funding from SD:ASAP. Costs of treatment at these installations were borne by the client or non-ASAP agencies such as the S. D. Department of Vocational Rehabilitation. Inpatient programs ranged from four to eight weeks in duration, and ordinarily involved a relatively intensive mix of individual and group counseling and therapy. A marked emphasis on the "AA philosophy" exists in virtually all of these programs. Figure 2 shows the geographic location of inpatient facilities used as referral resources by SD:ASAP.

Outpatient Treatment

A total of 27 facilities received SD:ASAP court referrals and provided alcohol counseling and therapy on an outpatient basis. As with the inpatient treatment programs, outpatient programs are heavily committed to the AA philosophy. Treatment in these installations was typically of about the same duration as inpatient treatment, and also involved a mix of individual counseling and group therapy. Figure 2 shows the location of the most frequently employed of these resources.

Alcoholics Anonymous

South Dakota has a relatively extensive network of local Alcoholics Anonymous (AA) chapters with 50 dispersed throughout the state. The courtworkers maintained an excellent working relationship with these local chapters and were able to secure referral to AA as both a single referral option or, more frequently, in combination with one or more forms of rehabilitation.

Courtworker Counseling

Although not frequently employed, a small number of clients actually did receive several 1 to 1 counseling sessions from a courtworker. For the majority of these referrals, however, courtworker counseling represented a discussion with the courtworker to determine an appropriate referral for additional treatment. The discussions often came

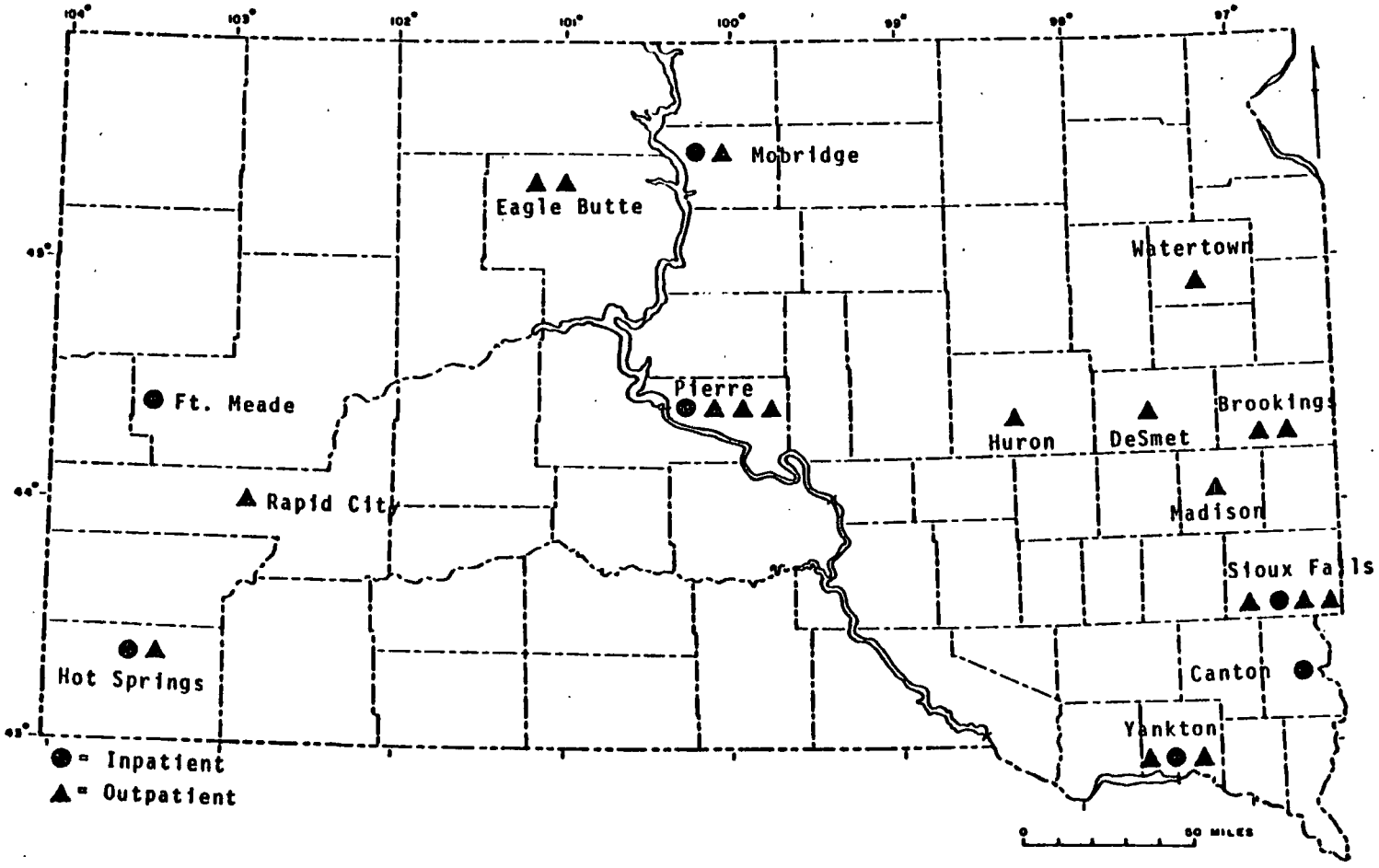


FIGURE 2. INPATIENT AND OUTPATIENT ALCOHOL REFERRAL RESOURCES

after a client had completed PDDC and resulted in referral to another treatment such as AA or outpatient therapy. In effect, the courtworker was performing the function of a referral center.

Chemotherapy

Chemotherapy was employed very infrequently during the original 3 year SD:ASAP operational period. When it was employed it consisted of disulfiram rather than supportive drugs such as tranquilizers.

ASAP SYSTEM FLOW

Figure 3 outlines the client flow through the traffic safety system for the ASAP operational period from January, 1972 through December, 1975. There are two major sources of inaccuracy in counting the number of clients that reach a particular stage in the flow over a fixed period of time. The first source arises from time lags between successive stages, partly caused by an actual backlog and partly due to delays in reporting. The other source is simply bad or missing data and when one considers the number of people collecting, encoding and processing the data a certain percentage of errors are expected. Therefore, although the numbers are made to balance, they should not be taken as a strict accounting of cases passing through the system. They are, however, quite representative of the traffic safety system operations during the four year ASAP operational period.

The conviction rate for those cases with known court disposition was 84%, of which at least 76% were referred to ASAP for pre-sentence investigation. The resulting ASAP treatment recommendation was accepted by the courts in 80% of these cases. However, of the 7043 clients who were ordered by the court to attend an ASAP treatment, only 75% completed the treatment, the remaining 25% either dropped out or simply did not comply with their sentence recommendation. Table 2 is a further breakdown of the four drinker types that completed the major combination treatment modalities.

It is obvious that ASAP accomplished its objective of providing drinker diagnosis and treatment alternatives for a large volume of drunk driving offenders. The major shortcoming in the present system appears to be a lack of effective probationary mechanisms to ensure client compliance with court directed rehabilitation.

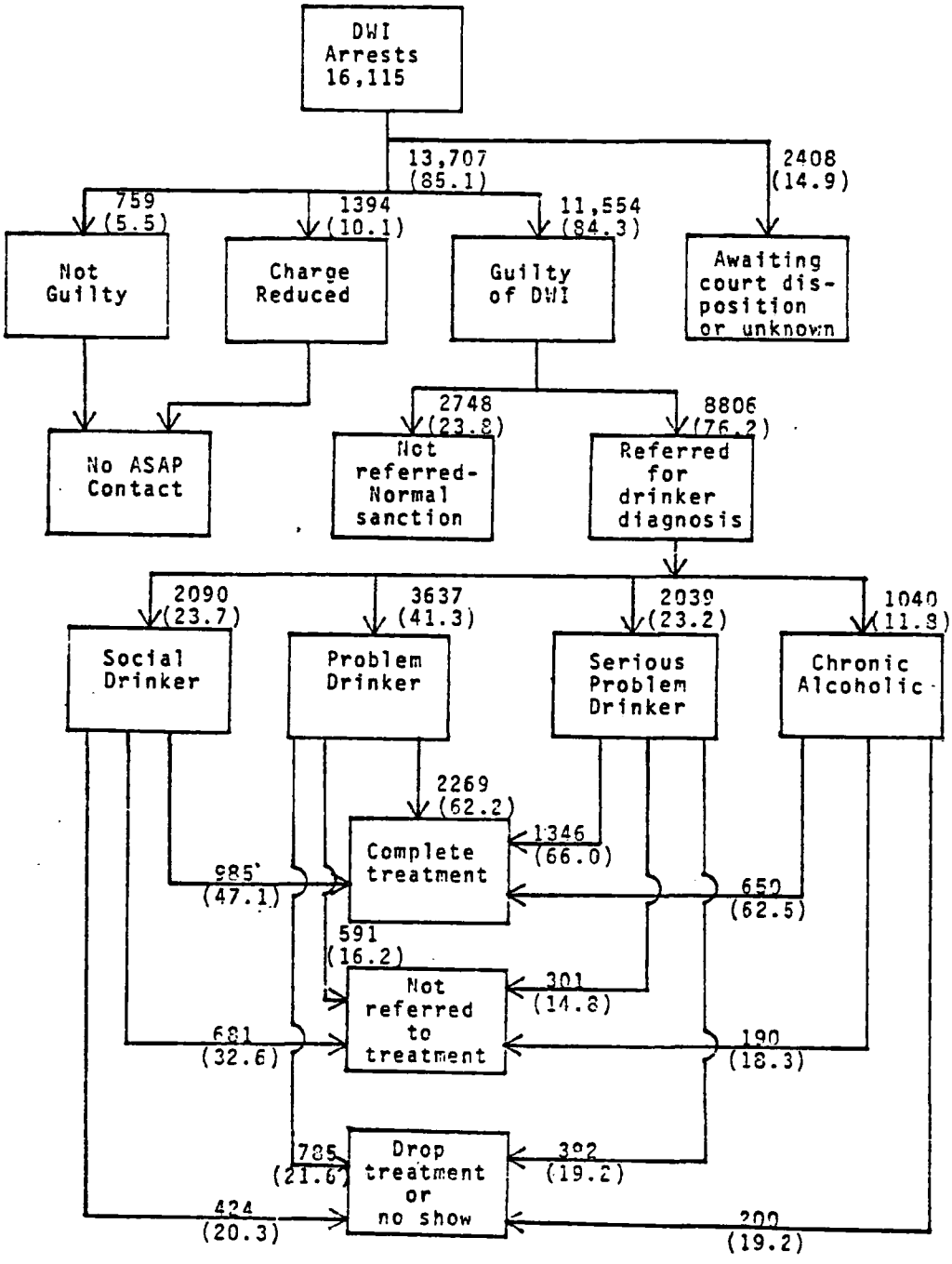


FIGURE 3. CASE FLOW THROUGH THE TRAFFIC SAFETY SYSTEM DURING THE SD:ASAP OPERATIONAL PERIOD, 1972-1975

TABLE 2. ENTRIES TO MAJOR TREATMENT MODALITY BY DRINKER TYPE
(Column percentages in parentheses)

	Social Drinkers	Problem Drinkers	Serious Problem Drinkers	Chronic Alcoholics	Total
Driver Improvement School	446 (45.3)				446 (8.5)
Problem Drinker Driver Classes	389 (39.5)	1729 (76.2)	616 (45.8)	170 (26.2)	2904 (55.3)
PDDC + AA		107 (4.7)	297 (22.1)	105 (16.2)	509 (9.6)
PDDC + Inpatient or Outpatient Treatment		134 (5.9)	319 (23.7)	289 (44.5)	742 (14.1)
Inpatient Treatment				86 (13.2)	86 (1.6)
Control-No Treatment	150 (15.2)	299 (13.1)	114 (8.5)		563 (10.7)
TOTAL	985	2269	1346	650	5250

RESULTS OF THE DIAGNOSTIC PROCESS

The number and percentage of persons classified into each drinker type utilized by the SD:ASAP for each operational year can be found in Table 3. The percentage of individuals classified as problem drinkers remained fairly stable across all four operational years, and consistently the largest of the four groups. It might also be noted that during the first two operational years (1972 and 1973), social drinkers accounted for the second largest drinker classification, however, during 1974 and 1975 this group accounted for the third and fourth largest classification, respectively. During 1975, while the percentage of persons classified as problem and serious problem drinkers remained relatively stable from the preceding year, the percentage of chronic alcoholic classifications virtually doubled during this time. Thus, while the percentage of problem drinkers remained relatively consistent across time, the chances of being classified a social drinker decreased, while the likelihood of being classified a serious problem drinker or chronic alcoholic increased during the four year SD:ASAP operational period. Further investigation of the diagnostic consistency is presented in a later section.

PROFILES OF DRINKER CLASSIFICATIONS

Although relatively objective criteria are employed in drinker diagnosis, it should be recognized that some degree of subjective judgement is part of the diagnostic procedure. It is, therefore, important to describe the characteristics of the drinker classification groups in terms of those variables considered in the diagnostic process. Such a description allows for a clearer understanding of the similarities and differences between drinker classifications in terms of demographic characteristics, arrest histories, and drinking related variables. Although the variables considered in this section do not represent the entire content of a PSI (interview with family, friend, and employer, etc. are difficult to quantify), they do provide a fairly detailed description of each drinker type.

The source for all data used in the present section is the PSI case files. As previuosly mentioned, these files represent data from a variety of sources such as interviews, police record checks, Department of Motor Vehicle

TABLE 3. INDIVIDUALS CLASSIFIED BY EACH DRINKER TYPE ACROSS FOUR YEAR SD:ASAP OPERATIONAL PERIOD.

Drinker Classification	Operational Year 1972	1973	1974	1975	Row Total and Percent of Total N
Social	589 34.9	604 32.4	503 20.2	348 14.0	2044 24.0
Problem	694 41.1	823 44.1	1029 41.2	971 39.2	3517 41.2
Serious Problem	304 18.0	340 18.2	714 28.6	623 25.1	1981 23.2
Alcoholic	102 6.0	98 5.3	250 10.0	536 21.6	986 11.6
COLUMN TOTALS	1689	1865	2496	2478	N = 8528
PERCENT OF TOTAL N	19.8	21.9	29.3	29.0	

Cell contents are:
1) frequency
2) percent of column

drivers license records checks, and arrest reports. Complete data for all cases were not available for all variables utilized in this section, and as a result, the number of cases represented in the following tables will vary according to the completeness of the data for the particular variable of interest.

All analyses in this section are simple cross tabulations of the distribution of a profile variable and drinker classification. The rows in each of the tables represent the distribution of the profile variable, while the columns represent the four drinker classifications employed by SD:ASAP. Although the cross tabulations are primarily descriptive, a chi-square test (χ^2) is offered as an index to assess the relative magnitudes of differences in the distribution of the profile variables between drinker classification groups.

This presentation is designed to allow for a clearer understanding of the similarities and differences between drinker classifications in terms of demographic characteristics, arrest histories and drinking related variables. Because of the large number of variables presented in this section, the variables are grouped under these three general sections; demographic variables, arrest history, and measures related to drinker status.

Demographic Variables

Table 4 displays the distribution of age categories for each drinker classification for the four year SD:ASAP operational period. The median age is 27.15 years for Social drinkers, 29.87 years for Problem drinkers, 36.46 years for Serious Problem drinkers, and 40.00 years for individuals classified as Chronic Alcoholics. A median test between the median ages for the three adjacent drinker classifications revealed statistically significant differences. The difference between Social and Problem drinkers indicated $\chi^2 = 29.337$, df = 1, significant at $p < .001$. The test between Problem and Serious Problem drinkers indicated $\chi^2 = 106.4755$, df = 1, significant at $p < .001$ while the difference between Serious Problem and Chronic Alcoholics revealed $\chi^2 = 19.79$, df = 1, and was also significant at $p < .001$. The tendency for the median age to increase with the severity of drinking problem suggests the development of more severe alcohol usage as the individual becomes older.

TABLE 4. AGE CATEGORY BY DRINKER CLASSIFICATION (1972-1975)

Age Category	Drinker Classification				Row Totals and Percent of Total N
	Social	Problem	Serious Problem	Alcoholic	
15-19	321 40.2 15.7	374 46.9 10.6	84 10.5 4.2	18 2.2 1.8	797 9.3
20-24	585 31.2 28.6	861 45.9 24.5	336 17.9 17.0	93 5.0 9.4	1875 22.0
25-29	268 21.8 13.1	538 43.7 15.3	287 23.3 14.5	137 11.1 13.9	1230 14.4
30-34	164 18.8 8.0	368 42.2 10.5	218 25.0 11.0	121 13.9 12.3	871 10.2
35-39	134 16.9 6.6	310 39.1 8.8	225 28.4 11.4	124 15.6 12.6	793 9.3
40-44	140 19.0 6.9	235 32.0 6.7	223 30.3 11.3	137 18.6 13.9	735 8.6
45-49	126 18.3 6.2	247 35.8 7.0	196 28.4 10.0	121 17.5 12.3	690 8.1
50-54	113 18.9 5.5	220 36.8 6.3	169 28.3 8.5	96 16.1 9.7	598 7.0
55-59	71 16.6 3.5	162 37.8 4.6	123 28.7 6.2	73 17.0 7.4	429 5.0
60-64	54 19.4 2.6	111 39.9 3.2	73 26.3 3.7	40 14.4 4.1	278 3.3
65-69	40 25.0 2.0	61 38.1 1.7	37 23.1 2.0	22 13.8 2.2	160 1.9
70 or more	26 37.1 1.2	30 42.9 0.9	10 14.3 0.5	4 5.7 0.4	70 0.8
COLUMN TOTAL	2042	3517	1981	986	N = 8526
PERCENT OF TOTAL N	24.0	41.3	23.2	11.6	
MEDIAN AGE	27.15	29.87	36.46	40.00	

χ^2 = 595.6758 df = 33 p < .001

Cell contents are:
1) frequency
2) percent of row
3) percent of column

*Median test on adjacent drinker classification.

The breakdown of male and female clients for each drinker classification is shown in Table 5. Although there is no significant difference in the proportion of males and females between drinker classifications, the overwhelming majority of ASAP clients are male.

The distribution of client race for each drinker classification is shown in Table 6. The χ^2 value indicates that there are unexpectedly larger differences in the distribution of race between drinker classifications. The row percentages show that a greater proportion of American Indians than Caucasians tend to be classified as having more serious drinking problems. Eighty-four percent of ASAP clients are white, 15% American Indian and less than one percent are Black or of Latin origin.

Table 7 presents the distribution of education levels between drinker classifications across the four year operational period. The χ^2 test indicates significant differences in the distribution of education level across the drinker classification groups beyond the .001 level. The education level tends to decrease as the drinking problem severity increases. Examination of column percentage indicates that the proportion of people in each drinker type with less than 11 years of schooling increases from the social drinker category to the alcoholic category while the proportion of each drinker type with college or postgraduate education tends to decrease from social drinkers to alcoholics.

Table 8 shows the distribution of income category between drinker classification for 1972-1975. The χ^2 test indicates significant differences exist beyond the .001 level between the distributions. Examination of the column percentages indicate that a large proportion of the individuals classified as Chronic Alcoholics (45.9%) are found in the lower two income categories, while the social drinkers appear to be relatively evenly distributed up to the $15,000 range. There also appears to be a tendency in the upper income categories for the proportion of people for each drinker classification to decrease as the severity of drinker classification increases.

The distribution of marital status by drinker classification for the four year period is shown in Table 9. The χ^2 test indicates significant differences between these groups beyond the .001 level. The major differences seem to lie in the "single" and "divorced" categories. The proportion of single persons tends to decrease as the severity of drinking problem increases, while the percentages of divorced persons appears to increase with

TABLE 5. SEX BY DRINKER CLASSIFICATION (1972-1975).

Sex	Drinker Classification: Social	Problem	Serious Problem	Alcoholic	Row Totals and Percent of Total N
Male	1863	3182	1830	897	7772
	23.9	40.9	23.5	11.5	
	91.1	90.5	92.4	91.0	91.1
Female	181	335	151	89	756
	23.9	44.3	20.0	11.8	
	8.9	9.5	7.6	9.0	8.9
COLUMN TOTALS	2044	3517	1981	986	N = 8528
PERCENT OF TOTAL N	24.0	41.2	23.2	11.6	

$\chi^2 = 5.7152$ df = 3 p = n.s.

Cell contents are:
1) frequency
2) percent of row
3) percent of column

TABLE 6. RACE BY DRINKER CLASSIFICATION (1972-1975).

Race	Drinker Classification				Row Totals and Percent of Total N
	Social	Problem	Serious Problem	Alcoholic	
Caucasian	1933	2986	1558	720	7197
	26.9	41.5	21.6	10.0	
	94.2	84.6	78.0	72.4	84.0
Black	9	11	8	3	31
	29.0	35.5	25.8	9.7	
	0.4	0.3	0.4	0.3	0.4
Latin	7	17	6	7	37
	18.9	45.9	16.2	18.9	
	0.3	0.5	0.3	0.7	0.4
American Indian	103	515	423	264	1305
	7.9	39.5	32.4	20.2	
	5.0	14.6	21.2	26.5	15.2
COLUMN TOTALS	2052	3529	1995	994	N = 8570
PERCENT OF TOTAL N	23.9	41.2	23.3	11.6	

χ^2 = 325.5122 df = 9 p < .001

Cell contents are:
1) frequency
2) percent of row
3) percent of column

TABLE 7. EDUCATION BY DRINKER CLASSIFICATION (1972-1975)

Education Level	Drinker Classification: Social	Problem	Serious Problem	Alcoholic	Row Totals and Percent of Total N
None	2	7	12	1	22
	9.1	31.8	54.5	4.5	
	0.1	0.2	0.6	0.1	0.3
7 Grades or Less	42	128	103	46	319
	13.2	40.1	32.3	14.4	
	2.1	3.7	5.3	4.8	3.8
8-11 Grades	510	1205	858	442	3015
	16.9	40.0	28.5	14.7	
	25.1	34.7	43.9	46.0	35.7
High School Diploma	812	1329	642	329	3112
	26.1	42.7	20.6	10.6	
	40.0	38.2	32.8	34.2	37.0
Business or Trade School	101	153	66	33	353
	28.6	43.3	18.7	9.3	
	5.0	4.4	3.4	3.4	4.2
1-3 Years College	406	479	212	88	1185
	34.3	40.4	17.9	7.4	
	20.0	13.8	10.8	9.2	14.1
College Diploma	113	121	46	13	293
	38.6	41.3	15.7	4.4	
	5.6	3.5	2.4	1.4	3.5
Post Graduate Work	44	54	17	8	123
	35.8	43.9	13.8	6.5	
	2.2	1.6	0.9	0.8	1.4
COLUMN TOTALS	2030	3476	1956	960	N = 8422
PERCENT OF TOTAL N	24.1	41.3	23.2	11.4	

χ^2 = 338.6826 df = 21 p < .001

Cell contents are:
1) frequency
2) percent of row
3) percent of column

TABLE 8. INCOME CLASS BY DRINKER CLASSIFICATION (1972-1975)

	Drinker Classification				
Income	Social	Problem	Serious Problem	Alcoholic	Row Totals and Percent of Total N
$0 - 1,999	335 22.9 16.6	554 37.9 15.9	333 22.8 17.0	241 16.5 24.6	1463 17.3
2,000 - 3,999	333 21.7 16.5	624 40.7 17.9	366 23.9 18.7	209 13.6 21.3	1532 18.1
4,000 - 5,999	333 21.0 16.5	680 42.8 19.5	413 26.0 21.1	163 10.8 16.6	1589 18.8
6,000 - 7,999	289 23.4 14.3	529 42.8 15.1	287 23.2 14.6	132 10.7 13.5	1237 14.6
8,000 - 9,999	217 24.3 10.7	390 43.6 11.2	210 23.5 10.7	77 8.6 7.9	894 10.6
10,000 - 14,999	320 28.1 15.8	467 41.1 13.5	234 20.6 11.9	116 10.2 11.9	1137 13.5
15,000 - 24,999	133 32.4 6.6	163 39.7 4.7	89 21.7 4.5	26 6.3 2.7	411 4.9
25,000 +	59 32.4 2.9	81 44.5 2.3	23 15.4 1.4	14 7.7 1.4	182 2.2
COLUMN TOTALS	2019	3488	1960	978	N = 8445
PERCENT OF TOTAL N	23.9	41.3	23.2	11.6	

χ^2 = 118.0260 df = 21 p < .001

Cell contents are:
1) frequency
2) percent of row
3) percent of column

TABLE 9. MARITAL STATUS BY DRINKER CLASSIFICATION (1972-1975)

Marital Status	Drinker Classification				Row Totals and Percent of Total N
	Social	Problem	Serious Problem	Alcoholic	
Single	970	1408	587	251	3216
	30.2	43.8	18.3	7.8	
	47.3	39.9	29.6	25.4	37.6
Married	844	1391	788	371	3394
	24.9	41.0	23.2	10.9	
	41.1	39.5	39.7	37.6	39.7
Divorced	114	400	345	229	1088
	10.5	36.8	31.7	21.0	
	5.6	11.3	17.4	23.2	12.7
Separated	38	159	130	86	413
	9.2	38.5	31.5	20.8	
	1.9	4.5	6.6	8.7	4.8
Widowed	69	112	81	38	300
	23.0	37.3	27.0	13.7	
	3.4	3.2	4.1	3.9	3.5
Divorced/ Remarried	10	36	35	7	88
	11.4	40.9	39.8	8.0	
	0.5	1.0	1.8	0.7	1.0
Multiple divorces	6	17	13	5	41
	14.6	41.5	31.7	12.2	
	0.3	0.5	0.7	0.2	0.5
COLUMN TOTALS	2051	3524	1981	987	N = 8543
PERCENT OF TOTAL N	24.0	41.3	23.2	11.5	

χ^2 = 442.9907 df = 18 p < .001

Cell contents are:
1) frequency
2) percent of row
3) percent of column

the severity of drinker classification. Only 5.6% of the social drinkers are divorced while 23.2% of the chronic alcoholics fall into this category.

Occupational category by drinker classification across years is shown in Table 10. The χ^2 test indicates significant differences in the distribution of occupational categories between drinker types beyond the .001 level. Only two categories show relatively large differences in proportion of persons in each drinker classification. Students account for a larger proportion of social drinkers than other drinker classifications which may simply reflect the generally younger age of social drinkers (see Table 4). The largest difference in occupation distributions occurs in the "employed" category. While only 3.8% of social drinkers are unemployed, the proportion of persons unemployed increases progressively with the severity of drinker classification, reaching 26.3% for chronic alcoholics.

Arrest History

The distributions of blood alcohol concentration (BAC) at time of arrest for each drinker classification for the four year operational period is shown in Table 11. The χ^2 test indicates significant differences between distributions of drinker classification beyond the .001 level, however, caution is advised in the interpretation of this result due to the relatively small frequencies of social drinkers in the higher BAC categories. It appears that the percentage of persons in the .10 - .14 and the .15 - .19 categories tend to decrease as the severity of drinker classification increases, while this tendency appears reversed for the BAC levels of .25 and above, indicating that BAC level at time of arrest increases with the severity of drinker classification.

The distribution of number of prior DWI arrests for each drinker classification across years is given in Table 12. The χ^2 value indicates significant differences between drinker classifications beyond the .001 level, however, the limited number of arrests in the higher arrest categories for Social and Problem drinkers suggests some caution in the interpretation of this result. The table does indicate, however, that for all categories of one prior arrest or more, the proportional number of arrests increase with the severity of drinker classification. While only 9.1% of the social drinkers had had one or more prior DWI arrest, 72.9% of the persons classified as chronic alcoholics have had one or more prior DWI arrest.

TABLE 10. OCCUPATION BY DRINKER CLASSIFICATION (1972-1975)

Category of Occupation	Drinker Classification: Social	Problem	Serious Problem	Alcoholic	Row Totals and Percent of Total N
Professional	44	50	12	6	112
	39.3	44.6	10.7	5.4	
	2.1	1.4	0.6	0.6	1.3
White Collar: Managerial	178	221	110	32	541
	32.9	40.9	20.3	5.9	
	8.7	6.3	5.5	3.2	6.3
White Collar: Non-managerial	169	220	120	36	545
	31.0	40.4	22.0	6.6	
	8.2	6.3	6.1	3.6	6.4
Blue Collar: Skilled	348	661	356	131	1496
	23.3	44.2	23.8	8.8	
	17.0	18.8	18.0	13.3	17.5
Blue Collar: Unskilled	650	1260	751	344	3005
	21.6	41.9	25.0	11.4	
	31.7	35.8	37.9	34.8	35.2
Farmer	152	239	131	56	578
	26.3	41.3	22.7	9.7	
	7.4	6.8	6.5	5.7	6.8
Student	238	207	54	21	520
	45.8	39.8	10.4	4.0	
	11.6	5.9	2.7	2.1	6.1
Housewife	48	111	63	31	253
	19.0	43.9	24.9	12.3	
	2.3	3.2	3.2	3.1	3.0
Disabled	8	37	34	30	109
	7.3	33.9	31.2	27.5	
	0.4	1.1	1.7	3.0	1.3
Retired	50	92	48	35	225
	22.2	40.9	21.3	15.6	
	2.4	2.6	2.4	3.5	2.6
Military	83	98	32	4	217
	38.2	45.2	14.7	1.8	
	4.1	2.8	1.6	0.4	2.5
Unemployed	77	316	271	260	924
	8.3	34.2	29.3	28.1	
	3.8	9.0	13.7	26.3	10.8
COLUMN TOTALS	2045	3512	1982	986	N = 8525
PERCENT OF TOTAL N	24.0	41.2	23.2	11.6	

χ^2 = 706.0178 df = 33 p < .001

Cell contents are:
1) frequency
2) percent of row
3) percent of column

TABLE 11. BAC CATEGORY BY DRINKER CLASSIFICATION (1972-1975)

	Drinker Classification				
BAC Level	Social	Problem	Serious Problem	Alcoholic	Row Totals and Percent of Total N
.10 - .14	500	390	117	40	1047
	47.8	37.2	11.2	3.8	
	28.2	12.9	7.3	5.0	14.6
.15 - .19	771	1095	413	175	2455
	31.4	44.6	16.8	7.2	
	43.5	36.2	25.9	22.0	34.1
.20 - .24	389	994	506	245	2134
	18.2	46.6	23.7	11.5	
	22.0	32.8	31.8	30.7	29.7
.25 - .29	90	400	336	178	1004
	9.0	39.8	33.5	17.7	
	5.1	13.2	21.1	22.3	14.0
.30 - .34	19	116	155	115	405
	4.7	28.6	38.3	28.4	
	1.1	3.8	9.7	14.4	5.6
.35 - .39	2	23	56	34	115
	1.7	20.0	48.7	29.6	
	0.1	0.8	3.5	4.3	1.6
.40 +	1	9	10	11	31
	3.2	29.0	32.3	35.5	
	0.1	0.3	0.7	1.4	0.4
COLUMN TOTALS	1772	3027	1593	799	N = 7191
PERCENT OF TOTAL N	24.6	42.1	22.2	11.1	

χ^2 = 1076.1729 df = 18 p < .001

Cell contents are:
1) frequency
2) percent of row
3) percent of column

TABLE 12. NUMBER OF PRIOR DWI ARRESTS BY DRINKER CLASSIFICATION (1972-1975).

Number of Prior DWI Arrests	Drinker Classification				Row Totals and Percent of Total N
	Social	Problem	Serious Problem	Alcoholic	
0	1858	2534	669	266	5327
	34.9	47.6	12.6	5.0	
	90.9	72.0	33.8	26.9	62.5
1	157	812	892	340	2201
	7.1	36.9	40.5	15.4	
	7.7	23.0	45.0	34.5	25.8
2	19	137	273	178	607
	3.1	22.6	45.0	29.3	
	0.9	3.9	13.8	18.1	7.1
3	5	26	84	103	218
	2.3	11.9	38.5	47.2	
	0.2	0.7	4.2	10.4	2.6
4	3	4	35	50	92
	3.3	4.3	38.0	54.3	
	0.2	0.1	1.8	5.0	1.1
5	1	2	16	28	47
	2.1	4.3	34.0	59.6	
	0.1	0.0	0.8	2.8	0.6
6+	1	2	12	21	36
	2.7	5.6	33.3	58.3	
	0.0	0.0	0.6	2.1	0.4
COLUMN TOTALS	2044	3517	1981	986	N = 3528
PERCENT OF TOTAL N	24.0	41.2	23.2	11.6	

χ^2 = 2569.2917 df = 18 p < .001

Cell contents are:
1) frequency
2) percent of row
3) percent of column

Table 13 shows the distribution of reckless driving arrests for each drinker classification across the four year operational period. The χ^2 test indicates significant differences beyond the .001 level between drinker classification and distribution of reckless driving arrests. Although the low frequencies found in the higher arrest categories suggest cautious interpretation of the significant finding, it appears that the proportional number of arrests increases with the severity of drinker classification. While the proportion of persons from each drinker classification decrease from social drinkers to alcoholic for the zero arrest category, the percentage of persons from each drinker category generally increases from social drinkers to alcoholics for the other arrest categories.

Table 14 shows the distribution of arrests for no driver's license for each drinker classification. The "no driver's license arrests" presented in this table encompass both driving with a suspended license and driving with a revoked license. Although the χ^2 test is significant beyond the .001 level, caution is again advised in its interpretation because of the relatively low frequencies occurring in the higher arrest categories. The table seems to indicate, however, that the proportion of persons in each drinker category tend to increase slightly as the severity of drinker classifications increases for the Non-zero categories, while this trend is reversed for the zero arrest category.

The distribution of the number of hazardous moving violation arrests for each drinker classification is indicated in Table 15. The arrests include such offenses as speeding, running a red light, failure to yield right-of-way, improper turns, etc. They do <u>not</u> include offenses such as equipment violations or expired safety inspection stickers. The χ^2 test indicates significant differences in the distribution of arrests between drinker classifications beyond the .001 level. Examination of the higher violation categories again shows a slight increase in the frequency of violations with an increase in drinker classification severity.

Table 16 displays the distribution of the number of public intoxication arrests for each drinker classification. The χ^2 test indicates significant differences beyond the .001 level, although low frequencies in the higher arrest categories for social drinkers advises some caution in its interpretation. The obvious trend appears to be an increase in the proportional number of public intoxication arrests with the severity of drinking problem. It might

TABLE 13. NUMBER OF RECKLESS DRIVING ARRESTS BY DRINKER CLASSIFICATION (1972-1975)

Number of Reckless Driving Arrests	Drinker Classification				Row Totals and Percent of Total N
	Social	Problem	Serious Problem	Alcoholic	
0	1860	2977	1563	762	7162
	30.0	41.6	21.8	10.6	
	91.0	84.6	78.9	77.3	84.0
1	166	469	354	171	1160
	14.3	40.4	30.5	14.7	
	8.1	13.3	17.9	17.3	13.6
2	13	53	53	30	149
	8.7	35.6	35.6	20.1	
	0.6	1.5	2.7	3.0	1.7
3	3	11	7	12	33
	9.1	33.3	21.2	36.4	
	0.1	0.3	0.3	1.2	0.4
4	1	3	1	6	11
	9.0	27.2	9.0	54.6	
	0.0	0.1	0.1	0.6	0.1
5 or more	1	4	3	5	13
	7.7	30.8	23.0	38.5	
	0.0	0.1	0.2	0.5	0.2
COLUMN TOTALS	2044	3517	1981	986	N = 8528
			2		
PERCENT OF TOTAL N	24.0	41.2	23.2	11.6	

χ^2 = 191.5070 df = 15 p < .001

Cell contents are:
1) frequency
2) percent of row
3) percent of column

TABLE 14. NUMBER OF NO-DRIVER'S LICENSE ARRESTS BY DRINKER CLASSIFICATION (1972-1975)

Number of No Driver's License Arrests	Drinker Classification				Row Totals and Percent of Total N
	Social	Problem	Serious Problem	Alcoholic	
0	2034	3455	1909	910	8303
	24.5	41.6	23.0	11.0	
	99.0	97.8	95.5	91.5	96.8
1	17	62	62	45	186
	9.1	33.3	33.3	24.2	
	0.8	1.8	3.1	4.5	2.2
2	3	10	12	19	44
	6.8	22.7	27.3	43.2	
	0.1	0.3	0.6	1.9	0.5
3	1	4	5	10	20
	5.0	20.0	25.0	50.0	
	0.0	0.1	0.3	1.0	0.2
4	0	2	10	11	23
or more	0.0	8.7	43.5	47.8	
	0.0	0.1	0.5	1.1	0.3
COLUMN TOTALS	2055	3533	1998	995	N = 8581
PERCENT OF TOTAL N	23.9	70.0	39.6	19.7	

χ^2 = 177.2519 df = 12 p < .001

Cell contents are:
1) frequency
2) percent of row
3) percent of column

TABLE 15. NUMBER OF HAZARDOUS MOVING VIOLATIONS BY DRINKER CLASSIFICATION (1972-1975).

Number of Hazardous Moving Violation Arrests	Drinker Classification				Row Totals and Percent of Total N
	Social	Problem	Serious Problem	Alcoholic	
0	1537	2592	1516	743	6388
	24.1	40.6	23.7	11.6	
	74.8	73.4	75.9	74.7	74.4
1	343	576	253	119	1291
	26.6	44.6	19.6	9.2	
	16.7	16.3	12.7	12.0	15.0
2	123	189	110	58	480
	25.6	39.4	22.9	12.1	
	6.0	5.3	5.5	5.8	5.6
3	29	92	45	28	194
	14.9	47.4	23.2	14.4	
	1.4	2.6	2.3	2.8	2.3
4	14	37	23	15	89
	15.7	41.6	25.8	16.9	
	0.7	1.0	1.2	1.5	1.1
5	5	21	19	11	56
	8.9	37.5	33.9	19.6	
	0.2	0.6	1.0	1.1	0.7
6+	4	26	32	21	83
	4.8	31.3	38.6	25.3	
	0.1	0.8	1.8	2.1	1.0
COLUMN TOTALS	2055	3533	1998	995	N = 8581
PERCENT OF TOTAL N	23.9	41.2	23.3	11.6	

$\chi^2 = 85.8037$ df = 18 $p < .001$

Cell contents are:
1) frequency
2) percent of row
3) percent of column

TABLE 16. NUMBER OF PUBLIC INTOXICATION (PI) ARRESTS (1972-1975)

Number of Public Intoxication Arrests	Drinker Classification				Row Totals and Percent of Total N
	Social	Problem	Serious Problem	Alcoholic	
0	1845	2399	887	304	5435
	33.9	44.1	16.3	5.6	
	90.3	68.2	44.8	30.8	63.7
1	166	662	432	203	1463
	11.3	45.2	29.5	13.9	
	8.1	18.8	21.8	20.6	17.2
2	14	231	202	125	572
	2.4	40.4	35.3	21.9	
	0.7	6.6	10.2	12.7	6.7
3	8	87	122	65	282
	2.8	30.9	43.3	23.0	
	0.4	2.5	6.2	6.6	3.3
4	6	40	79	38	163
	3.7	24.5	48.5	23.3	
	0.3	1.1	4.0	3.9	1.9
5	1	27	35	39	102
	1.0	26.5	34.3	38.2	
	0.0	0.8	1.8	4.0	1.2
6	0	18	43	34	95
	0.0	18.9	45.2	35.8	
	0.0	0.5	2.2	3.4	1.1
7	0	15	20	19	54
	0.0	27.8	37.0	35.2	
	0.0	0.4	1.0	1.9	0.6
8	0	5	19	9	33
	0.0	15.2	57.6	27.3	
	0.0	0.1	1.0	0.9	0.4
9	4	33	142	150	329
	1.2	10.0	43.2	45.6	
	0.2	0.9	7.1	15.2	3.9
COLUMN TOTALS	2044	3517	1981	986	N = 8528
PERCENT OF TOTAL N	24.0	41.2	23.2	11.6	

$x^2 = 1886.2158$ df = 24 $p < .001$

Cell contents are:
1) frequency
2) percent of row
3) percent of column

also be noted that there is a greater proportion of alcoholics with nine or more public intoxication arrests than social drinkers with only one or more public intoxication arrests.

The distribution for the number of other crimes for each drinker classification across years is shown in Table 17. The "other crimes" incorporated in this category are non-traffic, criminal offenses other than public intoxication, and include such crimes as burglary, assault, breaking and entering, grand theft auto, petty larceny, disorderly conduct, etc. The χ^2 test indicates significant differences between distributions beyond the .001 level. There is an obvious increasing trend in the number of crimes with the severity of drinker classification. While only 16.0% of the social drinkers have one or more other crimes on record, 38.1% of persons classified as chronic alcoholics have one or more other crimes on record.

Measures Related to Drinker Status

Presented in Table 18 are the distributions of drinking pattern for each drinker classification across years. These "drinking patterns" are subjective judgements of drinking experience made by the courtworkers after the administration of the Mortimer-Filkins interview. They are the impressions of the courtworker based on the answers of a client given during the interview and may include various "observational" indicators of a drinking problem. The χ^2 test indicates significant differences between drinker classifications in the distribution of drinking pattern beyond the .001 level. There is an obvious increase in drinking experience with the severity of drinker classification. It can also be seen that 62.3% of the chronic alcoholics were labled as being experienced in their drinking pattern while only 1.5% of persons classified as social drinkers were labled in their category.

Table 19 displays the distributions of work pattern for drinker classification across the four year operational years. The χ^2 tests again indicate significant differences between drinker classifications beyond the .001 level. For categories which can be considered as "favorable work patterns", such as "steady job", the proportion of persons from each drinker classification decreases from social drinkers to chronic alcoholics. For categories which might be considered as "unfavorable work patterns", such as "unable to keep job", "unemployed", "fired - alcohol related", etc., the proportion of persons from each drinker

classification appears to increase with the severity of drinker classification.

The distributions for the scores on the Mortimer-Filkins Questionnaire and Mortimer-Filkins Interview for each drinker classification are displayed in Tables 20 and 21, respectively. The χ^2 tests indicate significant differences in distributions between drinker classifications beyond the .001 level, although low frequencies in the higher score categories advise some caution in the overall interpretation of this test. It does appear, however, that the test scores for each instrument increase progressively with the severity of drinker classification.

TABLE 17. NUMBER OF OTHER CRIMES (1972-1975)

Number of Other Crimes	Drinker Classification				Row Totals and Percent of Total N
	Social	Problem	Serious Problem	Alcoholic	
0	1726	2730	1426	615	6497
	26.6	42.0	21.9	9.5	
	84.0	77.3	71.4	61.8	75.7
1	246	524	313	171	1254
	19.6	41.8	25.0	13.6	
	12.0	14.8	15.7	17.2	14.6
2	59	147	113	81	400
	14.7	36.7	28.2	20.2	
	2.9	4.2	5.7	8.1	4.7
3	9	65	47	36	157
	5.7	41.4	29.9	22.9	
	0.4	1.8	2.4	3.6	1.8
4	8	30	24	15	77
	10.4	39.0	31.2	19.5	
	0.4	0.8	1.2	1.5	0.9
5	1	10	20	22	53
	1.9	18.9	37.7	41.5	
	0.0	0.3	1.0	2.2	0.6
6	4	7	15	12	38
	10.5	18.4	39.5	31.6	
	0.2	0.2	0.8	1.2	0.4
7+	2	20	40	43	105
	1.9	19.0	38.1	41.0	
	0.1	0.6	2.0	4.3	1.2
COLUMN TOTALS	2055	3533	1998	995	N = 8581
PERCENT OF TOTAL N	23.9	41.2	23.3	11.6	

χ^2 = 376.0454 df = 21 p < .001

Cell contents are:
1) frequency
2) percent of row
3) percent of column

TABLE 18. DRINKING PATTERN BY DRINKER CLASSIFICATION (1972-1975).

Drinking Pattern	Drinker Classification: Social	Problem	Serious Problem	Alcoholic	Row Totals and Percent of Total N
Very Inexperienced	296	66	8	5	375
	78.9	17.6	2.1	1.3	
	14.8	1.9	0.4	0.5	4.5
Inexperienced	652	491	58	19	1220
	53.4	40.2	4.8	1.6	
	32.5	14.3	3.0	2.0	14.6
Average	723	1356	403	99	2641
	29.6	51.3	15.3	3.7	
	39.2	39.5	20.7	10.2	31.6
Experienced	239	1141	750	242	2372
	10.1	48.1	31.6	10.2	
	12.0	33.3	38.4	24.9	28.4
Very Experienced	30	375	730	606	1741
	1.7	21.5	41.9	34.8	
	1.5	10.9	37.4	62.3	20.9
COLUMN TOTALS	2000	3429	1949	971	N = 8349
PERCENT OF TOTAL N	24.0	41.1	23.3	11.6	

χ^2 = 3554.3564 df = 12 p < .001

Cell contents are:
1) frequency
2) percent of row
3) percent of column

TABLE 19. WORK PATTERN (1972-1975)

Work Pattern	Drinker Classification: Social	Problem	Serious Problem	Alcoholic	Row Totals and Percent of Total N
Steady Job	1429	2293	1191	450	5363
	26.6	42.8	22.2	8.4	
	70.7	66.3	61.0	46.3	63.8
Recent Change in Job	138	321	204	99	762
	18.1	42.1	26.8	13.0	
	6.8	9.3	10.5	10.2	9.1
Part Time Work	26	51	32	23	132
	19.7	38.6	24.2	17.4	
	1.3	1.5	1.6	2.4	1.6
Student, Part Time Work	44	42	4	5	95
	46.3	44.2	4.2	5.3	
	2.2	1.2	0.2	0.5	1.1
Unable to Keep Job	4	13	23	14	54
	7.4	24.1	42.6	25.9	
	0.2	0.4	1.2	1.4	0.6
Unemployed	99	333	252	222	906
	10.9	36.8	27.8	24.5	
	4.9	9.6	12.9	22.9	10.8
Fired, Unemployed	5	19	9	5	38
	13.2	50.0	23.7	13.2	
	0.2	0.5	0.5	0.5	0.5
Fired, Unemployed (Alcohol-Related)	1	14	42	38	95
	1.1	14.7	44.2	40.0	
	0.0	0.4	2.2	3.9	1.1
Laid Off, Unemployed	19	48	37	34	138
	13.8	34.8	26.8	24.6	
	0.9	1.4	1.9	3.5	1.6
Housewife	47	105	60	31	243
	19.3	43.2	24.7	12.8	
	2.3	3.0	3.1	3.2	2.9
Student	176	153	50	15	394
	44.7	38.8	12.7	3.8	
	8.7	4.4	2.6	1.5	4.7
Retired	33	67	48	35	183
	18.0	36.6	26.2	19.1	
	1.6	1.9	2.5	3.6	2.2
COLUMN TOTALS	2021	3459	1952	971	N = 8403
PERCENT OF TOTAL N	24.1	41.1	23.2	11.6	

$x^2 = 643.1313$ df = 33 $p < .001$

Cell contents are:
1) frequency
2) percent of row
3) percent of column

TABLE 20. CATEGORY OF MORTIMER-FILKINS QUESTIONNAIRE SCORE BY DRINKER CLASSIFICATION (1972-1975)

Category of Mortimer-Filkins Questionnaire Score	Drinker Classification				Row Totals and Percent of Total N
	Social	Problem	Serious Problem	Alcoholic	
1-7	491	286	46	6	829
	59.2	34.5	5.5	0.7	
	30.3	10.3	3.1	0.8	12.5
8-15	831	1264	389	86	2570
	32.3	49.2	15.1	3.3	
	51.3	45.7	26.6	11.2	38.8
16-23	253	883	528	240	1904
	13.3	46.4	27.7	12.6	
	15.6	31.9	36.1	31.3	28.8
24-31	41	281	346	249	917
	4.5	30.6	37.7	27.2	
	2.5	10.2	23.6	32.5	13.9
32-39	4	45	130	146	325
	1.2	13.8	40.0	44.9	
	0.2	1.6	8.9	19.1	4.9
40-47	1	6	19	31	57
	1.8	10.5	33.3	54.4	
	0.1	0.2	1.3	4.0	0.9
48-55	0	1	5	4	10
	0.0	10.0	50.0	40.0	
	0.0	0.0	0.3	0.5	0.2
56+	0	0	1	4	5
	0.0	0.0	20.0	80.0	
	0.0	0.0	0.1	0.5	0.1
COLUMN TOTALS	1621	2766	1464	766	N = 6617
PERCENT OF TOTAL N	24.5	41.8	22.1	11.6	

χ^2 = 2167.1404 df = 21 p < .001

Cell contents are:
1) frequency
2) percent of row
3) percent of column

TABLE 21. CATEGORY OF MORTIMER-FILKINS INTERVIEW SCORE (1972-1975)

Category of Mortimer-Filkins Interview Score	Drinker Classification				Row Totals and Percent of Total N
	Social	Problem	Serious Problem	Alcoholic	
1-9	302	64	4	0	370
	81.6	17.3	1.1	0.0	
	18.9	2.3	0.3	0.0	5.6
10-29	829	637	75	8	1549
	53.5	41.1	4.8	0.5	
	51.8	23.0	5.1	1.0	23.5
30-49	372	950	252	34	1608
	23.1	59.1	15.7	2.1	
	23.3	34.3	17.2	4.4	24.3
50-69	83	683	338	64	1168
	7.1	58.5	28.9	5.5	
	5.2	24.6	23.0	8.4	17.7
70-89	7	300	353	166	826
	0.8	36.3	42.7	20.1	
	0.4	10.8	24.0	21.7	12.5
90-109	2	99	244	198	543
	0.4	18.2	44.9	36.5	
	0.1	3.6	16.6	25.8	8.2
110-129	2	28	146	183	359
	0.6	7.8	40.7	51.0	
	0.1	1.0	9.9	23.9	5.4
130-149	2	7	44	87	140
	1.4	5.0	31.4	62.1	
	0.1	0.3	3.0	11.4	2.1
150-169	0	1	11	22	34
	0.0	2.9	32.4	64.7	
	0.0	0.0	0.7	2.9	0.5
170 +	0	2	1	4	7
	0.0	28.6	14.3	57.1	
	0.0	0.1	0.1	0.5	0.1
COLUMN TOTALS	1599	2771	1468	766	N = 6604
PERCENT OF TOTAL N	24.2	42.0	22.2	11.6	

χ^2 = 4388.7109 df = 27 p < .001

Cell contents are:
1) frequency
2) percent of row
3) percent of column

RESULTS OF THE REFERRAL PROCESS

It was previously noted that SD:ASAP utilizes five basic rehabilitation categories in the referral process. Table 22 indicates these basic categories along with the numbers and percentages of persons for each drinker classification referred to that modality category. It should be noted that persons referred to multiple treatment modalities will appear once for each modality category to which they were referred, so that the overall caseload to each modality category may be determined.

The most heavily utilized treatment modality was the Problem Drinker Driver Classes (PDDC), with 43%, 86%, 62%, and 54% of the social, problem, serious problem, and chronic alcoholic, respectively, referred to this modality. Virtually all social drinkers referred to treatment were referred to either DIS or PDDC. It should be noted that prior to 1975, South Dakota Highway Patrol was responsible for providing instructors for DIS, and, due to a reorganization of the highway patrol, DIS was unavailable for a period of time which may account for the large volume of PDDC referrals for this group. Most persons classified as problem drinkers were referred to PDDC with very few individuals in this group being referred to other modalities. Although the majority of serious problem drinkers were assigned to PDDC, 18% of this group were referred to Alcoholics Anonymous (AA), and 15% referred to some form of outpatient modality. Approximately 60% of all persons referred to AA were serious problem drinkers, as were almost 50% of all persons referred to outpatient facilities. While over 50% of all chronic alcoholics were referred to PDDC, approximately 16% were referred to outpatient facilities, 16% referred to inpatient facilities, and 14% referred to AA. Almost 65% of all persons referred to inpatient facilities were classified as chronic alcoholics.

The number and percentages of persons in each drinker classification referred to the various outpatient and inpatient treatment facilities throughout the state are displayed in Table 23 and Table 24, respectively. It should be noted that the number of persons reported in these tables reflect those persons who were referred to a particular modality, and, who actually entered treatment at that facility. Individuals referred to various facilities who did not actually report to the facility, or, individual referred to facilities outside the state of South Dakota are not included in these tables.

TABLE 22. JUDICIAL REFERRAL CATEGORY BY DRINKER CLASSIFICATION (1972-1975).

Judicial Referral Category	Drinker Classification				Row Totals and Percent of Total N
	Social	Problem	Serious Problem	Alcoholic	
DIS	684	104	19	1	808
	84.7	12.9	2.4	0.1	
	54.2	3.3	0.7	0.1	9.8
PDDC	544	2695	1603	689	5531
	9.8	48.7	29.0	12.5	
	43.1	86.0	62.4	53.7	67.1
Outpatient	13	201	382	212	808
	1.6	24.9	47.3	26.2	
	1.0	6.4	14.9	16.5	9.8
Inpatient	7	9	99	207	322
	2.2	2.8	30.7	64.3	
	0.6	0.3	3.9	16.1	3.9
AA	13	125	466	174	778
	1.7	16.1	59.9	22.4	
	1.0	4.0	18.1	13.6	9.4
COLUMN TOTALS	1261	3134	2569	1283	N = 8247
PERCENT OF TOTAL N	15.3	38.0	31.2	15.5	

Cell contents are:
1) frequency
2) percent of row
3) percent of column

TABLE 23. DISTRIBUTION OF OUTPATIENT REFERRALS BY TREATMENT AGENCY (1972-1975)

Facilities	Drinker Classification				Total/% of Tot.	
	Social	Problem	Serious Problem	Alcoholic		
Brookings Mental Health		18	9	1	28	5.1
Watertown Mental Health		10	29	1	40	7.2
Sioux Falls Alcohol & Drug Referral Center	1	18	47	14	80	14.5
Lake County Ref. Center		5	6	1	12	2.2
Nutrition Enrichment & Alcohol Control Prog.	2	18	14	2	36	6.5
Inter-Lakes Comm. Action		7	5	4	16	2.9
Capital Area Counseling		3	3	4	10	1.8
Brookings Alcohol Ref.Ctr.	1	16	14	5	36	6.5
Alcohol & Drug Referral Treatment Ctr. - Watertown		3	20	9	32	5.8
Yankton Alcohol Ref. Ctr.		2	25	23	50	9.0
Saint Johns (Rapid City Regional Hospital)		3	23	58	84	15.2
Lake Andes Halfway House			5	9	14	2.5
Individual therapy		8	14	5	23	4.2
Other facilities	1	15	32	40	92	16.6
Totals	5	126	246	176	N = 553	100.0

TABLE 24. DISTRIBUTION OF INPATIENT REFERRALS BY TREATMENT AGENCY (1972-1975)

Facilities	Drinker Classification				Total/% of Tot.	
	Social	Problem	Serious Problem	Alcoholic		
Moody County Area Information & Referral				1	1	0.4
Ft. Meade			14	32	46	19.6
Sioux Falls V.A.		1	5	8	14	6.0
Hot Springs V.A.	1		2	14	17	7.2
Yankton State Hospital		4	13	81	98	41.7
River Park		3	5	31	39	16.6
Friendship House				1	1	0.4
Nutrition Enrichment & Alcohol Control Program				1	1	0.4
Rosebud Tribal Alcoholism Project		1			1	0.4
Comprehensive Alcoholism Project				1	1	0.4
Keystone		1	1	12	14	6.0
Oahe Alcohol & Drug Referral Center			1		1	0.4
New Hope Manor				1	1	0.4
Total	1	10	41	183	N = 235	99.9

Most of the individuals referred to outpatient treatment are referred to the Sioux Falls Alcohol and Drug Referral Center (14.5%) or to Saint Johns Hospital in Rapid City (15.2%). Another 16.6% were referred to numerous other outpatient facilities located throughout the state, however, these facilities had received less than ten individual referrals during the four year operational period and were, therefore, not included in this table.

Most persons referred to inpatient treatment modalities were referred to Yankton State Hospital, which accounts for over 40% of all inpatient referrals. Ft. Meade and River Park were the next most heavily utilized facilities, followed by the Sioux Falls Veterans Administration and Keystone Hospital. It should be noted that referrals to specific facilities, both for inpatient and outpatient, are made based upon economic and geographic factors rather than utilizing specific facilities for various levels of drinking problem severity.

The number and percentage of persons in each drinker classification referred to all treatment modalities and to modality combinations can be found in Table 25. The treatment modalities and combinations utilized in this table correspond directly to the referral options employed by the individual courts, and are based upon judicial consideration of D/TP office referral recommendations and the client's unique economic, geographic, and familial situation. A single case will appear only <u>once</u> in this table in order to allow for the determination of the frequency of use of various modality combinations, and, the nature of these combinations.

Driver Improvement School (DIS) alone was the most popular individual referral for social drinkers. Nearly 30% of the social drinkers were, however, not referred to treatment. This "no treatment" recommendation may have resulted either because a client's problem appeared not serious enough to warrant treatment, or, because of the unavailability of Driver Improvement School. It should also be noted that 30% of the social drinkers were referred to Problem Drinker Driver Classes. This referral may have been the result of either a drinking problem at the upper end of the social drinker continuum, or, as alternative to a "no treatment" recommendation where DIS was not available.

The most frequently recommended referral for problem drinkers was the Problem Drinker Drivers Classes(PDDC) alone, with approximatley 80% of problem drinker being referred to this modality. The next two most popular

TABLE 25. JUDICIAL REFERRAL MODALITY COMBINATIONS BY DRINKER CLASSIFICATION (1972-1975)

Modality	Drinker Classification: Social	Problem	Serious Problem	Alcoholic	Row Totals and Percent of Total N
No Treatment	531	188	98	72	889
	59.7	21.1	11.0	8.1	
	29.8	6.1	5.3	7.5	11.6
DIS	684	104	19	1	808
	84.7	12.9	2.4	0.1	
	38.4	3.4	1.0	0.1	10.5
PDDC	533	2459	909	290	4191
	12.7	58.7	21.7	6.9	
	30.0	79.8	48.9	30.2	54.6
AA	2	13	44	16	75
	2.7	17.3	58.7	21.3	
	0.1	0.4	2.4	1.7	1.0
Outpatient	10	73	68	41	192
	5.2	38.0	35.4	21.4	
	0.6	2.4	3.7	4.3	2.5
Inpatient	6	6	16	111	139
	4.3	4.3	11.5	79.9	
	0.3	0.2	0.9	11.6	1.8
PDDC + AA	9	107	312	101	529
	1.7	20.2	59.0	19.1	
	0.5	3.5	16.8	10.5	6.9
PDDC + Outpatient	2	123	276	189	590
	0.3	20.8	46.8	32.0	
	0.1	4.0	14.8	19.7	7.7
PDDC + Inpatient	0	3	3	61	67
	0.0	4.5	4.5	91.0	
	0.0	0.1	0.2	6.4	0.9
Outpatient + AA	1	2	4	5	12
	8.3	16.7	33.3	41.7	
	0.1	0.1	0.2	0.5	0.2
Inpatient + AA	1	0	6	7	14
	7.1	0.0	42.9	5.0	
	0.1	0.0	0.3	0.7	0.2
Outpatient + Inpatient	0	0	1	17	18
	0.0	0.0	5.6	94.4	
	0.0	0.0	0.1	1.8	0.2
PDDC + Outpatient + AA	0	3	30	37	70
	0.0	4.3	42.9	59.9	
	0.0	0.1	1.6	3.9	0.9
PDDC + Inpatient + AA	0	0	70	8	78
	0.0	0.0	89.7	10.3	
	0.0	0.0	3.8	0.8	1.0
PDDC + Outpatient + Inpatient	0	0	3	3	6
	0.0	0.0	50.0	50.0	
	0.0	0.0	0.2	0.3	0.1
COLUMN TOTALS	1779	3081	1859	959	N = 7678
PERCENT OF TOTAL N	23.2	40.1	24.2	12.5	

Cell contents are:
1) frequency
2) percent of row
3) percent of column

treatment referrals were to PDDC in combination with either outpatient treatment or Alcoholic Anonymous (which may be considered a form of outpatient services). Slightly over 6% of all problem drinkers were not referred to any treatment modalities and 3.4% of the persons in this group were assigned to Drivers Improvement School alone.

Problem Drinker Drivers Classes alone is the most widely used treatment referral category for both serious problem and for chronic alcoholic classifications. Approximately 50% of all serious problem drinkers are referred to this modality, as are slightly over 30% of all persons classified as chronic alcoholics. The second most popular treatment referrals for problem drinkers appears to be PDDC plus Alcoholic Anonymous, closely followed by PDDC plus outpatient services. These two referral recommendations were used with approximately equal frequencies and accounted for over 30% of all serious problem drinkers. Referral recommendations to outpatient modalities alone were employed somewhat less frequently, while the remaining referral recommendations being distributed across a variety of modalities or modality combinations. Less than 1% of serious problem drinkers are referred to inpatient facilities alone, while almost 12% of all alcoholics are referred to this modality. Also, over 6% of chronic alcoholics are referred to PDDC plus inpatient care, while only 0.2% of serious problem drinkers are subjected to this combination. In all, 21.6% of all chronic alcoholics are referred to inpatient treatment alone or in combination with other modalities, compared to only 5.5% of all serious problem drinkers.

The overall court acceptance of D/TP referral recommendations is approximately 70%; however, the court referrals have a tendency to sanction less intensive treatments than the D/TP office recommends.

The modality most frequently agreed upon by both the D/TP office and the courts was a sentence to Problem Drinker Drivers Classes. While 83% of all persons recommended by the D/TP office actually received this modality, 80% of those individuals receiving PDDC referrals were recommended to this modality by the D/TP office.

RELIABILITY/CONSISTENCY OF CURRENT SYSTEM

The reliability of the current diagnosis system may be viewed in terms of the extent to which available information is being consistently employed in the determination of a drinker classification. It should be noted that because information is being consistently employed, it

does not necessarily indicate that the resulting classification is a valid one. While the reliability of the diagnostic system is related to the consistency with which information is applied to determine drinker classification, the validity of the diagnostic system is concerned with the correctness of the classification determined on the basis of the information applied. It might also be noted that the reliability of a classification system will set a "limit" for the validity of that system. If all persons at the same point in the social drinker-alcoholic continuum are not always identified as having problems of equal severity, then the eventual diagnosis cannot always be correct. It might also be noted that because a system consistently classifies persons who are social drinkers as chronic alcoholics, and is therefore reliable, the resulting diagnosis would not be valid.

Two methods of determining the relative consistency of the present diagnosis and classification system were utilized for this study. All data used in these analyses were obtained from the PSI case files.

The first analysis was a plot of the percentage of each of the four drinker types, by month, for the period of time beginning November 1974 and ending October 1975. Assuming that DWI offenders represent a relatively consistent group of persons with varying degrees of drinking problem severity, a comparison of drinker groups across time should yield a measure of drinker diagnosis consistency. A relatively constant percentage of persons diagnosed as belonging to each drinker classification across time is indicative of a reliable diagnostic procedure. It is assumed that the relative proportion of each drinker type will remain stable across time, although this may be an unwarranted assumption.

The present D/TP Coordinator first began making drinker classifications during mid-1974. In order to obtain a relatively stable measure of his particular classification groups, the time period previously mentioned was selected as the observation period. This 12 month period yields a relatively long term period covering any seasonal fluctuations that may exist, and begins late enough after his initial classifications to allow for his "regular" diagnosis pattern to emerge.

The second analysis of diagnostic consistency employed a multiple discriminant analysis. This multivariate technique allows for the discrimination between various groups (in this case drinker type) by the use of two or more discriminating variables (variables utilized in the

drinker classification procedures). Each variable, of the set of variables employed in the drinker diagnosis process, was multiplied by a weighting coefficient (discriminant function coefficient) forming a linear combination (discriminant function) of the set of variables which will form a weighted composite score (discriminant score) for each person diagnosed. This linear combination was so developed such that the weighting coefficient will form a weighted composite score that will afford maximum discrimination between the drinker classification groups.

The overall test of discrimination between drinker classification groups is a gross indication of the reliability or unreliability of the drinker diagnosis procedures. An overall test indicating significant differences between the drinker classification groups is an indication that at least some degree of consistency existed in the application of information in the drinker diagnosis procedures.

A second product of the discriminant analysis is the classification table. This yields a more precise indication of the degree to which information was applied consistently in the determination of drinker classification. The classification table compares the actual drinker classification made by the D/TP office to the classification most probable on the basis of the group means of the weighted composite scores for each drinker classification group. That is, means of the weighted composite scores for each D/TP group are computed and the scores of all persons included in the analysis are compared to the weighted composite means for each of the four drinker classification groups. A particular client's predicted group, then, is that group with a mean on the linear composite scores closest to the linear composite score of the client. The comparison of the percentages of people for whom the actual group and predicted group are the same ("HITS") to the percentage of people for whom the actual group and predicted group are different (misclassifications) provides an indication of the degree to which information was consistently applied in determination of drinker classification. A useful supplement to the classification table is a plot of the weighted group means (centroids) in the scale defined by the weighted composite scores. This plot provides a display of the pattern of separation among the drinker classification groups. Inspection of the standardized discriminant function coefficients for each of the variables provides an indication of the contribution made by each variable relative to the other variables in the discrimination of drinker classification groups. Variables having coefficients of relatively larger absolute value make a greater contribution to the discrimination between groups than variables

with smaller coefficients. Univariate F tests provide information relative to the ability of a single variable taken by itself to discriminate between drinker classification groups. It should be noted that data used in this discriminant analyses and in all subsequent analyses will have no missing cases for any of the variables utilized in the analysis. Also, all variables have been recoded to accomodate their use in the discriminant analysis. That is, marital status has been recoded married = 1, not married = 2; occupation has been recoded working = 1, not working = 2; work pattern has been recoded employed, or favorable work pattern = 1, unemployed or unfavorable work pattern = 2; and race has been recoded white = 1, other = 2.

Shown in Figure 4 is the percentage of each drinker type across courtworkers by month for 1972-1975. It may be noted that the proportions of each drinker type were relatively consistent for 1972 and 1973, suggesting a somewhat reliable process for that time period. If early to mid-1974 is considered as a transition period for the new D/TP coordinator, then the present observational period (November 1974 - October 1975) also appears to indicate a relatively stable process. It should be noted that although these classifications appear stable during this observation period, close examination of the diagnosis pattern from January 1972 reveals some interesting changes coinciding with the present coordinator's arrival. It appears that while problem and serious problem classifications remained relatively constant, social drinkers began to steadily decline to reach the lowest percentages of the four groups. On the other hand, chronic alcoholic diagnosis climbed from averaging approximately 5% per month prior to mid-1974 to a monthly average of almost 21% during the observational period. Although seemingly stable in his present drinker diagnosis, the present D/TP Coordinator appears to have substantially reduced the likelihood of being classified as a social drinker and has increased the probability of being classified as a chronic alcoholic.

Table 26 shows the number of persons classified in each of the four drinker classifications for each month of the observation period. More persons are classified as problem drinkers each month than any of the other three drinker types, while relatively few individuals are classified as social drinkers. The second entry in each cell represents the percentage of persons classified a particular drinker type for each specific month. Examination of these column percentages for each drinker classification indicates a relatively consistent percentage of persons classified in each drinker classification throughout the observation period.

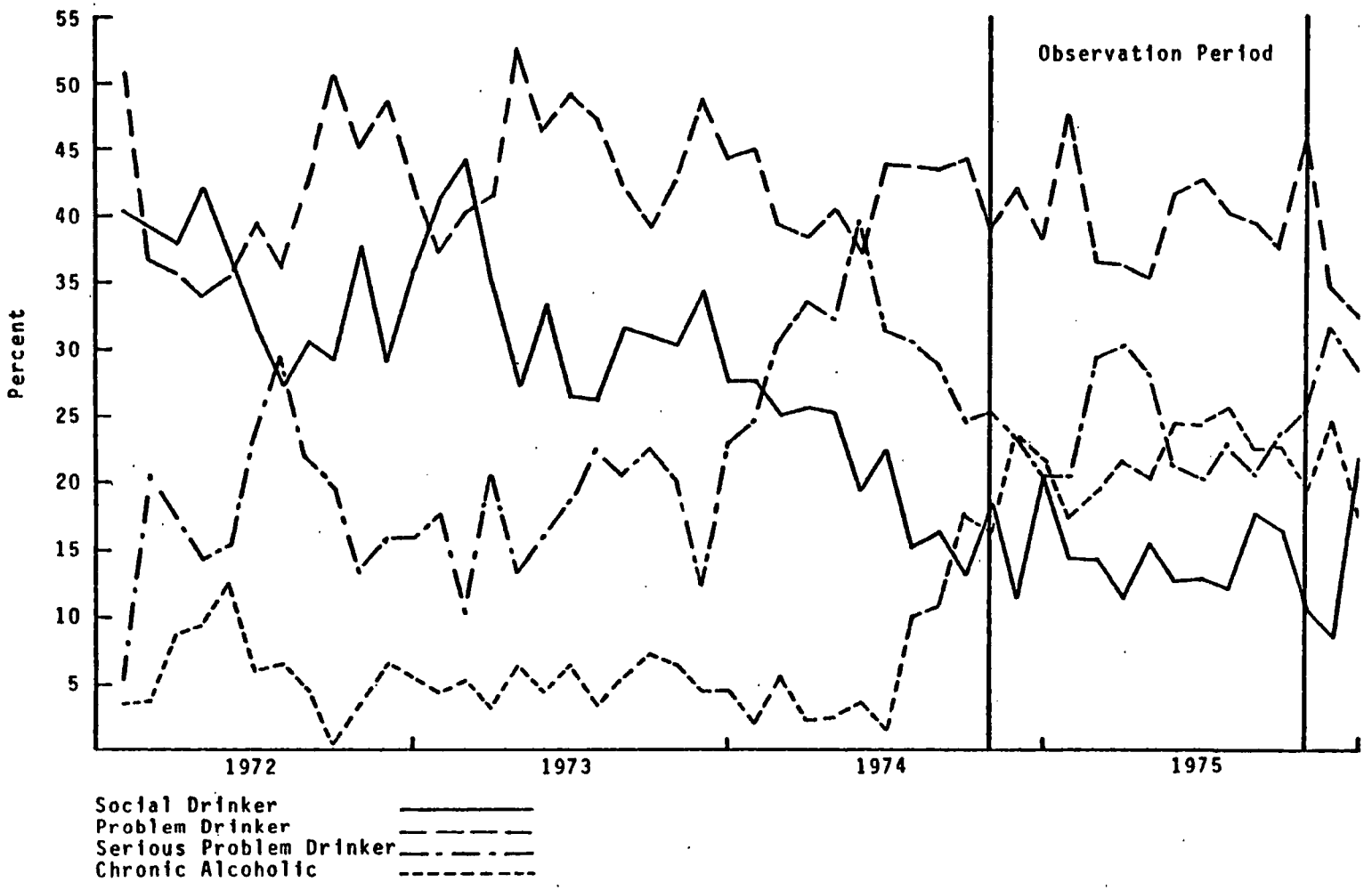


FIGURE 4. PERCENTAGE OF EACH DRINKER TYPE BY MONTH (1972-1975)

TABLE 26. FREQUENCY OF DRINKER CLASSIFICATION BY MONTH (NOVEMBER 1974 - OCTOBER 1975)

	Observation Period														
Drinker Classification	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	TOTAL	MEANS	S.D.
Social	23	43	22	24	25	37	30	26	24	39	31	16	340	28.33	7.9
	11.6	20.3	13.7	14.2	11.8	15.7	13.0	13.1	12.7	18.8	16.8	12.8	14.66		
Problem	83	81	78	62	78	85	98	87	76	86	68	65	948	79.00	10.26
	41.9	38.2	48.7	36.7	37.0	36.6	42.6	43.9	40.2	41.5	37.0	52.0	40.88		
Serious Problem	46	43	33	50	64	64	47	38	43	45	46	27	547	45.58	10.60
	23.2	20.3	20.6	29.6	30.3	27.7	20.4	19.1	22.8	21.7	25.0	21.6	23.59		
Alcoholic	46	45	27	33	44	47	55	48	46	37	39	17	484	40.33	10.40
	23.2	21.2	16.9	19.5	20.9	20.0	23.9	24.1	24.3	17.9	21.2	13.6	20.87		
COLUMN TOTALS	198	212	160	169	211	235	230	199	189	207	184	125	2319		

Cell contents are:
1) frequency
2) percent of column

The summary of the multiple discriminant analysis is shown in Table 27. This analysis utilized variables available from all sources of PSI input, including; interview with client, employer, friend, and family, Department of Motor Vehicle Records check, local police records check, arrest reports and Mortimer-Filkins Questionnaire and Interview scores.

The variables included in the analyses are listed in the first column of the table and the means of these variables for each drinker type and across all drinker types are given in the next five columns. The overall test of discrimination between groups is significant for a P value of less than .001.

The results of this analysis thus indicate that the variables included in the analysis are being applied consistently enough to yield significant differences between drinker classifications.

The standardized discriminant function coefficients given in the last column of the tables are an indication of the importance of each of the variables in relation to each other in the overall discrimination of the groups. As can be seen, the Mortimer-Filkins Interview score, BAC at time of arrest, the number of prior DWI arrests, drinking pattern, and the Mortimer-Filkins Questionnaire score are the most important variables in the discrimination of the drinker classification groups. The absolute value of the standardized discriminant function coefficients is indicative of the relative importance of the variables in the discrimination.

The "Univariate F Ratios" are indicative of the ability of each variable taken individually to discriminate between the four drinker classifications. All values in this column above 5.42 indicate that the variable associated with that value can significantly discriminate between drinker classification groups at or beyond the .001 level of significance.

The classification table presented in Table 28 indicates how consistently the PSI variables included in the discriminant analysis were applied to drinker diagnosis. It can be seen that 65.99% of those persons included in the analysis had predicted group membership which matched their original drinker classification. It should be noted that by chance alone, only 25% of the grouped cases would be expected to be correctly classified, and thus, these results suggest a reasonable degree of reliability.

TABLE 27. SUMMARY OF DRINKER TYPE DISCRIMINANT ANALYSIS

	Social	Problem	Serious Problem	Chronic Alcoholic	Total	Univariate F Ratios*	Standardized Discriminant Function Coefficients**
Group Counts	176	552	329	319	1376		
Variable Means							
Age	31.8920	32.7898	35.2310	39.8683	34.8997	21.2601	-0.00556
Sex	1.1307	1.0942	1.0638	1.1034	1.0938	2.2187	0.03848
Occupation	1.0966	1.1594	1.1915	1.3542	1.2042	22.2589	0.02600
Marital	1.9489	1.8333	1.7599	1.6740	1.7936	21.3564	-0.00541
Education	4.5511	4.2518	4.0000	3.9561	4.1613	10.0949	0.01572
Income	3.9205	3.9058	3.8359	3.4138	3.7769	5.0318	0.03525
Drink. Pat.	2.3636	3.2128	3.7903	4.3856	3.5145	255.7717	-0.15084
Work Pat.	1.0682	1.1377	1.1793	1.3636	1.1911	31.6662	-0.05192
BAC	16.3636	18.9174	21.3465	23.3072	20.2093	87.6990	-0.20679
M-F Quest.	9.6364	13.8188	18.9118	24.3177	16.9360	227.7303	-0.11117
DWI	0.0455	0.2138	0.8024	1.3636	0.5996	148.2565	-0.17094
PI	0.0909	0.3007	0.9179	2.3292	0.8917	110.7262	-0.04647
Reck. Driv.	0.0682	0.1558	0.2553	0.3354	0.2100	11.5073	0.01643
Haz. Mov.	0.5966	0.7971	0.8997	0.8276	0.8031	1.5687	-0.00758
No Dr. Lic.	0.0114	0.0308	0.1125	0.2132	0.0901	12.7139	-0.02393
P. Other	0.2386	0.4384	0.7477	1.0031	0.6177	15.9112	-0.01426
Race	1.0398	1.0996	1.1520	1.2539	1.1403	19.7057	-0.03380
M-F Int.	14.9659	38.3369	62.1398	95.4953	54.2900	701.4670	-0.60607

*All Univariate F Ratios with 3 and 1372 degrees of freedom, $F_{.001} = 5.42$

Overall test of significance: Wilks Lambda = .2784, Chi Square = 1743.985, df = 54, $p < .001$

** Standardized discriminant function for root 1.

Root 1 accounts for 96.22% of accountable variance.

TABLE 28. CLASSIFICATION TABLE FOR DRINKERS TYPE DISCRIMINANTS ANALYSIS

		Prediction Results			
Actual Group	N of Cases	Social	Problem	Serious Problem	Alcoholic
Social	176	147 83.5	28 15.9	1 0.6	0 0.0
Problem	552	111 20.1	341 61.8	97 17.6	3 0.5
Serious Problem	329	9 2.7	77 23.4	183 55.6	60 18.2
Alcoholic	319	1 0.3	9 2.8	72 22.6	237 74.3

Percent of "grouped" cases correctly classified = 65.99%

Cell contents are: 1) frequency

2) percent of row

It might also be noted that for those persons whose predicted group membership does not match their actual group membership, the predicted group is in most cases adjacent to the actual group. For example, of those persons diagnosed as problem drinkers by the D/TP Office, 62% were predicted to be problem drinkers. Of those original problem drinkers whose predicted group was different than problem drinker, 20% were predicted as social drinkers and 18% were predicted to be serious problem drinkers, while only 5% were predicted to be chronic alcoholics.

The group means of the four drinker classifications based on the linear composite scores are presented in Figure 5. As can be seen, the groups are clearly separated with a somewhat larger separation between serious problem and chronic alcoholic and between problem drinker and serious problem drinker, than between social and problem drinkers.

The results of the present analyses thus indicate that although the present D/TP coordinator appears to be classifying individuals differently than his predecessors, that is, tending to be more severe in his drinker diagnosis, he is relatively consistent in the application of PSI data in the determination of drinker type.

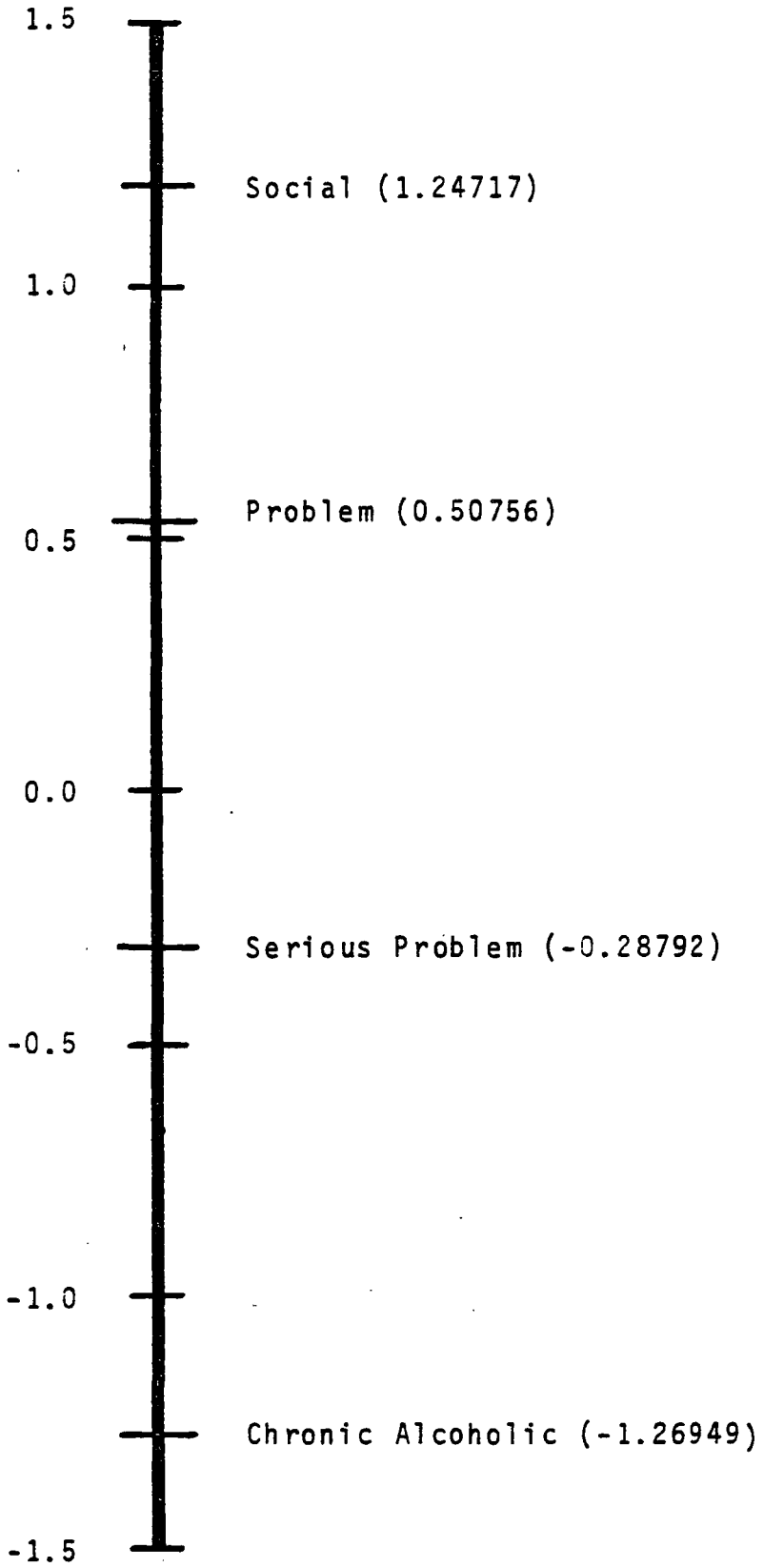


Figure 5

GROUP CONTROLS FOR DRINKER TYPE
MULTIPLE DISCRIMINANT ANALYSIS

EFFICIENCY OF THE CURRENT DIAGNOSIS AND REFERRAL PROCEDURES

A major portion of a presentence investigator's time and effort is devoted to the collection of background information as input to drinker diagnosis. These information come from a variety of sources, some of which require considerably more time than others. A telephone interview was conducted with each courtworker to determine which of the presentence information components require the most effort in their situation and which they consider to be relatively more valuable in deriving their diagnosis recommendation.

As expected, the records check and arrest reports were the most easily accessible and required the least time. The arrest report was virtually always available; however, in some instances travel to courts in other towns was required. Generally, the local RAP sheets required a brief (ten to twenty minute) personal visit to the appropriate enforcement agency for the information and travel time was a function of the location of the agency involved. Ten to thirty minutes travel and ten to twenty minutes of records search and transcription was usually sufficient to acquire the needed information.

The Mortimer-Filkins Questionnaire and Interview generally administered during the first meeting with the client and whenever possible the clients were seen at the court at the time of arraignment or conviction. If the courtworker was not at the court at this time, the client was contacted and arrangements made for an appointment. Whenever arrangements had to be made for these meetings, the time involved varied drastically. Courtworkers reported efforts ranging from a simple phone call to spending a few days trying to track a client down. Once a client was allowed to leave the court facility, the time and energies expended to arrange a meeting increased sharply.

Most of the courtworkers only see one client at a time, although a few stated that if more than one client was in the office, the questionnaire would be administered to more than one individual at a time. One courtworker admitted to <u>always</u> giving the questionnaire in a group situation. The average length of time for the questionnaire administration was twenty-five minutes, with a range of ten to forty-five minutes. Most courtworkers spent this

time completing their personal records, transcribing various information to the PSI forms and preparing for the personal interview to follow. The average time for the Mortimer-Filkins Interview was thirty-five minutes, with one courtworker spending only fifteen minutes per client while other courtworkers conducted interviews lasting well over one hour.

There was a general lack of uniformity in the way "outside" interviews with a client's family, friends, and employers were conducted. Most interviews were conducted telephonically, although some courtworkers preferred to interview in person. Interviews with the client's spouse averaged approximately fifteen to twenty minutes over the phone and forty-five minutes when conducted in person. Most courtworkers believed this interview to be quite an important insight as to the client's drinking pattern and were generally considered to be a "true picture" of the client's drinking problem. Employer interviews were also rated as a relatively "true picture" of the client, although generally not taking quite as long as the spouse/family interview. Most of these interviews tend to be conducted telephonically, and last approximately ten to twenty minutes. The interview with a client's friends were not believed to give a "true picture" of the individual's problem with alcohol and were most always conducted telephonically, lasting in the vicinity of ten to fifteen minutes.

The courtworkers were then asked to rank the PSI criteria in order of importance as input for their diagnosis and initial recommendation. All but one courtworker considered the Mortimer-Filkins Interview and "observable" data gained from the interview as the best indicator of the individual's drinking problem. Most felt that they could tell if an individual was answering questions truthfully, and could "coax" the individual to give a realistic picture of their alcohol problem. Most courtworkers placed the number of prior DWI arrests as the second important variable, although this information was obtained from the client, and not from the DMV records check. The BAC at time of arrest was generally rated second or third, but was considered important only if at a relatively high level, i.e., > .20. The "outside" interviews were usually rated third or fourth in importance except for one courtworker who liked this variable as the best indicator, with the client interview as a close second. It generally appears then, that the answers to the Mortimer-Filkins Interview and the personal "observable" information gleened from this contact, figure heavily in the courtworker's initial treatment recommendation.

It should be remembered that the actual interview score is not known at this time, and thus, the courtworker was relying on his personal subjective aggregate of responses to specific questions in making the determination.

Once the D/TP coordinator had reviewed the PSI information, a final drinker diagnosis was determined. It is of interest to note that while the recommendation of the courtworker was primarily based on personal "subjective" information, the D/TP coordinator was relying solely on more "objective" information, although he had the initial recommendation as a guideline. Unfortunately, the exact criteria utilized, if any, to make the final recommendation were not explicitly known, nor was the relative influence of the initial recommendation on the D/TP coordinator's final decision.

COSTS OF REFERRAL AND DIAGNOSIS

The costs of diagnosis and referral in terms of manhours and dollars are outlined in Tables 29-32. Since diagnosis and referral activity are not mutually exclusive events, the figures presented here should not be considered a strict cost accounting. That is, under the present system referral activity is dependent on the results of the diagnosis so that referral costs could be considered to include diagnostic costs. These figures correspond, however, to an estimated spatial break in activity and do not consider the relative importance of drinker classification as an essential criterion to referral. Furthermore, these data represent the major variable costs of manpower and travel. Minor variable costs such as courtworker supplies and fixed costs such as office space are not included.

A comparison of Tables 29 and 31 show that 56% of the courtworker's time and 67% of the D/TP central office time is devoted to diagnosis. The single item requiring the most time is the conduct of the presentence investigation, which over the four years took 3.2 hours per case. The major referral time is devoted to court communication, or time spent discussing the recommendation with the judge and appearing at the client's sentencing. In terms of dollar cost (Tables 30 and 32) each drinker diagnosis costs an average of $34.88 while the referral costs $26.19.

There is some yearly variation in both manhour and dollar costs over the four project years. Much of the dollar cost variation is due to cost of living and merit raises for the courtworkers and D/TP staff. Of greater interest, however, is the apparent gain in efficiency during the

TABLE 29. DIAGNOSTIC MANHOUR COSTS

	1972			1973			1974			1975			TOTAL		
Courtworkers	Hours	Cases	Hours Case	Hours	Cases	Hours Case	Hours	Cases	Hours Case	Hours	Cases	Hours Case	Hours	Cases	Hours Case
Conduct Actual PSI	5,674	1,662	3.354	7,280	1,861	3.912	7,905	2,468	3.203	6,403	2,444	2.620	27,162	8,435	3.220
PSI Reports	2,622	1,662	1.578	2,144	1,861	1.152	2,597	2,468	1.052	3,199	2,444	1.310	10,562	8,435	1.252
Travel (Related to PSI)[1]	1,565	1,662	0.942	1,904	1,861	1.023	1,607	2,468	0.651	1,410	2,444	.580	6,486	8,435	0.769
Arrange Med/Psyc Diagnosis	24	1,662	0.014	13	1,861	0.007	6	2,468	0.002	8	2,444	.003	51	8,435	0.006
Subtotal	9,785	1,662	5.887	11,341	1,861	6.094	12,115	2,468	4.909	11,020	2,444	4.510	44,261	8,435	5.247
D/TP Central Office															
Coordinator and Assistant Review and Diagnosis[2]	950	1,662	0.571	989	1,861	0.531	571[3]	2,468	0.231	512	2,444	.210	3,022	8,435	0.358
Clerical Handling of Cases[4]	3,501	1,662	2.107	2,869	1,861	1.542	2,209[5]	2,468	0.895	2,146	2,444	.890	10,725	8,435	1.271
Subtotal	4,451	1,662	2.678	3,858	1,861	2.073	2,780	2,468	1.126	2,658	2,444	1.090	13,747	8,435	1.630
Total	14,236	1,662	8.566	15,199	1,861	8.167	14,895	2,468	6.035	13,678	2,444	5.590	58,008	8,435	6.877

[1]One third of total travel time is estimated as PSI related
[2]One fourth of total coordinator and assistant time is estimated as diagnosis related
[3]Decrease in hours because of elimination of assistant D/TP coordinator for 1974
[4]Sixty percent of total clerical time is estimated as diagnosis related
[5]Decrease in hours because of reduced use of DMV clerk with computerization of DMV records

TABLE 30. DIAGNOSTIC DOLLAR COSTS

	1972			1973			1974			1975			TOTAL		
Courtworkers	Total	Cases	Per Case	Total	Cases	Per Case	Total	Cases	Per Case	Total	Cases	Per Case	Total	Cases	Per Case
PSI Related Hours/Total Hours x Total Courtworker Cost	36,504	1,662	21.96	52,818	1,861	28.38	62,416	2,468	25.29	65,419	2,444	26.76	217,157	8435	25.74
One-third of Total Travel Costs	6,641	1,662	4.00	8,656	1,861	4.65	8,406	2,468	3.41	6,955	2,444	2.85	30,658	8435	3.63
Subtotal	43,145	1,662	25.96	61,474	1,861	33.03	70,822	2,468	28.70	72,374	2,444	29.61	247,815	8435	29.38
D/TP Central Office															
25% of Total Expenditure for D/TP Coordinator and Assistant	4,832	1,662	2.91	5,086	1,861	2.73	3,011	2,468	1.22	2,655	2,444	1.09	15,584	8435	1.85
60% of Total Clerical Expenditure	8,293	1,662	4.99	7,865	1,861	4.23	8,515	2,468	3.45	6,114	2,444	2.50	30,787	8435	3.65
Subtotal	13,125	1,662	7.90	12,951	1,861	6.96	11,526	2,468	4.67	8,769	2,444	3.59	46,371	8435	5.50
Total	56,270	1,662	33.86	74,425	1,861	39.99	82,384	2,468	33.37	81,143	2,444	33.20	294,186	8435	34.88

TABLE 31. REFERRAL MANHOUR COSTS

	1972			1973			1974			1975			TOTAL		
Courtworkers	Hours	Referrals	Hours/Referral	Hours	Referrals	Hours/Referral	Hours	Referrals	Hours/Referral	Hours	Referrals	Hours/Referrals	Hours	Referrals	Hours/Referrals
Court Communications	4,187	1,662	2.52	6,282	1,861	3.38	5,754	2,468	2.33	3,478	2,444	1.42	19,701	8,435	2.336
Follow-up	1,791	1,662	1.08	1,620	1,861	0.87	1,952	2,468	0.79	1,625	2,444	.66	6,988	8,435	0.829
Arrange Referrals	868	1,662	0.52	587	1,861	0.32	633	2,468	0.26	479	2,444	.20	2,567	8,435	0.304
Travel[1]	1,565	1,662	0.94	1,904	1,861	1.02	1,607	2,468	0.65	642	2,444	.26	5,718	8,435	0.678
Subtotal	8,411	1,662	5.06	10,393	1,861	5.58	9,946	2,468	4.03	6,224	2,444	2.55	34,974	8,435	4.146
O/TP Central Office															
Referral Recommendations: O/TP Coordinator and Assistant[2]	950	1,662	0.57	989	1,861	0.53	571[3]	2,468	0.23	512	2,444	.21	3,022	8,435	0.358
Clerical Handling of Referral[4]	1,167	1,662	0.70	957	1,861	0.51	736[5]	2,468	0.30	894	2,444	.37	3,754	8,435	0.445
Subtotal	2,117	1,662	1.27	1,946	1,861	1.04	1,307	2,468	0.53	1,406	2,444	.57	6,839	8,435	0.811
Total	10,528	1,662	6.33	12,339	1,861	6.63	11,253	2,468	4.55	7,630	2,444	3.12	41,750	8,435	4.950

[1] One third of travel time is estimated as referral related
[2] One fourth of total coordinator and assistant time is estimated as referral related
[3] Decrease in hours because of elimination of assistant O/TP coordinator for 1974
[4] Twenty percent of clerical time is estimated as referral related
[5] Decrease in hours because of reduced use of DMV clerk with computerization of DMV records

TABLE 32. REFERRAL DOLLAR COSTS

	1972			1973			1974			1975			TOTAL		
Courtworkers	Total	Cases	Per Case	Total	Cases	Per Case	Total	Cases	Per Case	Total	Cases	Per Case	Total	Cases	Per Case
Referral Related Hours/Total Hours x Total Courtworker Cost	31,371	1,662	18.88	48,403	1,861	26.01	51,242	2,468	20.76	35,218	2,444	14.41	166,241	8,435	19.71
One-third of Total Travel Costs	6,641	1,662	4.00	8,656	1,861	4.65	8,405	2,468	3.41	5,778	2,444	2.36	29,481	8,435	3.49
Subtotal	38,019	1,662	22.88	57,059	1,861	30.66	59,648	2,468	24.17	40,996	2,444	16.77	195,722	8,435	23.20
D/TP Central Office															
25% of Total Expenditure for D/TP Coordinator and Assistant	4,832	1,662	2.91	5,086	1,861	2.73	3,011	2,468	1.22	2,069	2,444	0.85	14,998	8,435	1.78
20% of Total Clerical Expenditure	2,765	1,662	1.66	2,622	1,861	1.41	2,839	2,468	1.15	1,952	2,444	0.80	10,178	8,435	1.21
Subtotal	7,597	1,662	4.57	7,708	1,861	4.14	5,850	2,468	2.37	4,021	2,444	1.64	25,176	8,435	2.98
Total	45,616	1,662	27.45	64,767	1,861	34.80	65,498	2,468	26.54	45,017	2,444	18.42	220,898	8,435	26.19

last two years. It can also be noticed that a far greater number of cases were processed in 1974 and 1975, which suggests that the gain in efficiency is in large part due to the elimination of excess capacity in the diagnostic/referral system.

STREAMLINING THE DIAGNOSIS/REFERRAL PROCESS

With SD:ASAP nearing the end of funded operations, some of the courts expressed a desire to retain a system whereby background investigations could aid in making appropriate referrals and sentences for DWI offenders. Without project support for such activity a much more economical system had to be developed that could operate within the district court structure and independently of any central D/TP coordinator's office.

The elimination of the D/TP coordinator's office would result in an immediate dollar savings of $5.50 or 16% of the total cost of drinker diagnosis. Certain of the functions of this office such as scoring of the Mortimer-Filkins questionnaire and interview and acquiring DMV records check information would now be the responsibility of the individual courtworker. The scoring of the Mortimer-Filkins instruments would be offset by the time saved in central office communications, and a network of tele-communications from local police agencies to the DMV data base facilitated records check retrieval in each of the court districts.

The second area where streamlining measures could be effective was in the conduct of the presentence investigation. The objective here was to identify the relative importance of the various PSI criteria from all sources of input and alter existing PSI procedures by eliminating the collection of specific information which is not essential for an adequate assessment of an individual's drinking problem. The following approaches were considered:

1. Elimination of some portion of the existing PSI procedures for all individuals, resulting in a more "streamlined" procedure for all drinker type classifications. As previously mentioned, the current PSI represents an agglomeration of data from a variety of sources. Elimination of one or more of these sources, without a drastic reduction in the present classification system, would also result in increased efficiency based on a faster turn-around time for a completed investigation.

2. "Pre-screen" individuals at either end of the drinker classification continuum so that they may be quickly identified and eliminated from the more exhaustive diagnostic procedures currently employed. It is assumed that if those persons with a need for minimal or no rehabilitation could be identified, along with individuals who are in need of some form of severe treatment modalities on the basis of a less extensive procedure than a complete PSI, then considerable expenditure of effort could be eliminated.

Exhaustive analyses of the cases on file were made to address these two questions. All of the quantifiable diagnostic criterion variables (shown in Table 27) were grouped according to source and multiple discriminant analyses were used to assess the effects of deleting one or more of the sources of input from the current PSI collection procedures. The basic groups of variables were from: arrest report, local police agency check, division of motor vehicles records, drinking and work patterns interviews, Mortimer-Filkins Interview and Mortimer-Filkins Questionnaire. The discriminant analyses were applied to the groups of variables in stepwise fashion, while at each step the variables within a group were inspected to see which particular variables were contributing the most discriminatory power. Relative importance was based on a variable's or group of variable's ability to reclassify individuals back into their original drinker classifications. Secondly, cross tabulations of drinker type by scores on selected variables of BAC, number of prior DWI arrests and Mortimer-Filkins Interview score were made to see if some logical cutoff score could effectively determine the extreme drinker classes without the need to collect additional discriminating information.

The results of the discriminant analysis indicated that the Mortimer-Filkins Interview score, BAC at the time of arrest and the number of prior DWI arrests to be the more important discriminators in the current classification system. The optimal linear combination of these variables could not, however, satisfactorily reproduce the original groups. Furthermore, simple cross tabulations by drinker type did not reveal a consistent breaking score with which one could feel confident in prescreening the extreme high or extreme low drinker classes.

It should be remembered, however, that the search for a simpler more efficient drinker diagnosis process was based on a sample of cases whose classifications were derived

under the present system. It was these classifications that were used as a standard against which revised procedures were judged, which presumes, of course, that the present PSI criteria were uniformly applied and that the resulting drinker diagnoses are a valid assessment of the drinking problem. It was shown in a previous section, however, that based on a complete set of diagnostic criteria, a discriminant analysis could reclassify only 66% of the clients back into their original groups. Thus, the standard itself seems to be somewhat muddled in the subjectivity of the diagnosticians, and if variables such as BAC, Mortimer-Filkins score, etc., are considered to be relevant criteria on which to base the status of a drinking problem, the value of relying on the present system is questionable.

Therefore, it was decided to break from tradition and develop a standard, objective and simple classification scheme that was efficient and manageable in a district court system. The following criteria were set to guide the development of meaningful PSI revisions:

1. The determining criteria for drinker diagnosis should be relevant, consistent discriminators along the continuum of problem drinking. That is, a consensus of alcohol and highway safety research should concur with the relative importance of the variables used.

2. The diagnostic variables should be readily accessible and, with the exception of a client interview, their acquisition should require a minimum of effort.

3. The resulting drinker classifications should be based on an objective weighting of measures that are entirely dependent on the client. That is, the influence of subjective judgments by a particular courtworker is minimized.

4. The number of criteria should be large enough to reflect more than one dimension of the underlying construct of problem drinking, and few enough that a system of weights can be applied to these measures in an unambiguous, manageable fashion.

5. By varying the combination of criteria weights, a choice of group sizes should emerge that fall within the rehabilitation/re-education constraints of a particular jurisdiction.

6. The resulting groups should relate to a reasonable number of sentence/referral options available to the court.

The first major change was to reduce the number of drinker classifications from four to three. The new classes are loosely defined as:

1. Social Drinker - One who rarely drinks excessively or abusively, the use of alcohol is limited to occasions of special activity.

2. Excessive Drinker - One who drinks considerable amounts of alcoholic beverages at one drinking experience but does not permit the use of alcohol to interfere with his activity at home or on the job.

3. Problem Drinker - One who drinks heavily and permits the use of alcoholic beverages to interfere with his activity at home or on the job, cannot control the use of alcoholic beverages when involved in drinking experiences.

Four drinker classes were considered an unnecessary complication in light of the limited number of referral options open to the court in a particular district. At most a court would probably have a treatment center which might offer either outpatient and/or inpatient services in addition to the traditional PDDC classes.

The second major change was to reduce the number of classificatory criteria to only three. They are: blood alcohol content at the time of arrest, number of prior DWI arrests as reflected in the Division of Motor Vehicles records and the Mortimer-Filkins Interview score. Next, an objective weighting of these criteria was devised that would eliminate the need for totally subjective judgment decisions on the part of the courtworkers. The weighting scheme is shown in Table 33. That is, once the three measures are obtained, the courtworker simply enters the appropriate table according to BAC and finds the drinker classification at the column-row intersection of the number of prior DWIs and Mortimer-Filkins Interview score.

The cutoff scores for the Mortimer-Filkins Interview (a and b on Table 33) can be established depending on the desired group sizes in a particular court district. An empirical variation of the cutoff scores was performed on 1376 presentence investigations completed between November, 1974, and October, 1975. Table 34 shows the resulting group sizes as the low score iterates from

30 to 50 and the high cutoff varies from 80 to 60. Under the original ASAP classification scheme, the same sample resulted in the group sizes shown in Table 35. It can be seen in Table 34 that a high score cutoff of 80 provides a close approximation to the original number of clients falling into the most serious drinker category. In fact, 80.3% of the original chronic alcoholics fall into the new PD category. At the other end of the scale, a low cutoff of 30 contains 92.5% of the original social drinker class.

Further manipulation of the Mortimer-Filkins Interview score cutoffs yield substantial flexibility in the desired group sizes and the final guidelines could be chosen to conform to the capacity constraints of available treatment alternatives. The SD:ASAP project management found the revised system acceptable and chose to implement cutoff scores of 30 and 70 which would result in approximately equal group sizes. The new system was introduced to the district court judges and the courtworkers operating in each district by March, 1976.

TABLE 33. BLOOD ALCOHOL TEST LESS THAN OR EQUAL TO 0.15%

		Number of Prior DWI Convictions		
		0	1	2 or More
Mortimer-Filkins Interview Score	Less than or equal to a	SD	SD	ED
	Greater than a and less than b	SD	ED	PD
	Greater than or equal to b	ED	PD	PD

BLOOD ALCOHOL TEST GREATER THAN 0.15%

		Number of Prior DWI Convictions		
		0	1	2 or More
Mortimer-Filkins Interview Score	Less than or equal to a	SD	ED	PD
	Greater than a and less than b	ED	ED	PD
	Greater than or equal to b	PD	PD	PD

NOTE: 1. If Chemical Test was refused or is not available, use the second table.
2. If driver's record is not available, consider as "0" prior DWI conviction.

TABLE 34. RESULTING GROUP SIZES FOR VARIOUS COMBINATIONS OF MORTIMER-FILKINS INTERVIEW SCORES (percentages in parentheses)

Mortimer-Filkins Interview Scores	Drinker Type SD	ED	PD
≤ 30 / > 30 and < 80 / ≥ 80	448 (32.6)	555 (40.3)	373 (27.1)
≤ 40 / > 40 and < 80 / ≥ 80	555 (40.3)	449 (32.6)	372 (27.0)
≤ 50 / > 50 and < 80 / ≥ 80	623 (45.3)	381 (27.7)	372 (27.0)
≤ 30 / > 30 and < 70 / ≥ 70	441 (32.0)	495 (36.0)	440 (32.0)
≤ 40 / > 40 and < 70 / ≥ 70	548 (39.8)	389 (28.3)	439 (31.9)
≤ 50 / > 50 and < 70 / ≥ 70	616 (44.8)	321 (23.3)	439 (31.9)
≤ 30 / > 30 and < 60 / ≥ 60	424 (30.8)	406 (29.5)	546 (39.7)
≤ 40 / > 40 and < 60 / ≥ 60	531 (38.6)	300 (21.8)	545 (39.6)
≤ 50 / > 50 and < 60 / ≥ 60	599 (43.5)	232 (16.9)	545 (39.6)

TABLE 35. ORIGINAL ASAP DRINKER GROUP SIZES

	Social	Problem	Serious Problem	Chronic Alcoholic	Total
N	176	552	329	319	1376
%	12.8	40.1	23.9	23.2	

ANALYSES OF REHABILITATION SYSTEM EFFECTIVENESS

The intent of SD:ASAP referral and rehabilitation countermeasures was, of course, to produce positive behavioral change in the clients exposed to the ASAP diagnosis, referral and rehabilitation system. Analyses of effectiveness reported in the present study are based both on DWI rearrest recidivism, and on self-report indices of behavioral change obtained during follow-up interviews of SD:ASAP clients. These two classes of effectiveness measures are considered separately below.

RECIDIVISM ANALYSES

Designs and Analyses

Recidivism data for virtually all individuals exposed to SD:ASAP diagnostic or referral countermeasure activities were obtained through a search of law enforcement records submitted by state law enforcement agencies. Recidivist identification involved matching of client name, birthdate, and other demographics in the cumulative law enforcement file. A summary of these recidivism data is incorporated as Appendix C to the present report, and was also submitted in the 1976 annual Appendix H data tables.

Analyses of ASAP influence on recidivist behavior of ASAP clients were conducted within two evaluation designs. Overall assessments of total rehabilitation system effectiveness were restricted to quasi-experimental comparisons between the performance of individuals (within each project drinker classification) who had been referred to some form of rehabilitation countermeasure and those who had not been so referred. No equivalence of the treatment (referred) and no treatment (not referred) groups is claimed, and none should be inferred from these comparisons. Similar quasi-experimental comparisons (again separately for each project drinker type) were conducted between the group of individuals who had been referred to some treatment countermeasure and the group of individuals who had been referred but who either failed to appear (no shows) or failed to complete (dropouts) the assigned rehabilitation program(s). In most cases a full 16 quarters of project data were available to support these quasi-experimental analyses.

In January of 1974 a random assignment/no treatment control group procedure was implemented according to which 20% of those clients diagnosed as social, problem or serious problem drinkers were exempted from treatment referral. DWI recidivism data were available for this no treatment control group for a total of eight quarters (1974-1975) covered by the present report, and this assignment procedure served as the basis for the construction of an experimental design which was used to organize tests of the effectiveness of separate SD:ASAP treatment countermeasures. Analyses based on this experimental design compare the recidivism performance of no-treatment control group clients with the performance of individuals referred to each of the major ASAP treatment countermeasures. Separate comparisons are conducted for social drinkers and for a combined group of problem and serious problem drinkers. Since individuals diagnosed as chronic alcoholics were not eligible for control group assignment analyses of individual treatment program effectiveness for this subset of SD:ASAP clients relied on quasi-experimental comparisons of recidivism rates between individuals who were not referred to treatment (non-random assignment) and those referred to each of the principal referral resources for chronic alcoholic clients.

Actual analyses of differential recidivism (DWI rearrest) behavior within both the true experimental, and quasi-experimental designs relied on the survival rate methodology described by Cutler and Ederer (1958). For each survival rate comparison affected (survival rate = 1 - recidivism rate) the cumulative quarterly survival rates of groups of clients are plotted across the observation period available. The observation period for most of the quasi-experimental designs discussed was 16 quarters in duration, while the experimental comparisons with the random assignment control group spanned only 8 quarters. The statistical equivalence of pairs of cumulative survival rates was assessed at four quarter (annual) intervals by means of simple t tests.

Treatment Effectiveness for Social Drinkers

Figure 6 shows 16 quarter cumulative survival rate curves for, 1) total social drinker treatment entries, 2) total social drinkers not referred, and 3) total treatment dropouts and no-shows. A gross indication of overall treatment effectiveness for this drinker classification is provided by a comparison of the survival rates for the total treatment entry and total not-referred groups. Statistical comparisons of the equivalence of these curves

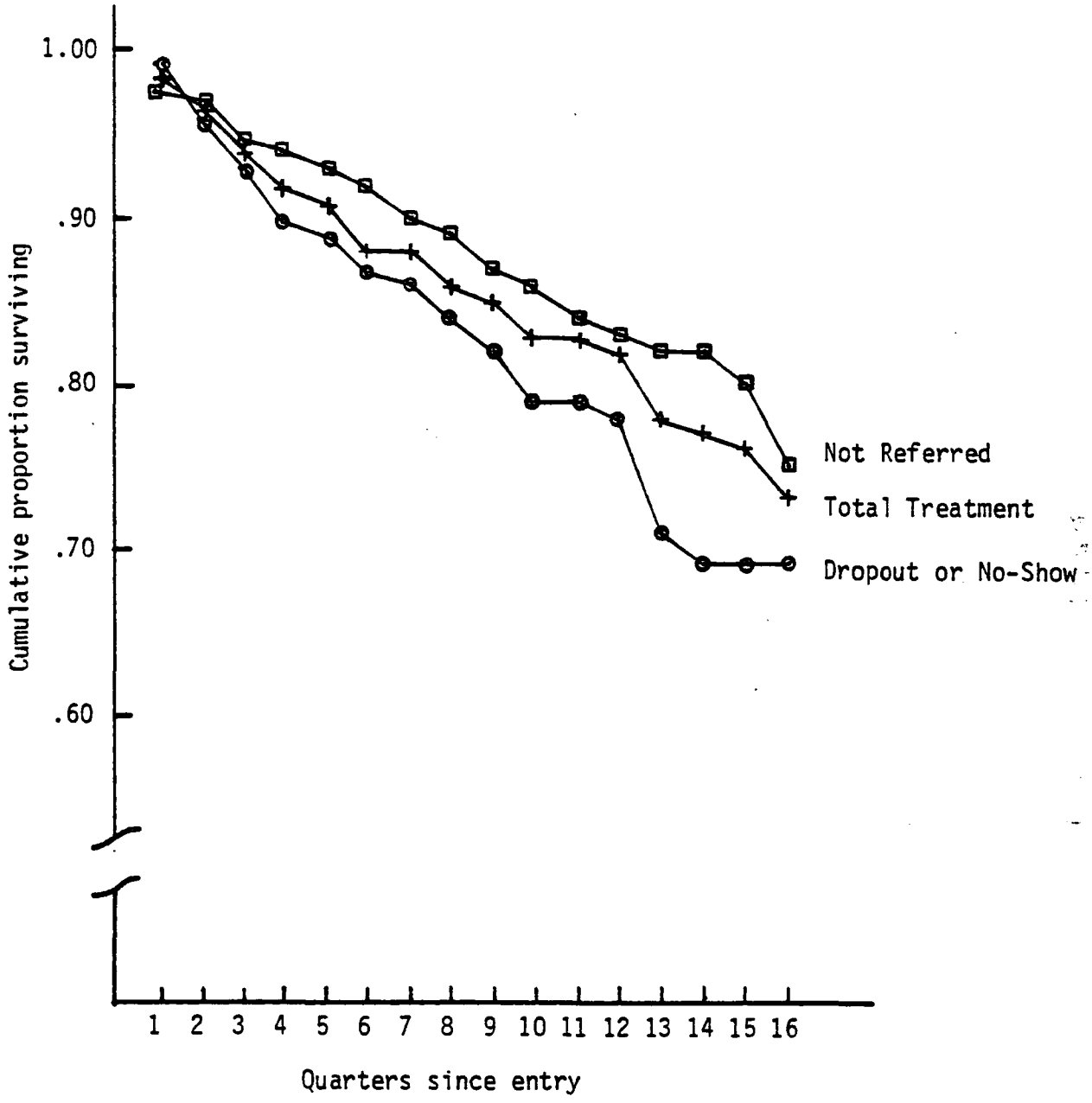


FIGURE 6. CUMULATIVE SURVIVAL RATE PROFILES FOR SOCIAL DRINKERS

at annual (4 quarter) intervals are contained in Table 36, as are comparisons between survival rate curves of total treatment entries and dropouts/no-shows. Although the cumulative survival rate curve for the not-referred group exceeds that for the total treatment entry group across the entire 16 quarter follow-up period, the only annual comparison which attained statistical significance occurred at quarter 8 (2 years exposure). Even at this point, however, the difference in proportion of clients surviving to two years without rearrest amounted to less than 3%. In general, inspection of Figure 6 indicates that the curves for these two groups are essentially parallel, and non-divergent across the follow-up period, and that both curves show a reasonably linear decrease in the proportion of individuals surviving without rearrest (or an increase in recidivism) during the four year follow-up period. It should be noted that the not-referred group does not represent a matched or randomly assigned control group for the treatment entry group, and that the individuals comprising the non-referred group were arbitrarily exempt from treatment referral by the courts for a variety of reasons, some of which may exhibit substantial correlation with the potential for treatment program success. It should also be noted that the total treatment entry group consists of individuals referred to any social drinker rehabilitation modality or referral resource. Thus, this set of comparisons assesses, within the significant constraints of a quasi-experimental design, the overall effectiveness of the SD:ASAP referral system for individuals classed as social drinkers, and not the effectiveness of any particular treatment modality.

It is also of interest to consider the post-referral performance of individuals who were referred to rehabilitation but who failed to complete the assigned treatment program. Although the survival rate curve for this group (Figure 6) lies below the curves for the not-referred and total treatment entry groups across the entire follow-up period, none of the t tests at quarters 4, 8, 12, and 16 indicated a statistically significant difference between cumulative survival rates of dropouts/no-shows and total treatment entries.

On the basis of these quasi-experimental comparisons, it is not possible to conclude that exposure to ASAP referral and rehabilitation countermeasures lessened the probability of rearrest for DWI of individuals who were classified as social drinkers.

TABLE 36. QUASI-EXPERIMENTAL ANALYSIS OF OVERALL TREATMENT EFFECT: SOCIAL DRINKERS

	Quarter After Entry	Total Treatment Entries	Total Not Referred	Dropout/ No-Show
Cumulative Survival Rate	4	.9218	.9370	.9044
	8	.8601	.8891	.8354
	12	.8180	.8319	.7800
	16	.7290	.7455	.6862
Standard Error	4	.0076	.0103	.0154
	8	.0107	.0135	.0217
	12	.0140	.0172	.0294
	16	.0375	.0426	.0474
Effective Sample Size	4	1243.4	555.4	363.4
	8	1041.8	538.9	292.1
	12	757.6	472.9	198.3
	16	140.7	104.5	95.9

t TEST COMPARISONS

		Quarters After Entry			
		4	8	12	16
Total Treatment Entry vs. Not Referred	t	-1.188	-1.676*	-.629	-.291
	df	1797	1579	1228	243
Total Treatment Entry vs. Dropout/ No-Show	t	1.012	1.021	1.166	.708
	df	1605	1332	954	235

* $p < .05$

Figure 7 contains the cumulative survival rate plots for social drinkers: 1) randomly assigned to the no-treatment control group, 2) referred to the one-session Driver Improvement School (DIS), and 3) referred to the four-session Problem Drinker Driver Classes (PDDC). It should be recalled that the control group assignment procedure was implemented in the first quarter of 1974, and that only an eight quarter (two year) follow-up period was available for this group. Statistical comparisons between control and each of the treatment groups were conducted at 4 and 8 quarters subsequent to treatment entry. The results of these comparisons are shown in Table 37. Neither the DIS, nor the PDDC group differed from the control group with respect to cumulative survival rate after one and two years of exposure to the risk of rearrest. Inspection of Figure 7 shows the essential equivalence of these survival rate curves, and further suggests that a rather substantial survival rate characterizes all three groups during the follow-up period considered (only 13% of the social drinkers had been rearrested for DWI after two years).

The results of these analyses, based on a strong experimental design, fail to provide support for the hypothesis that either of the alcohol safety schools increase the clients' probability of survival without rearrest.

Treatment Effectiveness for Problem Drinkers

Figure 8 shows 16 quarter cumulative survival rate curves for three problem drinker groups: 1) total treatment entries, 2) total not referred to treatment, and 3) total dropouts and no-shows. For purposes of these analyses, two SD:ASAP drinker classifications, "problem drinker," and "serious problem drinker," have been combined, and are referred to as problem drinkers. The quasi-experimental statistical comparisons (at annual intervals) between total treatment entries versus total not referred groups, and between total treatment entries and total dropout/no-show groups are summarized in Table 38.

With respect to the quasi-experimental assessment of overall treatment effectiveness, the curves for the total treatment entry and total not referred groups are seen to be similar in slope and level across most of the four year follow-up period. Although the 16 quarter cumulative survival rates of the two groups are significantly different ($t = -.2047$, $df = 1565$, $p < .05$), the not referred group shows a larger cumulative survival

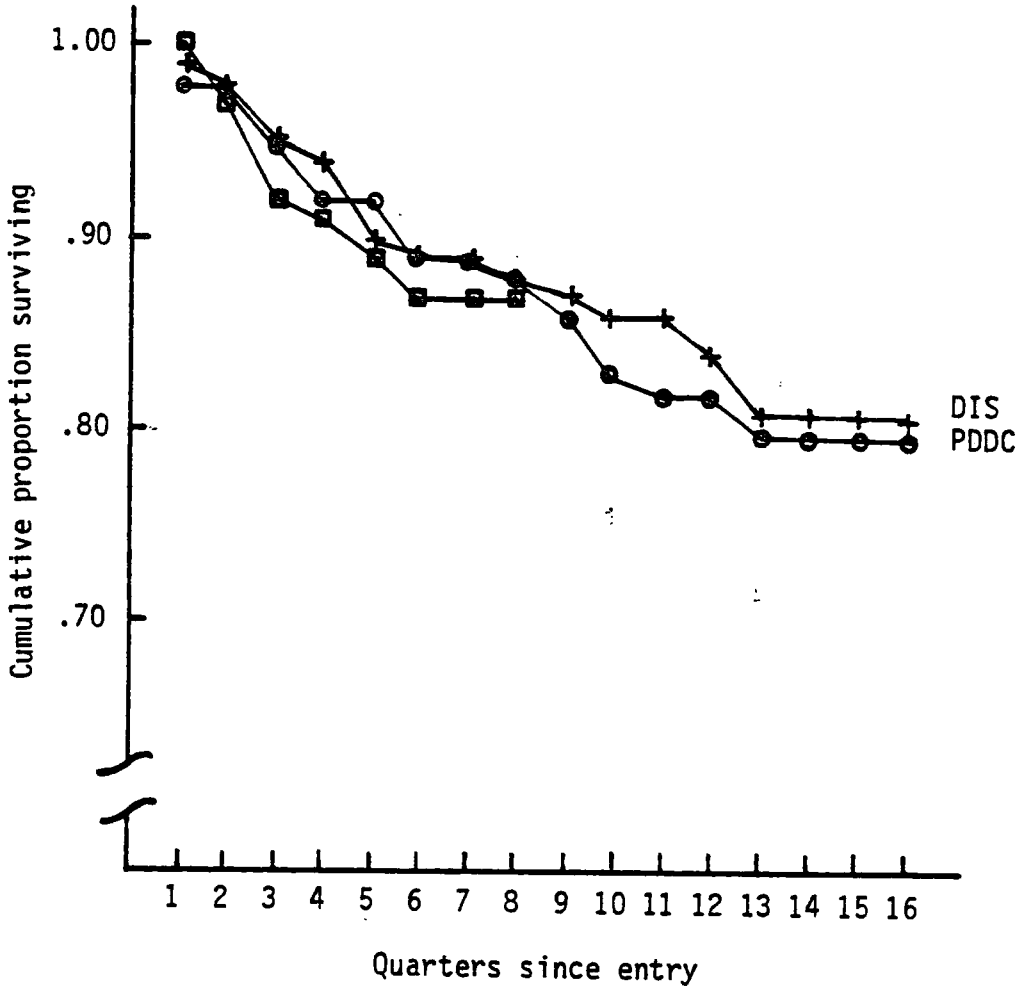


FIGURE 7. CUMULATIVE SURVIVAL RATE PLOTS FOR SOCIAL DRINKER CONTROL, DIS, AND PDDC GROUPS

TABLE 37. EXPERIMENTAL TREATMENT EFFECTIVENESS SURVIVAL RATE ANALYSIS: SOCIAL DRINKERS

	Quarters After Entry					
	4			8		
	Control	DIS	PDDC	Control	DIS	PDDC
Cumulative Survival Rate	.9094	.9401	.9228	.8713	.8760	.8776
Standard Error	.0307	.0084	.0146	.0398	.0132	.0199
Effective Sample Size	87.2	799.9	334.1	70.8	625.6	272.0
t (Control vs. Treatment)	---	-.961	-.394	---	-.112	-.142
df	---	885	419	---	694	341
Significance Level (p)	---	NS	NS	---	NS	NS

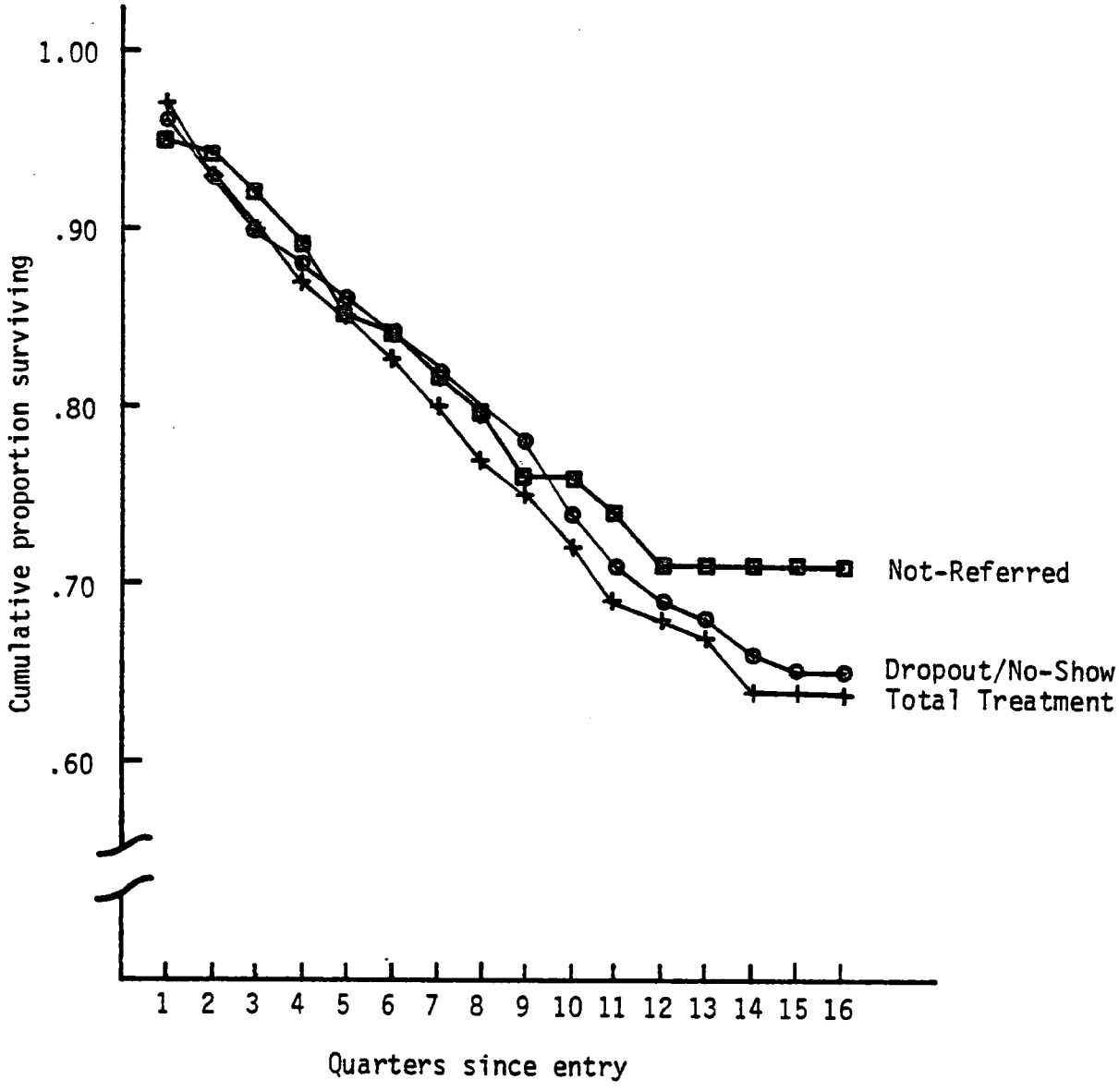


FIGURE 8. CUMULATIVE SURVIVAL RATE PROFILES FOR PROBLEM AND SERIOUS PROBLEM DRINKERS

TABLE 38. QUASI-EXPERIMENTAL ANALYSIS OF OVERALL TREATMENT EFFECT: PROBLEM AND SERIOUS PROBLEM DRINKERS

	Quarter After Entry	Total Treatment Entries	Total Not Referred	Dropout/ No-Show
Cumulative Survival Rate	4	.8733	.8889	.8750
	8	.7743	.8027	.8027
	12	.6761	.7111	.6879
	16	.6360	.7111	.6476
Standard Error	4	.0051	.0171	.0107
	8	.0074	.0235	.0146
	12	.0102	.0343	.0231
	16	.0129	.0343	.0302
Effective Sample	4	4202.6	339.4	959.9
	8	3223.1	285.7	745.9
	12	2105.8	174.1	402.8
	16	1393.4	174.1	250.8

t TEST COMPARISONS

		Quarters After Entry			
		4	8	12	16
Total Treatment Entries vs. Total Not-Referred	t	-.878	-1.152	-.976	-2.047*
	df	4540	3507	2278	1565
Total Treatment Entries vs. Dropout/ No-Show	t	-.148	-1.745*	-.468	-.353
	df	5160	3967	2507	1642

*p < .05

rate at this interval (and all other intervals for that matter). As a consequence, no indication of overall treatment program effectiveness (in increasing the probability of survival without rearrest) is indicated for problem drinker treatment programs considered together. Again, it must be noted that the not referred group does not represent a matched or systematically designated control group in this comparison. It is entirely possible that individuals were differentially assigned to treatment or no-treatment for reasons related to their subsequent recidivist performance.

The post-referral performance of problem drinkers who dropped out of or failed to show up for assigned treatment programs is also shown in Figure 8, and annual comparisons between this group and the group of total treatment entries are summarized in Table 38. Although the two survival rate curves are essentially similar across the follow-up period, the cumulative survival rates of the two groups differ at the end of the second year ($t = -1.745$, $df = 3967$, $p < .05$). The survival rate of the total treatment entry group is lower than the dropout/no-show rate at this point (.774 vs. .803). Because no statistically significant differences were detected at quarters 12 and 16, and because the magnitude of the difference was less than 3%, no particular importance is attached to the quarter 8 result. (It might also be noted that the direction of the difference did not favor the total treatment group).

The experimental comparisons of each of the major problem drinker treatment modalities with the random assignment control condition are illustrated in Figure 9. Table 39 summarizes the statistical comparisons between the performance of each modality group versus the control group at one and two years subsequent to treatment entry (quarters 4 and 8). The survival rate curves of all four groups (Control, Problem Drinker Driver Classes, Alcoholics Anonymous, and Outpatient Treatment) are essentially coincident during this two year follow-up period, and the t tests computed for these comparisons all show non-significant levels. The evidence provided by the application of the true experimental design (with random assignment control group) fails to support the hypotheses that any SD:ASAP treatment program is capable of increasing the probability of survival without rearrest, at least for the two year follow-up period considered.

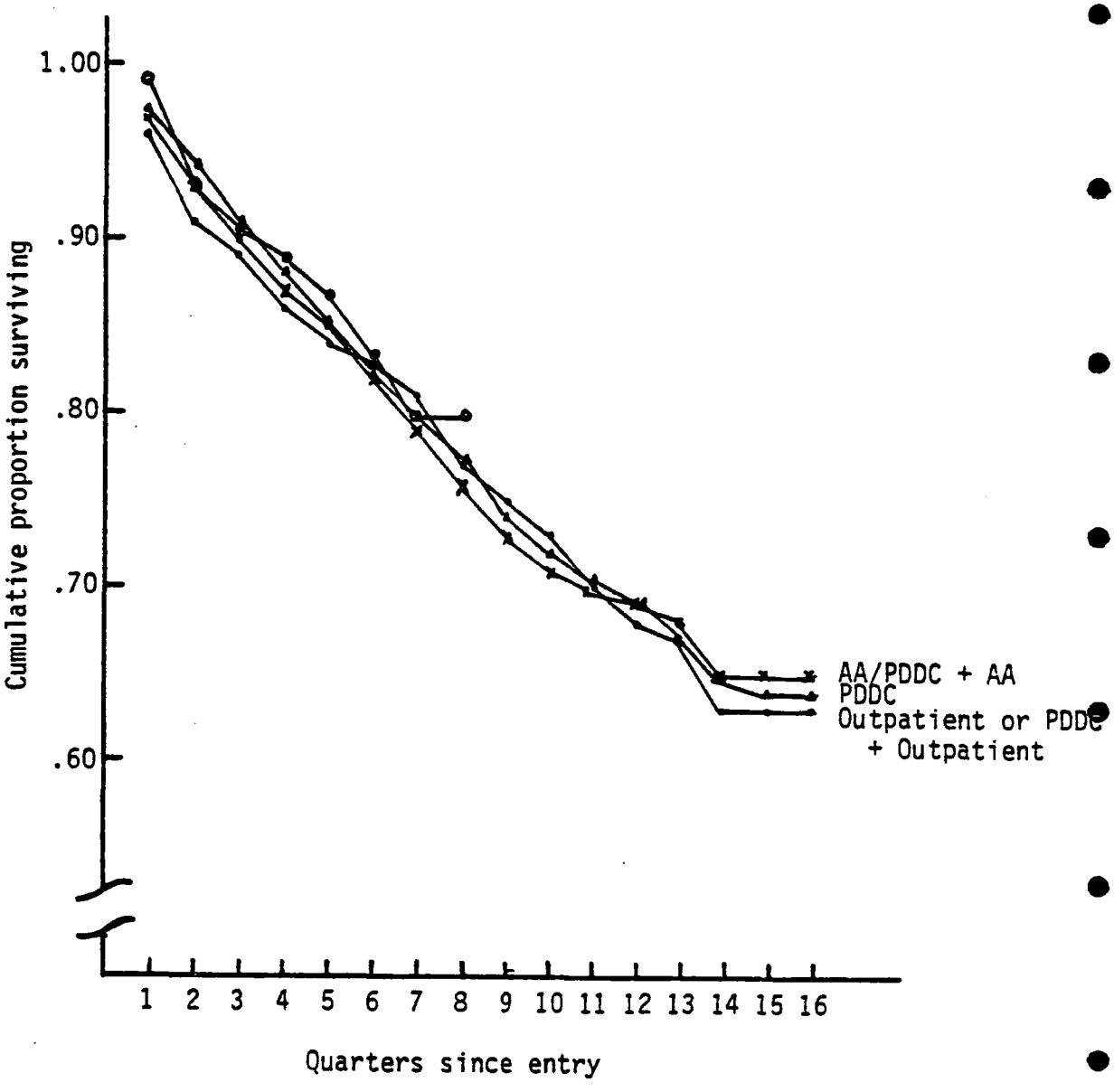


FIGURE 9. CUMULATIVE SURVIVAL RATE CURVES FOR PROBLEM AND SERIOUS PROBLEM DRINKERS REFERRED TO: CONTROL, PDDC, OUTPATIENT TREATMENT AND AA

TABLE 39. EXPERIMENTAL TREATMENT EFFECTIVENESS SURVIVAL RATE ANALYSIS: PROBLEM AND SERIOUS PROBLEM DRINKERS

	Quarters After Entry							
	4				8			
	Control	PDDC	AA*	Outpatient**	Control	PDDC	AA*	Outpatient
Cumulative Survival Rate	.8855	.8756	.8688	.8582	.8039	.7729	.7607	.7724
Standard Error	.0199	.0074	.0148	.0138	.0367	.0107	.0197	.0180
Effective Sample Size	254.7	1969.2	517.5	636.6	116.7	1530.9	467.2	543.0
t (Control vs. Treatment)	---	.466	.671	1.126	---	.811	1.037	.771
df	---	2222	770	889	---	1646	582	658
Significance Level (p)	---	NS	NS	NS	---	NS	NS	NS

* Treatment assignment to AA or AA plus PDDC.

** Treatment assignment to outpatient treatment or PDDC plus outpatient treatment.

Treatment Effectiveness for Chronic Alcoholics

The most severe problem drinkers identified by the SD:ASAP presentence investigation were designated "chronic alcoholics," and these individuals were exempt from the random assignment control group procedure implemented in the first quarter of 1974. Because of this exemption, quasi-experimental comparisons were utilized both for analyses of overall treatment program effect, and for analyses designed to assess the effectiveness of individual treatment countermeasures.

Figure 10 shows cumulative survival rate curves for three groups of "chronic alcoholic" clients: 1) total treatment entries, 2) total not referred to treatment, and 3) total dropouts/no-shows. Table 40 contains the t tests conducted at annual intervals (quarters 4, 8, 12, and 16) between total treatment entries and total not referred, and between total treatment entries and the dropout/no-show group. Although Figure 10 suggests a rather wide separation between the total treatment entry and total not referred groups from quarters 5 through quarter 16, none of the annual cumulative recidivism rate comparisons between these two groups approached statistical significance. The lack of sensitivity of these tests is at least partially due to the small sample size for the total not-referred group, which leads to relatively large standard errors at each interval. In any event the survival rate curve for the not-referred group remains at a higher level than that of the total treatment entry group across the entire follow-up period.

Comparisons between the total treatment entry and total dropout/no-show group were also made at quarters 4, 8, 12, and 16. The proportion of individuals surviving without rearrest did not differ between these two groups, and each of the four t test results was non-significant.

Since an appropriate no-treatment control group was not available for chronic alcoholics referred to various SD:ASAP treatment modalities, the total not-referred group was used as a comparison group to support quasi-experimental analyses of the effectiveness of each of the major rehabilitation modalities to which chronic alcoholics were exposed. It is very important to note that this <u>is not</u> a matched, or systematically assigned control group. For the chronic alcoholic clients it is highly likely that perception of an individual's drinking problem severity by the courts may have influenced treatment referral decisions. Although it is not possible to document the nature or extent of the bias

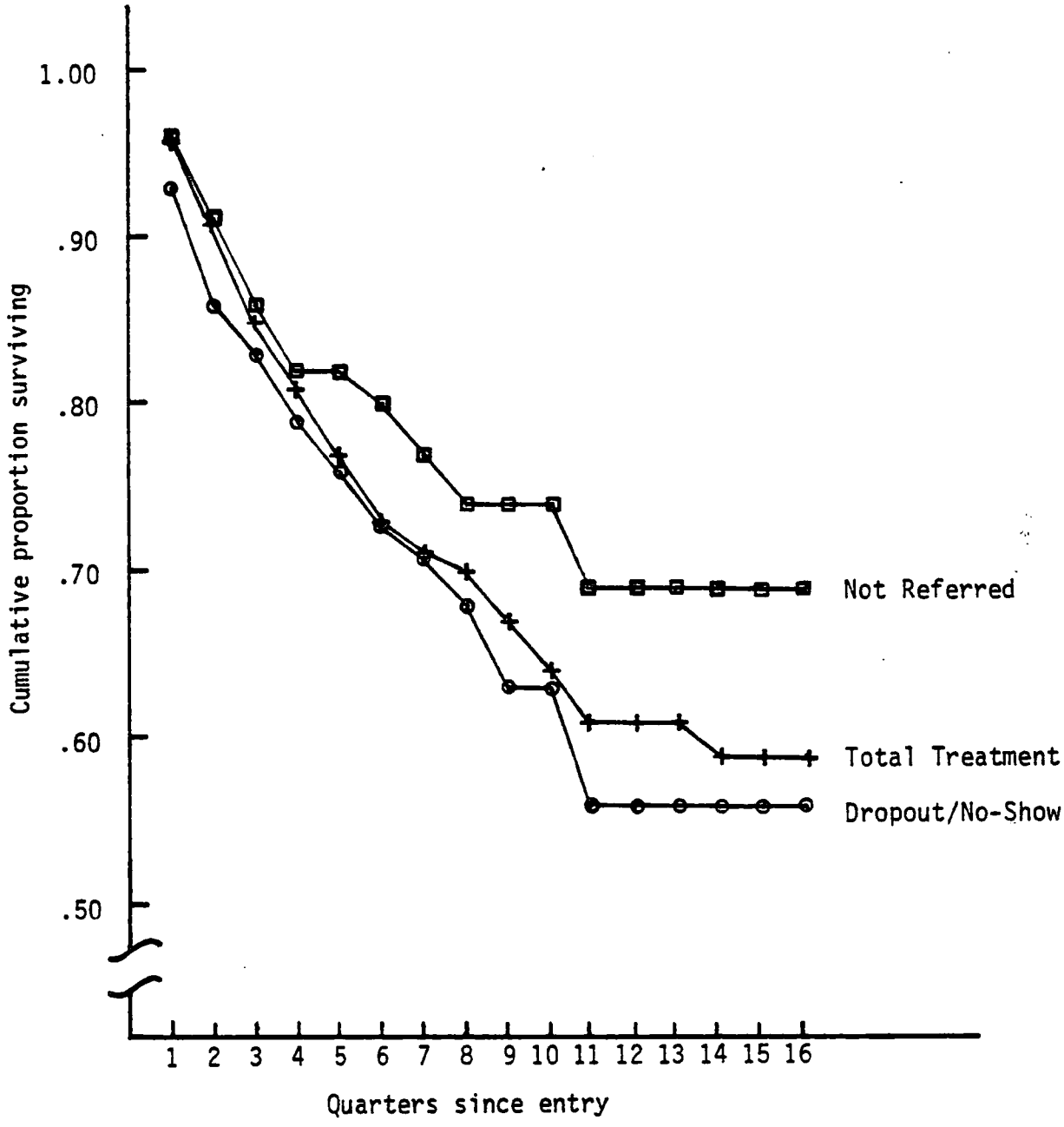


FIGURE 10. CUMULATIVE SURVIVAL RATE PROFILES FOR CHRONIC ALCOHOLICS

TABLE 40. QUASI-EXPERIMENTAL ANALYSIS OF OVERALL TREATMENT EFFECT: CHRONIC ALCOHOLICS

	Quarter After Entry	Total Treatment Entries	Total Not Referred	Dropout/ No-Show
Cumulative Survival Rate	4	.8125	.8214	.7892
	8	.7032	.7430	.6831
	12	.6066	.6899	.5614
	16	.5882	.4139	.5614
Standard Error	4	.0161	.0480	.0355
	8	.0238	.0613	.0518
	12	.0318	.0765	.0705
	16	.0357	.2186	.0705
Effective Sample	4	586.1	63.7	131.6
	8	369.2	50.9	80.6
	12	236.4	36.5	49.5
	16	189.7	5.1	49.5

t TEST COMPARISONS

		Quarters After Entry			
		4	8	12	16
Total Treatment Entries vs. Total Not-Referred	t	-.177	-.605	-1.006	.787
	df	648	418	271	193
Total Treatment Entries vs. Dropout/ No-Show	t	.596	.353	.584	.339
	df	716	448	284	237

present, it appears likely that the individuals who were perceived as exhibiting less severe and disabling drinking problems were more likely to be exempt from a court referral to rehabilitation.

Cumulative survival rates for four referral groups of chronic alcoholic clients are shown in Figure 11. These included: 1) PDDC, 2) Outpatient treatment (or outpatient plus PDDC), 3) AA (or PDDC plus AA), and 4) Inpatient treatment. Table 41 summarizes the annual comparisons (quarters 4,8, and 12) of the survival rates of each of these groups with the survival rate of the total not-referred comparison group.

Comparison of the PDDC group with the not-referred group showed the PDDC group to exhibit a significantly lower survival rate (higher recidivism rate) than the comparison group at quarter 8 ($t = 3.449$, $df = 323$, $p < .05$) and quarter 12 ($t = 2.650$, $df = 204$, $p < .05$). In each of these instances (quarter 8 and quarter 12), the proportion of no-treatment individuals surviving without rearrest exceeded that of the PDDC clients (.803 vs. .515 for quarter 8, and .711 vs. .458 for quarter 12). The separation of the two curves is clearly evident in Figure 11.

The comparison of cumulative survival rates between no-treatment and outpatient treatment groups for chronic alcoholic clients shows a similar pattern, with the no-treatment group showing superior performance (higher cumulative survival rate) across the follow-up period. Statistically significant differences were observed at quarters 4 ($t = 2.909$, $df = 532$, $p < .05$) and quarter 8 ($t = 2.144$, $df = 394$, $p < .05$).

The survival rate curves for no-treatment and AA referral groups were much more similar across the follow-up period, and none of the t tests conducted at annual intervals resulted in statistically reliable discrimination between the two groups.

The final modality specific comparisons conducted for the chronic alcoholic individuals were between the no-treatment comparison group and the group of individuals referred to inpatient treatment programs. The post-referral performance of the inpatient treatment group was consistently inferior to that of the no-treatment group and the t tests conducted at quarter 4 ($t = 2.376$, $df = 413$, $p < .05$) and quarter 8 ($t = 2.174$, $df = 353$, $p < .05$) were statistically significant.

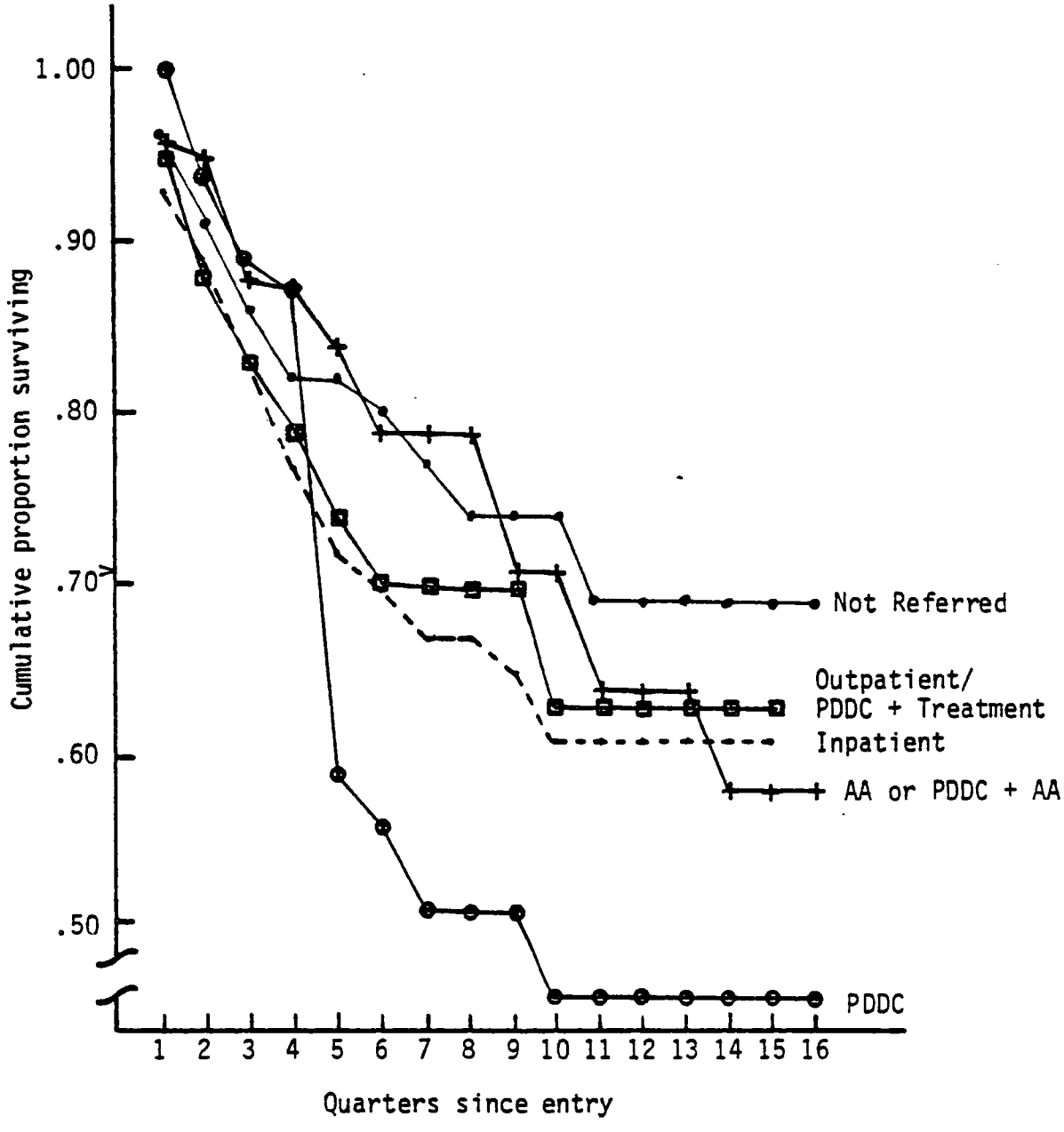


FIGURE 11. CUMULATIVE SURVIVAL RATE CURVES FOR CHRONIC ALCOHOLICS REFERRED TO: PDDC, OUTPATIENT TREATMENT, AA, AND INPATIENT TREATMENT

TABLE 41. QUASI-EXPERIMENTAL ANALYSES OF INDIVIDUAL TREATMENT PROGRAM EFFECT: CHRONIC ALCOHOLICS

	Quarter After Entry	Total Not Referred	PDDC	Outpatient[1] Treatment	AA[2]	Inpatient Treatment
Cumulative Survival Rate	4	.8889	.8698	.7906	.8704	.7662
	8	.8027	.5148	.6961	.7859	.6700
	12	.7111	.4576	.6328	.6351	.6067
Standard Error	4	.0170	.0367	.0292	.0339	.0487
	8	.0235	.0801	.0438	.0513	.0563
	12	.0343	.0893	.0723	.0797	.0618
Effective Sample Size	4	339.4	84.2	194.3	98.1	75.4
	8	285.7	38.9	110.3	64.0	69.7
	12	174.1	31.1	44.5	36.5	62.5

t TEST COMPARISONS

		Quarters After Entry		
		4	8	12
Not-Referred vs. PDDC	t	.473	3.449*	2.650*
	df	422	323	204
Not-Referred vs. Outpatient	t	2.909*	2.144*	.978
	df	532	394	217
Not-Referred vs. AA	t	.487	.297	.876
	df	435	348	209
Not-Referred vs. Inpatient	t	2.376*	2.174*	1.476
	df	413	353	235

* $p < .05$
[1] Outpatient treatment or PDDC + outpatient.
[2] AA or PDDC + AA

The results of statistical comparisons of the performance of chronic alcoholic clients referred to SD:ASAP treatments and the performance of similarly classified individuals who were not referred to treatment certainly do not suggest that these treatment programs were effective in accomplishing their intended traffic safety objectives (reducing recidivism probability, or conversely increasing the probability of survival without rearrest). It must be remembered, however, that the quasi-experimental designs which governed the statistical comparisons of treatment effectiveness conducted for the chronic alcoholic group did not provide for an adequately matched control group. As was pointed out earlier, it is highly likely that the assignment/referral biases which operated for chronic alcoholics were such as to increase the chance that the individuals less likely to recidivate (or more likely to survive without rearrest) would be excluded from treatment and be counted among the clients in the not-referred group. To the extent that this was true, the comparisons were certain to be biased against the treatment groups.

ANALYSES OF LIFE CHANGE DATA

Beginning in April of 1974, initial presentence investigation interview between SD:ASAP courtworkers and clients included the Life Activities Interview as a component of the data collection process. This interview was also utilized during follow-up interviews with SD:ASAP clients conducted at six month intervals subsequent to treatment entry or assignment. A subset of the data collected during these interviews were used to support experimental (with random assignment control group) analyses designed to determine whether treatment programs employed as rehabilitation countermeasures by the project were effective in producing favorable changes in the life status of SD:ASAP clients in areas other than explicit drinking driving behavior.

Designs and Analyses

Although initial courtworker contacts with SD:ASAP clients have utilized the LAI instrument since April, 1974, the form of the interview protocol was modified substantially in the first quarter of 1975. As a consequence, some clients who had responded to the first version of the instrument in their initial contact were re-interviewed with the revised version in their follow-up contacts. In order to make maximum use of the data at

hand common items of the two versions of the Life Activities Interview were rescored to produce a set of 25 items common to the two interview forms (Table 42). Three life change scales were derived from these data based on a principal axis factor analysis with varimax rotation. This was conducted on the initial interview responses of a total of 268 clients for whom complete data were available. The first factor obtained showed its most substantial correlations with the following variables:

	Variable	Varimax Loading	Factor Score Coefficient
1	Earned Income	.306	.07996
2	Monthly Income	.528	.17525
4	Income Source Change	-.431	-.13146
6	Discharges from Employment	.356	.10683
20	Married?	.591	.16084
21	# Living With	.306	.01752
24	# Dependents	.772	.47574
25	# People Take Care of	.476	.12896

A scale score for a given individual, on this factor, was obtained by multiplying the standardized (z) score for that individual on each of these eight variables by the corresponding factor score coefficient from the varimax factor analysis and summing the weighted z scores. (Scale 1 score = $z_1w_1 + z_2w_2 + z_4w_4 + z_6w_6 + z_{20}w_{20} + z_{21}w_{21} + z_{24}w_{24} + z_{25}w_{25}$; where z_i is the standardized raw score for variable i, and w_i is the factor score coefficient for variable $_i$). This first factor is arbitrarily designated as "Economic/family stability" by virtue of the variables which show the largest loadings. A high score on this scale would be obtained by the individual who was married, provided and cared for a number of dependents, with whom he lived, and who was gainfully employed on a relatively continuous basis.

The second factor obtained in the varimax analysis was primarily determined by the following variables:

TABLE 42. ITEMS COMMON TO OLD AND NEW VERSIONS OF THE LAI

#	Variable Name	Responses
Y01	Earned	1 = Yes, 2 = No
Y02	Monthly income	1 = (≤ 250), 2 = (251-500), 3 = (501-750), 4 = (751-1000), 5 = (> 1000)
Y03	Income source change	1 = Yes, 2 = No
Y04	Income change	1 = Yes, 2 = No
Y05	Quit job	1 = Yes, 2 = No
Y06	Discharged	1 = Yes, 2 = No
Y07	Drugs and Medicine	0, 1, 2, 3, 4
Y08	Days sick	0, 1, 2, 3, 4, 5
Y09	Medical visits	0, 1, 2, 3, 4, 5
Y10	Nervous/sleep difficulty	0, 1, 2, 3, 4, 5
Y11	Colds/flu	0, 1, 2, 3, 4, 5
Y12	Headache/digestive problems	0, 1, 2, 3, 4, 5
Y13	Beer use/week	0, 1, 2, 3, 4
Y14	Liquor use/week	0, 1, 2, 3, 4
Y15	Wine use/week	0, 1, 2, 3, 4
Y16	Weekdays with drinks	0, 1, 2, 3, 4
Y17	Weekends with drinks	0, 1, 2, 3
Y18	Times drunk	0, 1, 2, 3
Y19	Blackouts	0, 1, 2, 3
Y20	Married	1 = No, 2 = Yes
Y21	People living with	0, 1, 2, 3, 4, 5
Y22	Close friends	0, 1, 2, 3, 4
Y23	Change close friends	1, 2, 3
Y24	Dependents	0, 1, 2, 3, 4, 5
Y25	People provide care for	0, 1, 2, 3, 4, 5

	Variable	Varimax Loading	Factor Score Coefficient
7	Number of drugs and medicines	.527	.21303
8	Days sick last month	.412	.13567
9	Medical visits last month	.404	.14631
10	Days with nervousness/ sleep problems	.637	.31561
12	Days with headaches/ digestive problems	.486	.17367

This factor reflects physical health problems, and scale scores were obtained as the weighted sum of the standardized scores on the five variables listed above.

The final factor obtained reflected alcohol use/abuse and was determined by the following variables:

	Variable	Varimax Loading	Factor Score Coefficient
13	Beer use last week	.565	.15436
14	Liquor use last week	.283	.05031
16	# weekdays with drinks	.699	.39268
17	# weekend days with drinks	.714	.40939
18	times drunk last month	.316	.13051
19	# blackouts last month	.233	.08299

A high score on this factor would be obtained by an individual who regularly consumed large amounts of alcohol, and who reported being drunk and suffering blackouts subsequent to drinking.

Analyses of the effectiveness of SD:ASAP modalities in influencing these life status factors were based on a total of 218 cases for which complete initial and 6 month follow-up interview data were available. These cases were selected from among those social, problem, and serious problem drinkers who had been eligible for random assignment to the no-treatment control group. The distribution of these cases by treatment assignment and drinker classification are shown in Table 43.

Two sets of analyses were performed on these data for each of the three dependent variables (LAI factor scores). The first consisted of a treatment modality (4 levels) x interview replication (2 levels) analysis of variance. This procedure permits an overall test of the relative effectiveness of the four treatment program assignments

TABLE 43. CROSS TABULATION OF DRINKER CLASSIFICATION BY TREATMENT GROUP ASSIGNMENT FOR THE 218 CLIENTS INCLUDED IN THE LAI FOLLOW-UP STUDY

Assignment	Social	Problem	Serious Problem	Total
Driver Improvement School (DIS)	21	5	1	27
Problem Drinker Driver Class (PDDC)	13	87	29	129
Outpatient Treatment	0	2	14	16
Control (No Treatment)	7	28	11	46
Total	41	122	55	218

(including no-treatment assignment to the control group) in producing change in the life status variable of interest. This analysis was supplemented by individual tests of treatment effectiveness which also utilized a two factor repeated measures analysis of variance comparing (separately) DIS and PDDC with the control group. The test of particular interest in both analyses was, of course, the treatment x replications interaction.

Factor I (Economic/Family Stability)

Figure 12 shows mean initial and follow-up scores for each of the treatment groups on Factor Score I, which reflects economic productivity and current family status. Table 44 summarizes the analysis of variance designed to assess the relative effectiveness of the four treatment options. Although both the treatment modality (T) and the replications (R) main effects are statistically significant, the interaction is not. This indicates that although the four groups differ in level on this index of life status, and although change was observed between initial and follow-up interviews, the changes were parallel for the four groups. As a consequence, no implication of differential treatment effectiveness can be drawn from this comparison.

Table 45 presents the separate effectiveness analyses comparing DIS vs. Control (45a), and PDDC vs. Control (45b). In neither analysis does the R x T interaction approach statistical significance, again providing no demonstration of the capability of either treatment program to produce improvement in this life status measure. A separate analysis was not conducted for the outpatient treatment group due to the small number of cases assigned to this treatment option (n = 16).

Factor II (Physical Health Problems)

Figure 13 shows the mean initial and six month follow-up scores of the four treatment assignment groups on the measure of physical health problems (Factor II). Table 46 contains a summary of the analysis of variance for these data. Neither the main effects (treatment modalities and replications) nor the treatment by replications interaction were statistically significant in this analysis, indicating no evidence of differential effectiveness between the four treatment assignments (including the no-treatment control condition). Individual comparisons between DIS and PDDC treatments and the Control

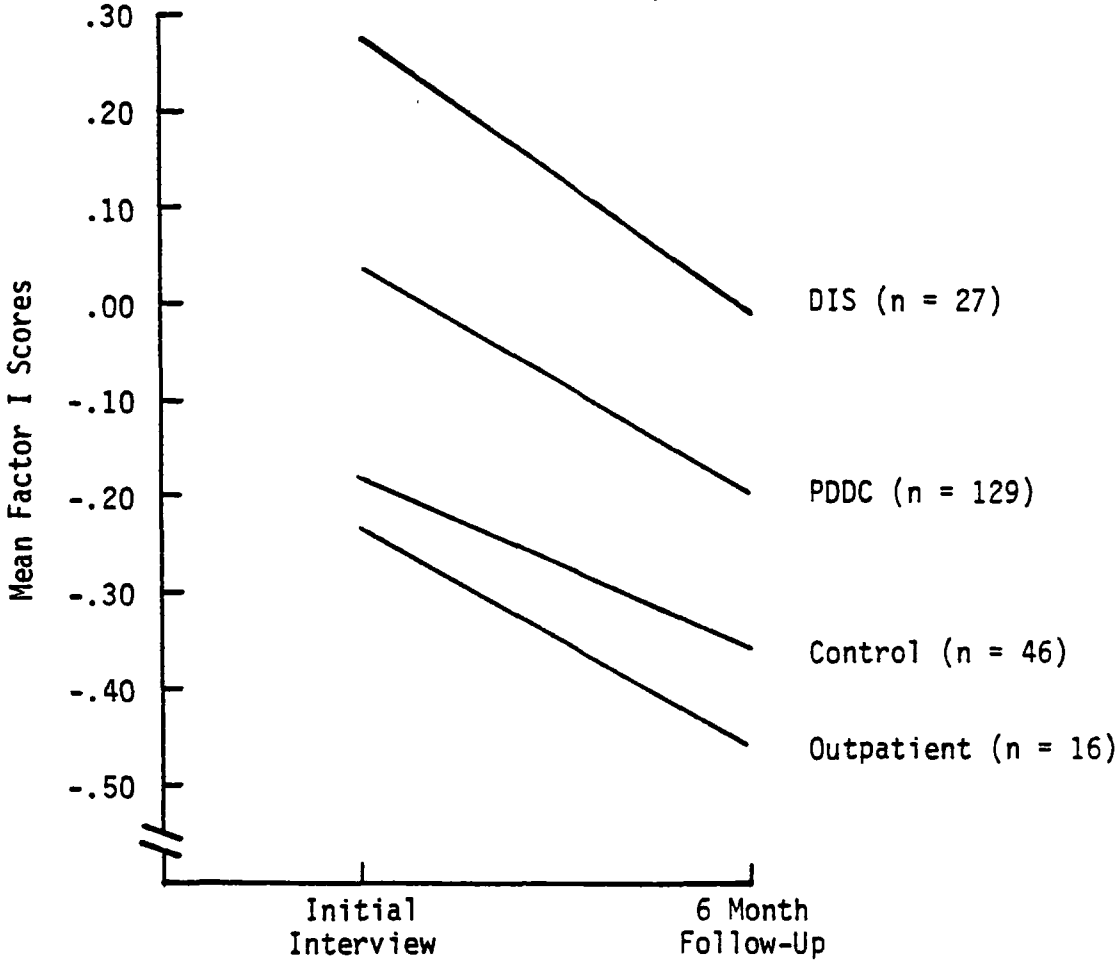


FIGURE 12. MEAN INITIAL AND 6 MONTH FOLLOW-UP FACTOR SCORES FOR EACH TREATMENT CONDITION ON THE "ECONOMIC/FAMILY STABILITY" SCALE (Factor I)

TABLE 44. OVERALL ANALYSIS OF VARIANCE FOR TREATMENT CONDITIONS X INTERVIEW REPLICATIONS FOR FACTOR SCORE I (Economic, Family Stability)

	SS	df	MS	F	p
Between Subjects					
(T) Treatment Modalities	7.487	3	2.496	2.196	.090
Error (S's Within Groups)	243.188	214	1.136		
Within Subjects					
(R) Replications	3.387	1	3.387	17.774	.000
T x R	.117	3	.039	.205	.893
Error (R x S's Within Groups)	40.776	214	.190		

TABLE 45. SUMMARY OF INDIVIDUAL TREATMENT EFFECTIVENESS ANALYSES FOR FACTOR SCORE I (Economic/Family Stability)

a. DIS vs. Control

	SS	df	MS	F	p
Between Subjects					
(T) Treatment	5.424	1	5.424	5.201	.026
Error (S's Within Groups)	74.036	71	1.043		
Within Subjects					
(R) Replications	1.852	1	1.852	10.662	.002
T x R	.107	1	.107	.618	.434
Error (R x S's Within Groups)	12.332	71	.174		

b. PDDC vs. Control

	SS	df	MS	F	p
Between Subjects					
T	2.368	1	2.368	2.015	.158
Error (S's Within Groups)	203.343	173	1.175		
Within Subjects					
R	2.938	1	2.938	14.260	.000
R x T	.065	1	.065	.317	.574
Error (R x S's Within Groups)	35.639	173	.206		

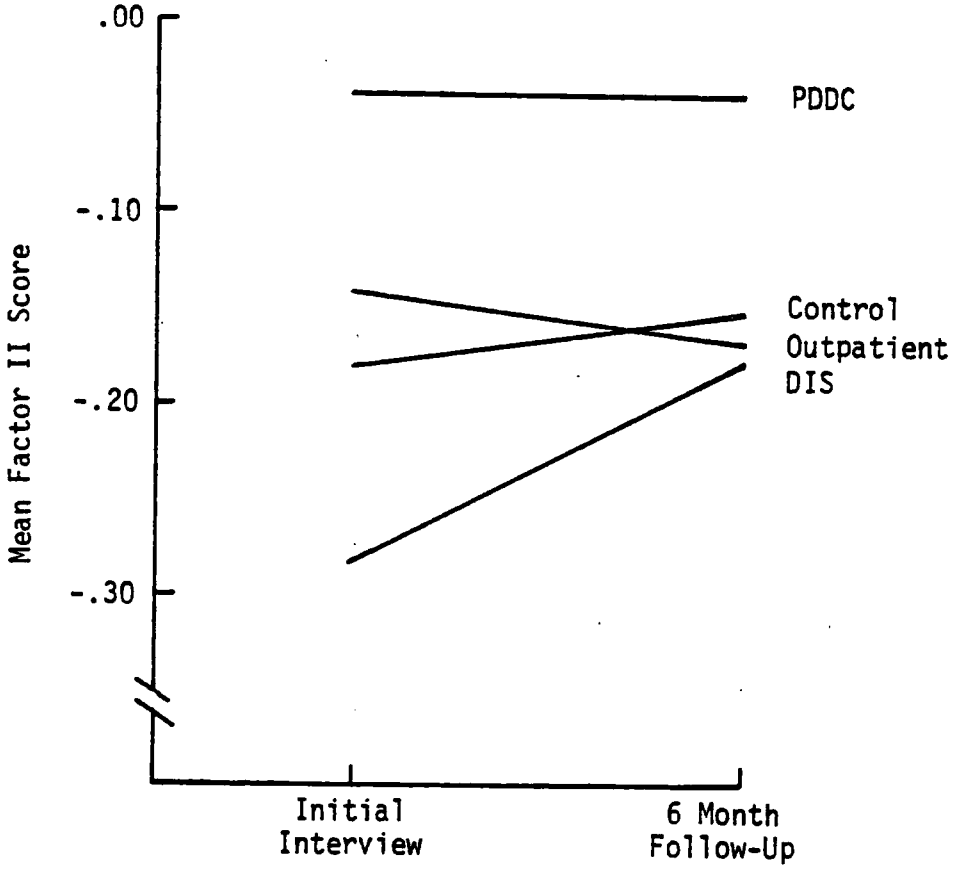


FIGURE 13. MEAN INITIAL AND 6 MONTH FOLLOW-UP FACTOR SCORES FOR EACH TREATMENT CONDITION ON THE "PHYSICAL HEALTH PROBLEMS" SCALE (Factor II)

TABLE 46. OVERALL ANALYSIS OF VARIANCE FOR TREATMENT CONDITIONS (DIS, PDDC, OUTPATIENT, CONTROL) X INTERVIEW REPLICATIONS FOR FACTOR SCORE II (Physical Health Problems)

	SS	df	MS	F	p
Between Subjects					
(T) Treatment Modality	2.492	3	.831	2.068	.105
Error (S's Within Groups)	85.952	214	.402		
Within Subjects					
(R) Replications	.036	1	.036	.229	.633
T x R	.139	3	.046	.295	.829
Error (R x S's Within Groups)	33.645	214	.157		

condition are summarized in Table 47. Again, none of the effects tested in either analysis were statistically significant sources of variation, and it cannot be concluded that either treatment program was effective in modifying the life status characteristics reflected by factor score II.

Factor III (Alcohol Abuse)

The performance of the four groups, at initial and follow-up interviews, on factor III is illustrated in Figure 14. The analysis of variance summary for the overall comparison between these groups may be found in Table 48. Although the treatment modality and replications main effects were statistically significant in this analysis, the test of R x T interaction did not indicate differential effectiveness among the four treatment conditions in producing change in the "alcohol abuse" scores between initial and follow-up interviews. Inspection of Figure 14 shows the profiles (initial to follow-up change) of the PDDC, DIS, and Control groups to be essentially parallel. Although the more extreme slope of the Outpatient profile would seem to suggest the basis for an interaction, it must be remembered that the sample size for this group was small compared to the others (only 16 clients).

The individual treatment x replications analysis for DIS vs. Control and PDDC vs. Control, are summarized in Table 49. Again the failure of the tests of the T x R interactions to achieve statistical significance suggests that neither treatment was effective in modifying the drinking behavior of SD:ASAP clients (as reflected by factor score III).

TABLE 47. SUMMARY OF INDIVIDUAL TREATMENT EFFECTIVENESS ANALYSES FOR FACTOR SCORE II (Physical Health Problems)

a. DIS vs. Control

	SS	df	MS	F	p
Between Subjects					
(T) Treatment	.136	1	.136	.531	.468
Error (S's Within Groups)	18.150	71	.256		
Within Subjects					
(R) Replications	.137	1	.137	.846	.361
T x R	.048	1	.048	.294	.589
Error (R x S's Within Groups)	11.503	71	.162		

b. PDDC vs. Control

	SS	df	MS	F	p
Between Subjects					
T	1.178	1	1.178	2.646	.106
Error (S's Within Groups	77.028	173	.445		
Within Subjects					
R	.008	1	.008	.046	.830
T x R	.015	1	.015	.085	.771
Error (R x S's Within Groups)	30.942	173	.179		

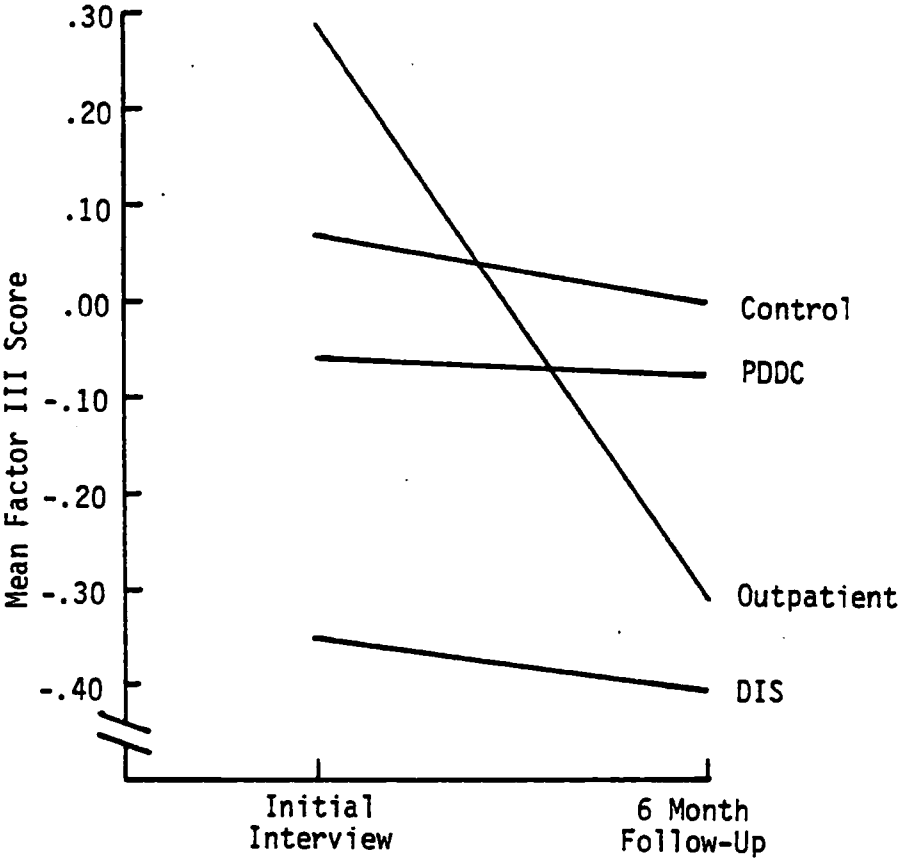


FIGURE 14. MEAN INITIAL AND 6 MONTH FOLLOW-UP FACTOR SCORES FOR EACH TREATMENT CONDITION ON THE "ALCOHOL ABUSE" SCALE (Factor III)

TABLE 48. OVERALL ANALYSIS OF VARIANCE FOR TREATMENT CONDITIONS (DIS, PDDC, OUTPATIENT, CONTROL) X INTERVIEW REPLICATIONS FOR FACTOR SCORE III (Alcohol Abuse)

	SS	df	MS	F	p
Between Subjects					
(T) Treatment Modalities	6.220	3	2.073	2.666	.049
Error (S's Within Groups)	166.401	214	.778		
Within Subjects					
(R) Replications	2.163	1	2.163	4.623	.033
T x R	2.429	3	.809	1.730	.162
Error (R x S's Within Groups)	100.149	214	.468		

TABLE 49. SUMMARY OF INDIVIDUAL TREATMENT EFFECTIVENESS ANALYSES FOR FACTOR SCORE III (Alcohol Abuse)

a. DIS vs. Control

	SS	df	MS	F	p
Between Subjects					
(T) Treatment	5.797	1	5.797	8.583	.005
Error (S's Within Groups)	47.955	71	.675		
Within Subjects					
(R) Replications	.137	1	.137	.370	.545
R x T	.005	1	.005	.013	.910
Error (R x S's Within Groups)	26.229	71	.369		

b. PDDC vs. Control

	SS	df	MS	F	p
Between Subjects					
T	.695	1	.695	.794	.374
Error (S's Within Groups)	151.332	173	.875		
Within Subjects					
R	.150	1	.150	.301	.584
R x T	.054	1	.054	.108	.742
Error (R x S's Within Groups)	86.192	173	.498		

DISCUSSION OF THE VALIDITY OF DRINKER DIAGNOSIS AND THE PREDICTION OF RECIDIVISM

An important question surrounding the various ASAP drinker diagnostic schema and the outcome of alcohol treatments that are based on the classification of drinker problems is: "Are the drinker classifications valid and can the criteria upon which a diagnostic decision is based be improved?" A solid approach to the question of validity of drinker diagnosis has been severely circumscribed because no rigid standard exists with which to compare the outcome of a particular presentence investigation procedure. Traditionally, the validity question has been approached indirectly by setting DWI recidivism as the success criterion for alcohol treatment and asking if certain characteristics can be identified that discriminate between program successes and failures. If this were possible, the logical diagnostic modification would be to separate highly probable failures and structure a more intensive treatment for this group.

A very thorough investigation of this question was conducted in 1975 on three years of SD:ASAP treatment referrals.* This investigation begins with a multiple discriminant analysis between groups classified by their recidivist status. The variables determined to be important (those with larger weights in the disciminant function) were subsequently used as independent variables in a regression model to predict the number of rearrests (after a suitable transformation) using each client as an independent observation. The major results of this investigation can be summarized as follows:

1. The variables that ranked high in discriminating between recidivists and non-recidivists were the same PSI criteria that weighed heavily in determining the drinker classification. The relative order of variable importance was somewhat different, however, with the prior arrest history (particularly driving related) variables receiving the higher weights in the recidivist/non-recidivist discriminant function. In other

---

* Reis, R. E. SD:ASAP Analytic Study No. 6, An analysis of alcohol rehabilitation efforts, University of South Dakota, May, 1975.

words, the best predictor of recidivism is previous recidivist behavior. Mortimer-Filkins score and BAC at the time or arrest ranked next in importance and recidivists had significantly higher means on both variables.

2. No linear combination of these variables proved to be of any practical use in predicting recidivism.

Thus, the similarity between the findings of recidivist/non-recidivist comparisons and the weighting of PSI input criteria suggests that we are in a sense validating the presentence investigation procedure. This assumes, of course, that associated and ordered with drinker class is a probability of becoming a recidivist if treatment effects are ignored. The optimal drinker classification scheme, therefore, would maximize the separation between drinker classes according to recidivist probability, subject to the constraint that the resulting group sizes can be accommodated with available rehabilitation resources.

Figure 15 plots the survival rates by drinker type for all PSI drinker diagnoses (i.e., total treatment entries plus total non-referrals). If it is assumed that treatment had only a neglible effect (not unrealistic in view of the results of the two previous sections) and that these effects were distributed equally between the four groups, then the probability of surviving (not being rearrested) is ordered as would be expected had the drinker diagnoses resulted in valid assessments of the drinking problem. The divergence in the cumulative survivor rates for the first three groups is almost identical, while the "chronic alcoholic" group tends to more closely resemble the "serious problem" group. This suggests that in the absence of any differential treatment effect, the latter two groups might be combined into one drinker class or that the most severe drinker class should be redefined by establishing higher cutoffs on selected PSI criteria.

Figure 16 shows the survival rates for the three drinker classes randomly assigned to "no-treatment" control. Again, the order of the rates is for the most part consistent with a valid drinker diagnosis scheme; however, the similarity between social drinkers and problem drinkers suggests that more diagnostic discrimination needs to be applied at the lower end of the drinking scale. It is also quite probable that a clearer pattern of survival rate divergence would appear with larger group sample sizes and additional periods for follow-up.

It seems reasonable to conclude, therefore, that if the probability of rearrest is a sound criterion on which to validate a drinker diagnostic procedure, the South Dakota procedure is on the right track, at least with respect to ordering the resulting groups. This is not to say that significant improvements cannot be made. In light of the recidivist vs. non-recidivist discriminant analysis, a first iteration would assign more weight to driving history variables with the expectation that greater divergence in the respective drinker class survival patterns would emerge.

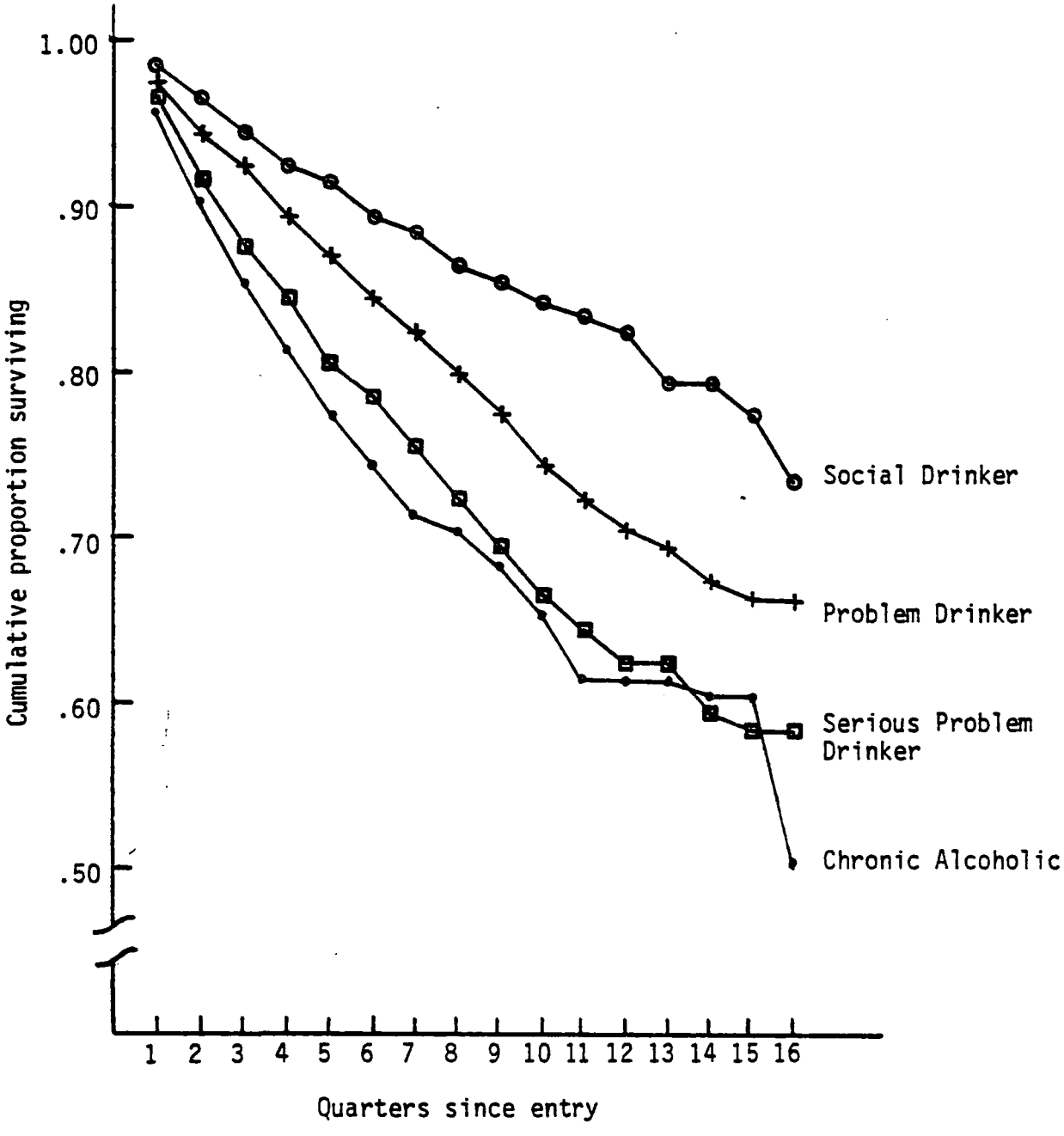


FIGURE 15. CUMULATIVE SURVIVAL RATES BY DRINKER TYPE FOR TOTAL PRESENTENCE INVESTIGATIONS

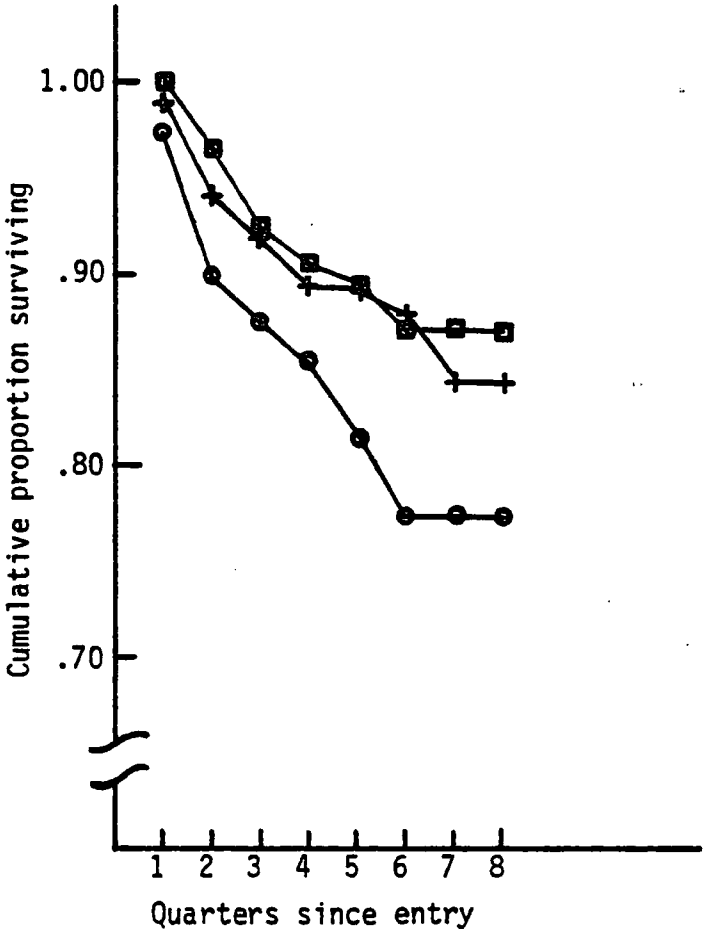


FIGURE 16. CUMULATIVE SURVIVAL RATES BY DRINKER TYPE ASSIGNED TO NO-TREATMENT CONTROL

CONCLUSION

During the four years of SD:ASAP operations 11,550 persons were convicted of driving while intoxicated, of which 8,800 or 76% were referred by the courts to ASAP for pre-sentence investigation and drinker diagnosis. As a statewide project SD:ASAP employed as many as two pre-sentence investigators to serve the various district/ county, municipal and circuit courts. Their responsibility was to gather and assemble detailed background information from sources such as personal interviews, employer interviews, arrest reports, and local police agency records checks. This information was then sent to a central rehabilitation coordinators office, combined with driver history information and then reviewed; whereupon a diagnostic decision placed the client into one of four drinker classes. The entire pre-sentence investigation procedure was accomplished at a cost of approximately $35 per client.

A reliability analysis of the resulting drinker classification revealed that substantial shifts in the distribution of drinker types occurred over time. This was primarily attributed to personnel changes in the rehabilitation coordinators position. That is, no predetermined standards were established for the use (i.e. relative weighting) of the PSI input variables; the makeup and size of the resulting drinker groups was highly dependent on the subjective feeling of the rehabilitation coordinator. Within a particular coordinator's administration a statistical reclassification of drinker types (based on a total of 18 quantifiable diagnostic variables) showed that a consistent weighting was applied to the diagnostic criteria in approximately 65% of the cases. By far the most heavily weighted variable was the Mortimer Filkens Interview score, followed by BAC and the number of previous DWI arrests.

The drinker classes were used as a guide for treatment referral recommendations. The treatment options ranged from a two session driver improvement school for the least problem drinkers to inpatient treatment for the most serious problem drinkers. The ultimate treatment recommendation and assignment, however, depended on the availability of rehabilitation resources in a particular area and a strict structuring of rehabilitation modalities for a particular drinker type was not possible. The possibility of streamlining the PSI procedure was also investigated. The recommended system reduced the

number of drinker classes to three and the procedures for classification were based solely on an objective weighting of a greatly reduced set of diagnostic criteria.

An evaluation of treatment effectiveness was based on DWI recidivism and used a survival rate analysis for quasi-experimental treatment/no treatment group comparisons. Admittedly, the inferential potential of these analyses was severely weakened by the lack of a strict experimental situation; nevertheless, there was absolutely no indication (neither in magnitude nor direction of survival rate differences) that any treatment was effective in reducing the probability of subsequent drinking/driving behavior. As supplementary treatment effectiveness analysis was based on measures of client life activities which were derived from scores on client interviews. Three scales, providing measures of (1) economic/family stability, (2) physical health problems and (3) alcohol abuse were used for control group versus treatment comparisons. Although there was some indication of overall improvement on these measures after a six month follow-up period, there was no treatment by period interaction that would indicate that rehabilitation effected a differential impact on life activity. That is, the control group showed similar changes on these measures.

Thus, the SD:ASAP pre-sentence investigation, referral and rehabilitation subsystems did offer the courts an alternative to traditional punitive sanctions and a better understanding of the nature and extent of a particular client's drinking problem. It could not be shown, however, that these efforts produced any social benefit that could not have been achieved with the traditional less costly court procedures for handling DWI convictions.

APPENDIX A

INDIVIDUAL TREATMENT MODALITY SUMMARY TABLE

INDIVIDUAL TREATMENT MODALITY SUMMARY TABLE

Driver Improvement School

1. Average length of program

   Number of sessions 1
   Number of hours per session 1½

2. Size of sessions

   Number of students/clients per session _____

3. Cost of program

   Cost per program: Total _____, % ASAP funded _____
   % Non-ASAP funded _____.
   Therapist/Instructor fees _____
   Cost to students/clients _____
   Program sponsors ASAP

4. Distribution of students/clients by drinker classification

Drinker Type	Number	% of Total
Social	412	88.6
Problem	43	9.2
Serious Problem	9	1.9
Chronic Alcoholic	1	0.2
	465	

5. Distribution of students/clients by race

Race	Number	% of Total
White	451	97.0
Black	0	0.0
Oriental	0	0.0
Indian	14	3.0
Other	0	0.0
	465	

6. Distribution of students/clients by sex

Sex	Number	% of Total
Male	424	91.2
Female	41	8.8
	465	

Driver Improvement School (Continued)

7. Distribution of students/clients by age

Age	Number	% of Total
15 - 19	72	15.5
20 - 24	135	29.0
25 - 29	62	13.3
30 - 34	41	8.8
35 - 39	35	7.5
40 - 44	31	6.7
45 - 49	33	7.1
50 - 54	20	4.3
55 - 59	12	2.6
60 - 64	13	2.8
65 +	11	2.4
	465	

8. Number of students/clients completing modality

Year	Number	% of Total
1972	105	22.6
1973	205	44.1
1974	58	12.5
1975	97	20.9
	465	

9. Average number of students/clients entering per month (1972-1975)

9.79

INDIVIDUAL TREATMENT MODALITY SUMMARY TABLE

Problem Drinker Driver Classes

1. Average length of program

   Number of sessions 4
   Number of hours per session 1½

2. Size of sessions

   Number of students/clients per session 9

3. Cost of program

   Cost per program: Total _____, % ASAP funded _____
   % Non-ASAP funded _____
   Therapist/Instructor fees _____
   Cost to students/clients _____
   Program sponsors ASAP

4. Distribution of students/clients by drinker classification

Drinker Type	Number	% of Total
Social	433	12.5
Problem	1811	52.4
Serious Problem	866	25.1
Chronic Alcoholic	345	10.0
	3455	

5. Distribution of students/clients by race

Race	Number	% of Total
White	3081	88.8
Black	13	0.4
Oriental	18	0.5
Indian	355	12.2
Other	4	0.1
	3471	

6. Distribution of students/clients by sex

Sex	Number	% of Total
Male	3170	91.3
Female	303	8.7
	3473	

Problem Drinker Driver Classes (Continued)

7. Distribution of students/clients by age

Age	Number	% of Total
15 - 19	327	9.4
20 - 24	751	21.6
25 - 29	485	14.0
30 - 34	335	9.6
35 - 39	301	8.7
40 - 44	288	8.3
45 - 49	301	8.7
50 - 54	255	7.3
55 - 59	212	6.1
60 - 64	117	3.4
65 +	102	2.9
	3474	

8. Number of students/clients completing modality

Year	Number	% of Total
1972	676	19.6
1973	678	19.6
1974	973	28.2
1975	1125	32.6
	3452	

9. Average number of students/clients entering per month (1972-1975)

75.68

INDIVIDUAL TREATMENT MODALITY SUMMARY TABLE

Outpatient

1. Average length of program

   Number of sessions _____
   Number of hours per session _____

2. Size of sessions

   Number of students/clients per session _____

3. Cost of program

   Cost per program: Total _____, % ASAP funded _____
   % Non-ASAP funded _____
   Therapist/Instructor fees _____
   Cost to students/clients _____
   Program sponsors _____

4. Distribution of students/clients by drinker classification

Drinker Type	Number	% of Total
Social	2	0.6
Problem	82	26.6
Serious Problem	124	40.3
Chronic Alcoholic	100	32.5
	308	

5. Distribution of students/clients by race

Race	Number	% of Total
White	245	79.5
Black	0	0.0
Oriental	0	0.0
Indian	63	20.5
Other	0	
	308	

6. Distribution of students/clients by sex

Sex	Number	% of Total
Male	282	91.0
Female	28	9.0
	310	

Outpatient (Continued)

7. Distribution of students/clients by age

Age	Number	% of Total
15 - 19	21	6.8
20 - 24	50	16.1
25 - 29	46	14.8
30 - 34	39	12.6
35 - 39	44	14.2
40 - 44	31	10.0
45 - 49	22	7.1
50 - 54	25	8.1
55 - 59	18	5.8
60 - 64	6	1.9
65 +	8	2.6
	310	

8. Number of students/clients completing modality

Year	Number	% of Total
1972	33	10.7
1973	74	23.9
1974	105	34.0
1975	97	31.4
	309	

9. Average number of students/clients entering per month (1972-1975)

7.56

INDIVIDUAL TREATMENT MODALITY SUMMARY TABLE

Inpatient

1. Average length of program

   Number of sessions _____
   Number of hours per session _____

2. Size of sessions

   Number of students/clients per session _____

3. Cost of program

   Cost per program: Total _____, % ASAP funded _____
   % Non-ASAP funded _____
   Therapist/Instructor fees _____
   Cost to students/clients _____
   Program sponsors ASAP

4. Distribution of students/clients by drinker classification

Drinker Type	Number	% of Total
Social	0	0.0
Problem	12	7.2
Serious Problem	30	18.1
Chronic Alcoholic	124	74.7
	166	

5. Distribution of students/clients by race

Race	Number	% of Total
White	128	74.0
Black	0	0.0
Oriental	0	0.0
Indian	45	26.0
Other	0	0.0
	173	

6. Distribution of students/clients by sex

Sex	Number	% of Total
Male	156	90.2
Female	17	9.8
	173	

Inpatient (Continued)

7. Distribution of students/clients by age

Age	Number	% of Total
15 - 19	3	1.7
20 - 24	16	9.2
25 - 29	21	12.1
30 - 34	15	8.6
35 - 39	18	10.3
40 - 44	21	12.1
45 - 49	28	16.1
50 - 54	24	13.8
55 - 59	17	9.8
60 - 64	9	5.2
65 +	2	1.2
	174	

8. Number of students/clients completing modality

Year	Number	% of Total
1972	44	26.3
1973	50	29.9
1974	31	18.6
1975	42	25.1
	167	

9. Average number of students/clients entering per month (1972-1975)

3.48

INDIVIDUAL TREATMENT MODALITY SUMMARY TABLE

Alcoholics Anonymous

1. Average length of program

   Number of sessions Usually 1/week for undefined period
   Number of hours per session 1

2. Size of sessions

   Number of students/clients per session Range = 4-40

3. Cost of program

   Cost per program: Total N/A, % ASAP funded _____
   % Non-ASAP funded _____
   Therapist/Instructor fees None
   Cost to students/clients None (unless voluntary contribution)
   Program sponsors Local AA chapters

4. Distribution of students/clients by drinker classification

Drinker Type	Number	% of Total
Social	15	2.5
Problem	112	18.9
Serious Problem	325	54.7
Chronic Alcoholic	142	23.9
	594	

5. Distribution of students/clients by race

Race	Number	% of Total
White	498	82.9
Black	0	0.0
Oriental	6	1.0
Indian	97	16.1
Other	0	0.0
	601	

6. Distribution of students/clients by sex

Sex	Number	% of Total
Male	554	92.2
Female	47	7.8
	601	

Alcoholics Anonymous (Continued)

7. Distribution of students/clients by age

Age	Number	% of Total
15 - 19	17	2.8
20 - 24	67	11.1
25 - 29	90	15.0
30 - 34	75	12.5
35 - 39	67	11.1
40 - 44	67	11.1
45 - 49	58	9.7
50 - 54	63	10.5
55 - 59	46	7.7
60 - 64	33	5.5
65 +	18	3.0
	601	

8. Number of students/clients completing modality

Year	Number	% of Total
1972	189	31.8
1973	136	22.9
1974	195	32.8
1975	75	12.6
	595	

9. Average number of students/clients entering per month (1972-1975)

12.40

APPENDIX B

SELECTED OUTPATIENT AND INPATIENT TREATMENT PROGRAM DESCRIPTIONS

SELECTED OUTPATIENT TREATMENT PROGRAM DESCRIPTIONS

Sioux Falls Alcohol and Drug Referral Center

Average number of sessions per client:

Number of group sessions: 0

Number of individual sessions: 2

Average session length:

Group session: 0 hours

Individual sessions: 45 minutes

Average number of clients per group session: 0

Estimated total cost per client: $ _____

Therapist/counselor fees: $ _____

Cost to client: $ _____

SELECTED OUTPATIENT TREATMENT PROGRAM DESCRIPTIONS

St. Johns (Rapid City Regional Hospital

Average number of sessions per client:

Number of group sessions: 30

Number of individual sessions: 5

Average session length:

Group session: 1½ hours

Individual sessions: 1 hour

Average number of clients per group session: 10

Estimated total cost per client: $215

Therapist/counselor fees: $ Included

Cost to client: $ 185

SELECTED OUTPATIENT TREATMENT PROGRAM DESCRIPTIONS

Watertown Mental Health

Average number of sessions per client:

Number of group sessions: 7

Number of individual sessions: 1

Average session length:

Group sessions: 1½ hours

Individual sessions: 1 hour

Average number of clients per group session: 7

Estimated total cost per client: $125.00

Therapist/counselor fees: $ 25.00/hour

Cost to client: $8.00 Estimated

This program is now within the Alcohol Drug Referral and Treatment Center. We are a separate unit, and is an expansion of the program originally with the Mental Health Center. We all belong to the Human Service Agency. Our groups have fluctuated from a high of 15 to a low, now, of 3, but the average seems to be 7.

Gene A. Cooley
Program Administrator

SELECTED INPATIENT TREATMENT PROGRAM DESCRIPTIONS

Yankton State Hospital

Average number of sessions per client:

Number of group sessions: 90

Number of individual sessions: 7

Average session length:

Group sessions: 1 hour

Individual sessions: No definite time

Average number of clients per group session: 10

Estimated total cost per client: $22.55 per day to taxpayer

Therapist/counselor fees: $ Just the monthly salary

Cost to client: $ Sometime none - if they have nothing.
If County pays - $100.00 per month.
If person can afford the whole amount is paid.
If person has insurance the whole amount is paid.

SELECTED INPATIENT TREATMENT PROGRAM DESCRIPTIONS

River Park Center

Average number of sessions per client:

Number of group sessions: 72

Number of individual sessions: 15

Average session length:

Group sessions: 1 hour

Individual sessions: 1 hour

Average number of clients per group session: 12

Estimated total cost per client: $1176.00

Therapist/counselor fees: $ Included in above

Cost to client: $1176.00

SELECTED INPATIENT TREATMENT PROGRAM DESCRIPTIONS

Fort Meade

Average number of sessions per client:

Number of group sessions: 80

Number of individual sessions: 8-9

Average session length:

Group sessions: 1 hour

Individual sessions: 1 hour

Average number of clients per class session: 55

Average number of clients per group session: 8

Estimated total cost per client: $50.97/day

Therapist/counselor fees: $ Salary

Cost to client: $ None

APPENDIX C

1975 APPENDIX H TABLE 15

TABLE 15

ANNUAL REHABILITATION RECIDIVISTS
BY REHABILITATION PROGRAM - PROBLEM DRINKERS

TABLE NO. 15A-1
PROJECT SD:ASAP
ANNUAL ENDING December, 1975

ROW NO.	EVALUATION MEASURE	NOT REFER	TOTAL TREAT. ENTER	TOTAL TREAT. DROP	TOTAL TREAT. NO SHOW	SPECIFIC MODALITY/COMB. ENTRIES						OTHER TREAT.	RANDOM CNTRL.	NON RANDOM CNTRL
						DIS	PDDC	INPA-TIENT	OUTPA-TIENT	PDDC + AA	PDDC + TREAT.			
		1	2	3	4	5	6	7	8	9	10	11	12	13
1	NUMBER ENTERING IN Q1	22	186	3	28	0	81	3	2	47	15	7	0	
2	Recidivists in Q1	0	2	0	0	0	1	0	0	1	0	0	0	
3	Recidivists in Q2	0	8	0	0	0	3	1	0	3	0	1	0	
4	Recidivists in Q3	0	6	1	1	0	2	0	0	1	1	0	0	
5	Recidivists in Q4	0	7	0	1	0	4	1	0	0	1	0	0	
6	Recidivists in Q5 + Q6	0	6	0	0	0	3	0	0	2	0	1	0	
7	Recidivists in Q7 + Q8	0	10	0	2	0	5	0	0	3	0	0	0	
8	Recidivists in Q9 + Q10	1	7	0	1	0	4	1	0	1	0	0	0	
9	Recidivists from Q11 on	1	21	0	4	0	8	0	1	5	1	2	0	
10	NUMBER ENTERING IN Q2	15	247	9	57	0	89	8	2	52	19	11	0	
11	Recidivists in Q2	0	7	0	2	0	2	1	0	2	0	0	0	
12	Recidivists in Q3	0	12	1	2	0	3	0	1	4	1	0	0	
13	Recidivists in Q4	0	9	0	1	0	2	0	0	4	1	1	0	
14	Recidivists in Q5	0	4	0	0	0	4	0	0	0	0	0	0	
15	Recidivists in Q6 + Q7	1	11	1	2	0	3	0	0	2	3	0	0	
16	Recidivists in Q8 + Q9	0	7	0	1	0	3	0	0	1	1	1	0	
17	Recidivists in Q10 + Q11	1	18	0	6	0	3	3	0	4	2	0	0	
18	Recidivists from Q12 on	2	16	0	4	0	7	1	0	3	1	0	0	
19	NUMBER ENTERING IN Q3	11	246	13	31	1	112	8	1	53	18	9	0	
20	Recidivists in Q3	1	8	1	1	0	1	0	0	4	1	0	0	
21	Recidivists in Q4	0	11	1	0	0	6	0	0	2	2	0	0	
22	Recidivists in Q5	0	2	0	0	0	2	0	0	0	0	0	0	
23	Recidivists in Q6	1	9	0	0	1	5	1	0	1	0	1	0	
24	Recidivists in Q7 + Q8	0	5	0	0	0	2	0	0	3	0	0	0	
25	Recidivists in Q9 + Q10	1	11	3	2	0	3	0	0	2	0	1	0	
26	Recidivists in Q11 + Q12	0	22	3	3	0	7	0	0	7	2	0	0	
27	Recidivists from Q13 on	2	19	1	2	0	11	0	0	3	2	0	0	
28	NUMBER ENTERING IN Q4	25	272	10	39	3	139	8	4	24	39	6	0	
29	Recidivists in Q4	1	15	1	4	0	8	0	0	0	2	0	0	
30	Recidivists in Q5	0	6	2	0	0	1	1	0	1	1	0	0	
31	Recidivists in Q6	2	6	1	0	0	2	1	0	1	1	0	0	
32	Recidivists in Q7	1	5	0	1	0	2	0	1	1	0	0	0	
33	Recidivists in Q8 + Q9	0	16	0	0	0	9	2	0	3	2	0	0	
34	Recidivists in Q10 + Q11	0	14	1	1	0	9	0	0	0	3	0	0	
35	Recidivists in Q12 + Q13	1	13	0	3	0	5	0	0	2	1	2	0	
36	Recidivists from Q14 on	1	12	1	5	0	2	0	0	1	1	2	0	

TABLE 15

ANNUAL REHABILITATION RECIDIVISTS BY REHABILITATION PROGRAM - PROBLEM DRINKERS

TABLE NO. 15B-1
PROJECT SD:ASAP
ANNUAL ENDING December, 1975

ROW NO.	EVALUATION MEASURE	NOT REFER	TOTAL TREAT. ENTER	TOTAL TREAT. DROP	TOTAL TREAT. NO SHOW	SPECIFIC MODALITY/COMB. ENTRIES						OTHER TREAT.	RANDOM CNTRL.	NON RANDO CNTRL
						DIS	PDDC	INPA-TIENT	OUTPA-TIENT	PDDC + AA	PDDC + TREAT.			
		1	2	3	4	5	6	7	8	9	10	11	12	13
1	NUMBER ENTERING IN Q5	28	238	13	26	7	129	8	1	29	20	5	0	
2	Recidivists in Q5	2	7	0	1	0	5	0	0	0	1	0	0	
3	Recidivists in Q6	1	4	1	0	0	3	0	0	0	0	0	0	
4	Recidivists in Q7	1	5	0	0	0	3	1	0	1	0	0	0	
5	Recidivists in Q8	0	3	1	0	0	2	0	0	0	0	0	0	
6	Recidivists in Q9 + Q10	1	15	1	1	0	7	1	0	3	2	0	0	
7	Recidivists in Q11 + Q12	3	10	0	3	0	5	0	0	1	1	0	0	
8	Recidivists in Q13 + Q14	0	9	0	1	1	4	0	0	0	3	0	0	
9	Recidivists from Q15 on	0	6	0	0	0	4	0	0	1	1	0	0	
10	NUMBER ENTERING IN Q6	27	293	19	43	1	136	9	17	32	26	10	0	
11	Recidivists in Q6	0	6	0	1	0	3	1	1	0	0	0	0	
12	Recidivists in Q7	1	15	0	1	0	7	0	2	3	1	1	0	
13	Recidivists in Q8	0	10	0	0	0	7	1	0	2	0	0	0	
14	Recidivists in Q9	0	11	2	0	0	6	0	1	1	0	1	0	
15	Recidivists in Q10 + Q11	2	17	0	4	1	9	0	1	2	0	0	0	
16	Recidivists in Q12 + Q13	0	17	0	0	0	10	1	0	3	2	1	0	
17	Recidivists in Q14 + Q15	1	10	0	0	0	8	0	0	2	0	0	0	
18	Recidivists from Q16 on	0	3	0	1	0	2	0	0	0	0	0	0	
19	NUMBER ENTERING IN Q7	26	273	9	61	3	119	6	10	24	24	17	0	
20	Recidivists in Q7	1	14	1	7	0	3	1	1	0	0	1	0	
21	Recidivists in Q8	1	11	1	1	0	6	0	1	0	1	1	0	
22	Recidivists in Q9	1	6	0	1	0	2	0	0	0	2	1	0	
23	Recidivists in Q10	1	13	0	3	0	4	0	1	3	0	2	0	
24	Recidivists in Q11 + Q12	2	9	0	3	0	2	0	0	3	0	1	0	
25	Recidivists in Q13 + Q14	2	10	1	2	0	7	0	0	0	0	0	0	
26	Recidivists in Q15 + Q16	2	14	1	3	0	4	0	0	2	3	1	0	
27	Recidivists from Q17 on													
28	NUMBER ENTERING IN Q8	42	338	7	68	2	167	12	11	35	20	16	0	
29	Recidivists in Q8	3	13	2	4	0	4	0	1	2	0	0	0	
30	Recidivists in Q9	1	7	0	1	0	3	1	0	2	0	0	0	
31	Recidivists in Q10	3	15	1	3	0	7	1	0	2	1	0	0	
32	Recidivists in Q11	1	19	1	7	0	6	2	1	2	0	0	0	
33	Recidivists in Q12 + Q13	1	15	0	0	0	9	1	0	3	0	2	0	
34	Recidivists in Q14 + Q15	0	17	0	4	0	6	0	1	4	1	1	0	
35	Recidivists in Q16 + Q17	1	11	0	1	0	8	0	0	1	0	1	0	
36	Recidivists from Q18 on													

TABLE 15

ANNUAL REHABILITATION RECIDIVISTS
BY REHABILITATION PROGRAM - PROBLEM DRINKERS

TABLE NO. 15C-1
PROJECT SD:ASAP
ANNUAL ENDING December, 1975

ROW NO.	EVALUATION MEASURE	NOT REFER	TOTAL TREAT. ENTER	TOTAL TREAT. DROP	TOTAL TREAT. NO SHOW	SPECIFIC MODALITY/COMB. ENTRIES						OTHER TREAT.	RANDOM CNTRL.	NON RANDO CNTRL
						DIS	PDDC	INPA-TIENT	OUTPA-TIENT	PDDC + AA	PDDC + TREAT.			
		1	2	3	4	5	6	7	8	9	10	11	12	13
1	NUMBER ENTERING IN Q9	45	397	17	100	3	179	6	12	28	36	16	27	
2	Recidivists in Q9	2	13	1	3	0	5	0	0	3	1	0	0	
3	Recidivists in Q10	1	14	1	3	0	7	0	2	1	0	0	2	
4	Recidivists in Q11	1	23	2	2	1	10	2	1	2	1	2	0	
5	Recidivists in Q12	4	12	0	4	0	7	1	0	0	0	0	2	
6	Recidivists in Q13 + Q14	3	14	0	3	0	8	0	0	0	3	0	4	
7	Recidivists in Q15 + Q16	1	21	0	2	1	10	1	0	4	2	1	0	
8	Recidivists in Q17 + Q18													
9	Recidivists from Q19 on													
10	NUMBER ENTERING IN Q10	47	379	6	95	2	156	6	6	38	58	12	40	
11	Recidivists in Q10	2	8	0	2	0	3	0	0	3	0	0	0	
12	Recidivists in Q11	1	17	0	4	0	5	0	1	3	4	0	4	
13	Recidivists in Q12	0	14	1	5	0	5	0	1	0	1	1	0	
14	Recidivists in Q13	0	12	0	1	0	6	0	1	2	2	0	1	
15	Recidivists in Q14 + Q15	3	20	0	5	0	9	0	0	2	3	1	0	
16	Recidivists in Q16 + Q17	2	9	0	1	0	2	0	1	2	2	1	1	
17	Recidivists in Q18 + Q19													
18	Recidivists from Q20 on													
19	NUMBER ENTERING IN Q11	28	431	11	89	4	193	4	2	49	71	8	45	
20	Recidivists in Q11	2	7	1	3	0	5	2	0	1	3	2	1	
21	Recidivists in Q12	0	19	1	5	0	6	0	0	2	5	0	1	
22	Recidivists in Q13	0	12	0	1	0	5	0	0	2	4	0	1	
23	Recidivists in Q14	0	16	0	3	0	6	1	0	4	2	0	0	
24	Recidivists in Q15 + Q16	2	24	0	3	0	14	0	0	3	3	1	2	
25	Recidivists in Q17 + Q18													
26	Recidivists in Q19 + Q20													
27	Recidivists from Q21 on													
28	NUMBER ENTERING IN Q12	40	482	9	131	1	183	0	1	48	100	9	47	
29	Recidivists in Q12	2	15	0	3	0	4	0	0	3	5	0	2	
30	Recidivists in Q13	1	22	0	5	0	11	0	1	0	4	1	1	
31	Recidivists in Q14	1	15	1	1	0	6	0	0	4	3	0	1	
32	Recidivists in Q15	3	16	0	5	0	3	0	0	1	6	1	0	
33	Recidivists in Q16 + Q17	1	14	0	3	0	4	0	0	0	7	0	0	
34	Recidivists in Q18 + Q19													
35	Recidivists in Q20 + Q21													
36	Recidivists from Q22 on													

TABLE 15

ANNUAL REHABILITATION RECIDIVISTS
BY REHABILITATION PROGRAM - PROBLEM DRINKERS

TABLE NO. 15D-1
PROJECT SD:ASAP
ANNUAL ENDING December, 1975

ROW NO.	EVALUATION MEASURE	NOT REFER	TOTAL TREAT. ENTER	TOTAL TREAT. DROP	TOTAL TREAT. NO SHOW	SPECIFIC MODALITY/COMB. ENTRIES						OTHER TREAT.	RANDOM CNTRL.	NON RANDO CNTRL
						DIS	PDDC	INPA-TIENT	OUTPA-TIENT	PDDC + AA	PDDC + TREAT.			
		1	2	3	4	5	6	7	8	9	10	11	12	13
1	NUMBER ENTERING IN Q13	18	367	3	82	4	177	6	2	22	65	6	41	
2	Recidivists in Q13	1	8	0	1	0	4	0	0	0	3	0	1	
3	Recidivists in Q14	1	11	1	3	0	3	0	0	1	3	0	2	
4	Recidivists in Q15	0	6	0	0	0	4	1	0	1	0	0	1	
5	Recidivists in Q16	0	3	0	0	0	3	0	0	0	0	0	1	
6	Recidivists in Q17 + Q18													
7	Recidivists in Q19 + Q20													
8	Recidivists in Q21 + Q22													
9	Recidivists from Q23 on													
10	NUMBER ENTERING IN Q14	28	493	12	93	9	246	10	7	21	89	6	67	
11	Recidivists in Q14	1	18	0	5	0	5	2	0	0	5	1	1	
12	Recidivists in Q15	0	19	0	6	0	10	0	0	0	3	0	2	
13	Recidivists in Q16	0	15	1	2	0	9	0	0	0	3	0	2	
14	Recidivists in Q17													
15	Recidivists in Q18 + Q19													
16	Recidivists in Q20 + Q21													
17	Recidivists in Q22 + Q23													
18	Recidivists from Q24 on													
19	NUMBER ENTERING IN Q15	26	464	29	81	3	255	4	3	12	73	4	57	
20	Recidivists in Q15	2	8	1	0	0	3	0	0	0	4	0	0	
21	Recidivists in Q16	2	14	0	3	0	4	0	0	0	6	1	5	
22	Recidivists in Q17													
23	Recidivists in Q18													
24	Recidivists in Q19 + Q20													
25	Recidivists in Q21 + Q22													
26	Recidivists in Q23 + Q24													
27	Recidivists from Q25 on													
28	NUMBER ENTERING IN Q16	44	434	15	111	5	221	1	4	13	63	1	62	
29	Recidivists in Q16	0	6	0	1	0	4	0	0	0	1	0	0	
30	Recidivists in Q17													
31	Recidivists in Q18													
32	Recidivists in Q19													
33	Recidivists in Q20 + Q21													
34	Recidivists in Q22 + Q23													
35	Recidivists in Q24 + Q25													
36	Recidivists from Q26 on													

TABLE 15

ANNUAL REHABILITATION RECIDIVISTS BY REHABILITATION PROGRAM - UNIDENTIFIED DRINKERS

TABLE NO. 15A-2
PROJECT SD:ASAP
ANNUAL ENDING December, 1975

ROW NO.	EVALUATION MEASURE	NOT REFER	TOTAL TREAT. ENTER	TOTAL TREAT. DROP	TOTAL TREAT. NO SHOW	SPECIFIC MODALITY/COMB. ENTRIES						OTHER TREAT.	RANDOM CNTRL.	NON RANDO CNTRL
						DIS	PDDC	INPA-TIENT	OUTPA-TIENT	PDDC + AA	PDDC + TREAT.			
		1	2	3	4	5	6	7	8	9	10	11	12	13
1	NUMBER ENTERING IN Q1	9	5	0	2	0	1	0	0	1	1	0	0	
2	Recidivists in Q1	0	0	0	0	0	0	0	0	0	0	0	0	
3	Recidivists in Q2	0	0	0	0	0	0	0	0	0	0	0	0	
4	Recidivists in Q3	0	1	0	1	0	0	0	0	0	0	0	0	
5	Recidivists in Q4	2	0	0	0	0	0	0	0	0	0	0	0	
6	Recidivists in Q5 + Q6	0	0	0	0	0	0	0	0	0	0	0	0	
7	Recidivists in Q7 + Q8	1	0	0	0	0	0	0	0	0	0	0	0	
8	Recidivists in Q9 + Q10	0	0	0	0	0	0	0	0	0	0	0	0	
9	Recidivists from Q11 on	1	1	0	0	0	1	0	0	0	0	0	0	
10	NUMBER ENTERING IN Q2	1	1	0	0	0	1	0	0	0	0	0	0	
11	Recidivists in Q2	0	0	0	0	0	0	0	0	0	0	0	0	
12	Recidivists in Q3	1	0	0	0	0	0	0	0	0	0	0	0	
13	Recidivists in Q4	0	0	0	0	0	0	0	0	0	0	0	0	
14	Recidivists in Q5	0	0	0	0	0	0	0	0	0	0	0	0	
15	Recidivists in Q6 + Q7	0	0	0	0	0	0	0	0	0	0	0	0	
16	Recidivists in Q8 + Q9	0	0	0	0	0	0	0	0	0	0	0	0	
17	Recidivists in Q10 + Q11	0	0	0	0	0	0	0	0	0	0	0	0	
18	Recidivists from Q12 on	0	0	0	0	0	0	0	0	0	0	0	0	
19	NUMBER ENTERING IN Q3	5	13	0	3	0	2	3	0	3	2	0	0	
20	Recidivists in Q3	0	3	0	1	0	0	0	0	2	0	0	0	
21	Recidivists in Q4	0	0	0	0	0	0	0	0	0	0	0	0	
22	Recidivists in Q5	0	2	0	0	0	1	0	0	0	1	0	0	
23	Recidivists in Q6	0	0	0	0	0	0	0	0	0	0	0	0	
24	Recidivists in Q7 + Q8	1	2	0	1	0	0	1	0	0	0	0	0	
25	Recidivists in Q9 + Q10	0	0	0	0	0	0	0	0	0	0	0	0	
26	Recidivists in Q11 + Q12	0	0	0	0	0	0	0	0	0	0	0	0	
27	Recidivists from Q13 on	0	0	0	0	0	0	0	0	0	0	0	0	
28	NUMBER ENTERING IN Q4	13	13	1	3	0	8	0	0	0	0	0	0	
29	Recidivists in Q4	1	1	0	0	0	1	0	0	0	0	1	0	
30	Recidivists in Q5	0	0	0	0	0	0	0	0	0	0	0	0	
31	Recidivists in Q6	0	0	0	0	0	0	0	0	0	0	0	0	
32	Recidivists in Q7	0	1	0	0	0	1	0	0	0	0	0	0	
33	Recidivists in Q8 + Q9	1	1	0	0	0	1	0	0	0	0	0	0	
34	Recidivists in Q10 + Q11	1	1	0	0	0	1	0	0	0	0	0	0	
35	Recidivists in Q12 + Q13	1	1	0	0	0	1	0	0	0	0	0	0	
36	Recidivists from Q14 on	2	0	0	0	0	0	0	0	0	0	0	0	

TABLE 15

ANNUAL REHABILITATION RECIDIVISTS
BY REHABILITATION PROGRAM - UNIDENTIFIED DRINKERS

TABLE NO. 15B-2
PROJECT SD:ASAP
ANNUAL ENDING December, 1975

ROW NO.	EVALUATION MEASURE	NOT REFER	TOTAL TREAT. ENTER	TOTAL TREAT. DROP	TOTAL TREAT. NO SHOW	SPECIFIC MODALITY/COMB. ENTRIES						OTHER TREAT.	RANDOM CNTRL.	NON RANDO CNTRL
						DIS	PDDC	INPA-TIENT	OUTPA-TIENT	PDDC + AA	PDDC + TREAT.			
		1	2	3	4	5	6	7	8	9	10	11	12	13
1	NUMBER ENTERING IN Q5	0	12	0	5	0	3	2	0	1	0	1	0	
2	Recidivists in Q5	0	1	0	0	0	0	0	0	1	0	0	0	
3	Recidivists in Q6	0	0	0	0	0	0	0	0	0	0	0	0	
4	Recidivists in Q7	0	0	0	0	0	0	0	0	0	0	0	0	
5	Recidivists in Q8	0	1	0	1	0	0	0	0	0	0	0	0	
6	Recidivists in Q9 + Q10	0	0	0	0	0	0	0	0	0	0	0	0	
7	Recidivists in Q11 + Q12	0	1	0	0	0	1	0	0	0	0	0	0	
8	Recidivists in Q13 + Q14	0	1	0	1	0	0	0	0	0	0	0	0	
9	Recidivists from Q15 on	0	0	0	0	0	0	0	0	0	0	0	0	
10	NUMBER ENTERING IN Q6	2	5	1	1	0	1	0	0	1	0	1	0	
11	Recidivists in Q6	0	0	0	0	0	0	0	0	0	0	0	0	
12	Recidivists in Q7	0	0	0	0	0	0	0	0	0	0	0	0	
13	Recidivists in Q8	0	0	0	0	0	0	0	0	0	0	0	0	
14	Recidivists in Q9	0	0	0	0	0	0	0	0	0	0	0	0	
15	Recidivists in Q10 + Q11	0	1	0	0	0	1	0	0	0	0	0	0	
16	Recidivists in Q12 + Q13	1	0	0	0	0	0	0	0	0	0	0	0	
17	Recidivists in Q14 + Q15	0	0	0	0	0	0	0	0	0	0	0	0	
18	Recidivists from Q16 on	0	0	0	0	0	0	0	0	0	0	0	0	
19	NUMBER ENTERING IN Q7	2	8	0	3	0	2	1	1	0	0	1	0	
20	Recidivists in Q7	0	1	0	0	0	0	0	1	0	0	0	0	
21	Recidivists in Q8	1	0	0	0	0	0	0	0	0	0	0	0	
22	Recidivists in Q9	0	0	0	0	0	0	0	0	0	0	0	0	
23	Recidivists in Q10	0	0	0	0	0	0	0	0	0	0	0	0	
24	Recidivists in Q11 + Q12	1	0	0	0	0	0	0	0	0	0	0	0	
25	Recidivists in Q13 + Q14	0	0	0	0	0	0	0	0	0	0	0	0	
26	Recidivists in Q15 + Q16	0	1	0	0	0	1	0	0	0	0	0	0	
27	Recidivists from Q17 on													
28	NUMBER ENTERING IN Q8	3	2	0	1	0	1	0	0	0	0	0	0	
29	Recidivists in Q8	1	0	0	0	0	0	0	0	0	0	0	0	
30	Recidivists in Q9	0	0	0	0	0	0	0	0	0	0	0	0	
31	Recidivists in Q10	0	0	0	0	0	0	0	0	0	0	0	0	
32	Recidivists in Q11	0	0	0	0	0	0	0	0	0	0	0	0	
33	Recidivists in Q12 + Q13	0	0	0	0	0	0	0	0	0	0	0	0	
34	Recidivists in Q14 + Q15	0	0	0	0	0	0	0	0	0	0	0	0	
35	Recidivists in Q16 + Q17	0	0	0	0	0	0	0	0	0	0	0	0	
36	Recidivists from Q18 on													

TABLE 15

ANNUAL REHABILITATION RECIDIVISTS BY REHABILITATION PROGRAM - UNIDENTIFIED DRINKERS

TABLE NO. 15C-2
PROJECT SD:ASAP
ANNUAL ENDING December, 1975

ROW NO.	EVALUATION MEASURE	NOT REFER	TOTAL TREAT. ENTER	TOTAL TREAT. DROP	TOTAL TREAT. NO SHOW	SPECIFIC MODALITY/COMB. ENTRIES						OTHER TREAT.	RANDOM CNTRL.	NON RANDO CNTRL
						DIS	PDDC	INPA-TIENT	OUTPA-TIENT	PDDC + AA	PDDC + TREAT.			
		1	2	3	4	5	6	7	8	9	10	11	12	13
1	NUMBER ENTERING IN Q9	0	0	0	0	0	0	0	0	0	0	0	0	
2	Recidivists in Q9	0	0	0	0	0	0	0	0	0	0	0	0	
3	Recidivists in Q10	0	0	0	0	0	0	0	0	0	0	0	0	
4	Recidivists in Q11	0	0	0	0	0	0	0	0	0	0	0	0	
5	Recidivists in Q12	0	0	0	0	0	0	0	0	0	0	0	0	
6	Recidivists in Q13 + Q14	0	0	0	0	0	0	0	0	0	0	0	0	
7	Recidivists in Q15 + Q16	0	0	0	0	0	0	0	0	0	0	0	0	
8	Recidivists in Q17 + Q18													
9	Recidivists from Q19 on													
10	NUMBER ENTERING IN Q10	0	0	0	0	0	0	0	0	0	0	0	0	
11	Recidivists in Q10	0	0	0	0	0	0	0	0	0	0	0	0	
12	Recidivists in Q11	0	0	0	0	0	0	0	0	0	0	0	0	
13	Recidivists in Q12	0	0	0	0	0	0	0	0	0	0	0	0	
14	Recidivists in Q13	0	0	0	0	0	0	0	0	0	0	0	0	
15	Recidivists in Q14 + Q15	0	0	0	0	0	0	0	0	0	0	0	0	
16	Recidivists in Q16 + Q17	0	0	0	0	0	0	0	0	0	0	0	0	
17	Recidivists in Q18 + Q19													
18	Recidivists from Q20 on													
19	NUMBER ENTERING IN Q11	0	1	0	0	0	0	0	0	0	1	0	0	
20	Recidivists in Q11	0	0	0	0	0	0	0	0	0	0	0	0	
21	Recidivists in Q12	0	0	0	0	0	0	0	0	0	0	0	0	
22	Recidivists in Q13	0	0	0	0	0	0	0	0	0	0	0	0	
23	Recidivists in Q14	0	0	0	0	0	0	0	0	0	0	0	0	
24	Recidivists in Q15 + Q16	0	0	0	0	0	0	0	0	0	0	0	0	
25	Recidivists in Q17 + Q18													
26	Recidivists in Q19 + Q20													
27	Recidivists from Q21 on													
28	NUMBER ENTERING IN Q12	0	0	0	0	0	0	0	0	0	0	0	0	
29	Recidivists in Q12	0	0	0	0	0	0	0	0	0	0	0	0	
30	Recidivists in Q13	0	0	0	0	0	0	0	0	0	0	0	0	
31	Recidivists in Q14	0	0	0	0	0	0	0	0	0	0	0	0	
32	Recidivists in Q15	0	0	0	0	0	0	0	0	0	0	0	0	
33	Recidivists in Q16 + Q17	0	0	0	0	0	0	0	0	0	0	0	0	
34	Recidivists in Q18 + Q19													
35	Recidivists in Q20 + Q21													
36	Recidivists from Q22 on													

TABLE 15

ANNUAL REHABILITATION RECIDIVISTS
BY REHABILITATION PROGRAM - UNIDENTIFIED DRINKERS

TABLE NO. 15D-2
PROJECT SD:ASAP
ANNUAL ENDING December, 1975

ROW NO.	EVALUATION MEASURE	NOT REFER	TOTAL TREAT. ENTER	TOTAL TREAT. DROP	TOTAL TREAT. NO SHOW	SPECIFIC MODALITY/COMB. ENTRIES						OTHER TREAT.	RANDOM CNTRL.	NON RANDO CNTRL
						DIS	PDDC	INPA-TIENT	OUTPA-TIENT	PDDC + AA	PDDC + TREAT.			
		1	2	3	4	5	6	7	8	9	10	11	12	13
1	NUMBER ENTERING IN Q13	0	0	0	0	0	0	0	0	0	0	0	0	
2	Recidivists in Q13	0	0	0	0	0	0	0	0	0	0	0	0	
3	Recidivists in Q14	0	0	0	0	0	0	0	0	0	0	0	0	
4	Recidivists in Q15	0	0	0	0	0	0	0	0	0	0	0	0	
5	Recidivists in Q16	0	0	0	0	0	0	0	0	0	0	0	0	
6	Recidivists in Q17 + Q18													
7	Recidivists in Q19 + Q20													
8	Recidivists in Q21 + Q22													
9	Recidivists from Q23 on													
10	NUMBER ENTERING IN Q14	0	0	0	0	0	0	0	0	0	0	0	0	
11	Recidivists in Q14	0	0	0	0	0	0	0	0	0	0	0	0	
12	Recidivists in Q15	0	0	0	0	0	0	0	0	0	0	0	0	
13	Recidivists in Q16	0	0	0	0	0	0	0	0	0	0	0	0	
14	Recidivists in Q17													
15	Recidivists in Q18 + Q19													
16	Recidivists in Q20 + Q21													
17	Recidivists in Q22 + Q23													
18	Recidivists from Q24 on													
19	NUMBER ENTERING IN Q15	0	0	0	0	0	0	0	0	0	0	0	0	
20	Recidivists in Q15	0	0	0	0	0	0	0	0	0	0	0	0	
21	Recidivists in Q16	0	0	0	0	0	0	0	0	0	0	0	0	
22	Recidivists in Q17													
23	Recidivists in Q18													
24	Recidivists in Q19 + Q20													
25	Recidivists in Q21 + Q22													
26	Recidivists in Q23 + Q24													
27	Recidivists from Q25 on													
28	NUMBER ENTERING IN Q16	0	0	0	0	0	0	0	0	0	0	0	0	
29	Recidivists in Q16	0	0	0	0	0	0	0	0	0	0	0	0	
30	Recidivists in Q17													
31	Recidivists in Q18													
32	Recidivists in Q19													
33	Recidivists in Q20 + Q21													
34	Recidivists in Q22 + Q23													
35	Recidivists in Q24 + Q25													
36	Recidivists from Q26 on													

TABLE 15

ANNUAL REHABILITATION RECIDIVISTS BY REHABILITATION PROGRAM - NON-PROBLEM DRINKERS

TABLE NO. 15A-3
PROJECT SD:ASAP
ANNUAL ENDING December, 1975

ROW NO.	EVALUATION MEASURE	NOT REFER	TOTAL TREAT. ENTER	TOTAL TREAT. DROP	TOTAL TREAT. NO SHOW	SPECIFIC MODALITY/COMB. ENTRIES						OTHER TREAT.	RANDOM CNTRL.	NON RANDO CNTRL
						DIS	PDDC	INPA-TIENT	OUTPA-TIENT	PDDC + AA	PDDC + TREAT.			
		1	2	3	4	5	6	7	8	9	10	11	12	13
1	NUMBER ENTERING IN Q1	67	68	1	23	8	24	0	1	3	1	7	0	
2	Recidivists in Q1	3	1	0	0	0	1	0	0	0	0	0	0	
3	Recidivists in Q2	0	1	0	1	0	0	0	0	0	0	0	0	
4	Recidivists in Q3	0	2	0	0	0	2	0	0	0	0	0	0	
5	Recidivists in Q4	1	2	0	0	0	2	0	0	0	0	0	0	
6	Recidivists in Q5 + Q6	1	3	0	0	0	0	0	0	2	1	0	0	
7	Recidivists in Q7 + Q8	0	3	0	2	0	0	0	0	0	0	1	0	
8	Recidivists in Q9 + Q10	1	3	0	2	0	1	0	0	0	0	0	0	
9	Recidivists from Q11 on	7	6	0	3	1	0	0	0	0	0	2	0	
10	NUMBER ENTERING IN Q2	104	49	0	13	20	8	0	0	4	1	3	0	
11	Recidivists in Q2	2	0	0	0	0	0	0	0	0	0	0	0	
12	Recidivists in Q3	0	0	0	0	0	0	0	0	0	0	0	0	
13	Recidivists in Q4	4	1	0	0	0	1	0	0	0	0	0	0	
14	Recidivists in Q5	0	1	0	1	0	0	0	0	0	0	0	0	
15	Recidivists in Q6 + Q7	3	1	0	0	1	0	0	0	0	0	0	0	
16	Recidivists in Q8 + Q9	4	2	0	0	1	0	0	0	1	0	0	0	
17	Recidivists in Q10 + Q11	2	1	0	0	0	1	0	0	0	0	0	0	
18	Recidivists from Q12 on	4	5	0	2	2	0	0	0	1	0	0	0	
19	NUMBER ENTERING IN Q3	58	51	0	13	26	8	0	0	0	0	4	0	
20	Recidivists in Q3	0	3	0	1	1	1	0	0	0	0	0	0	
21	Recidivists in Q4	1	1	0	0	1	0	0	0	0	0	0	0	
22	Recidivists in Q5	1	4	0	1	2	1	0	0	0	0	0	0	
23	Recidivists in Q6	0	0	0	0	0	0	0	0	0	0	0	0	
24	Recidivists in Q7 + Q8	1	2	0	2	0	0	0	0	0	0	0	0	
25	Recidivists in Q9 + Q10	2	1	0	0	0	1	0	0	0	0	0	0	
26	Recidivists in Q11 + Q12	2	3	0	0	1	2	0	0	0	0	0	0	
27	Recidivists from Q13 on	2	0	0	0	0	0	0	0	0	0	0	0	
28	NUMBER ENTERING IN Q4	66	81	0	10	36	33	0	0	1	0	1	0	
29	Recidivists in Q4	0	2	0	0	1	1	0	0	0	0	0	0	
30	Recidivists in Q5	2	0	0	0	0	0	0	0	0	0	0	0	
31	Recidivists in Q6	2	1	0	0	1	0	0	0	0	0	0	0	
32	Recidivists in Q7	1	0	0	0	0	0	0	0	0	0	0	0	
33	Recidivists in Q8 + Q9	1	5	0	0	3	2	0	0	0	0	0	0	
34	Recidivists in Q10 + Q11	0	1	0	1	0	0	0	0	0	0	0	0	
35	Recidivists in Q12 + Q13	5	1	0	0	1	0	0	0	0	0	0	0	
36	Recidivists from Q14 on	2	4	0	1	1	2	0	0	0	0	0	0	

TABLE 15

ANNUAL REHABILITATION RECIDIVISTS
BY REHABILITATION PROGRAM - NON-PROBLEM DRINKERS

TABLE NO. 15B-3
PROJECT SD:ASAP
ANNUAL ENDING December, 1975

ROW NO.	EVALUATION MEASURE	NOT REFER	TOTAL TREAT. ENTER	TOTAL TREAT. DROP	TOTAL TREAT. NO SHOW	SPECIFIC MODALITY/COMB. ENTRIES						OTHER TREAT.	RANDOM CNTRL.	NON RANDO CNTRL
						DIS	PDDC	INPA-TIENT	OUTPA-TIENT	PDDC + AA	PDDC + TREAT.			
		1	2	3	4	5	6	7	8	9	10	11	12	13
1	NUMBER ENTERING IN Q5	61	121	5	17	70	23	0	1	4	0	1	0	
2	Recidivists in Q5	1	2	0	1	1	0	0	0	0	0	0	0	
3	Recidivists in Q6	0	0	0	0	0	0	0	0	0	0	0	0	
4	Recidivists in Q7	1	3	0	1	0	2	0	0	0	0	0	0	
5	Recidivists in Q8	1	2	0	0	0	2	0	0	0	0	0	0	
6	Recidivists in Q9 + Q10	0	4	0	0	4	0	0	0	0	0	0	0	
7	Recidivists in Q11 + Q12	1	3	0	0	2	0	0	0	1	0	0	0	
8	Recidivists in Q13 + Q14	3	2	0	2	0	0	0	0	0	0	0	0	
9	Recidivists from Q15 on	2	1	0	0	1	0	0	0	0	0	0	0	
10	NUMBER ENTERING IN Q6	37	98	2	22	57	14	0	1	0	0	2	0	
11	Recidivists in Q6	0	0	0	0	0	0	0	0	0	0	0	0	
12	Recidivists in Q7	0	0	0	0	0	0	0	0	0	0	0	0	
13	Recidivists in Q8	0	2	0	0	0	2	0	0	0	0	0	0	
14	Recidivists in Q9	0	2	0	0	2	0	0	0	0	0	0	0	
15	Recidivists in Q10 + Q11	2	2	0	0	2	0	0	0	0	0	0	0	
16	Recidivists in Q12 + Q13	3	2	1	0	1	0	0	0	0	0	0	0	
17	Recidivists in Q14 + Q15	0	2	0	0	1	1	0	0	0	0	0	0	
18	Recidivists from Q16 on	0	0	0	0	0	0	0	0	0	0	0	0	
19	NUMBER ENTERING IN Q7	27	83	0	33	41	8	0	0	0	0	1	0	
20	Recidivists in Q7	1	2	0	0	2	0	0	0	0	0	0	0	
21	Recidivists in Q8	0	0	0	0	0	0	0	0	0	0	0	0	
22	Recidivists in Q9	0	3	0	3	0	0	0	0	0	0	0	0	
23	Recidivists in Q10	2	2	0	0	2	0	0	0	0	0	0	0	
24	Recidivists in Q11 + Q12	1	5	0	3	2	0	0	0	0	0	0	0	
25	Recidivists in Q13 + Q14	0	1	0	1	0	0	0	0	0	0	0	0	
26	Recidivists in Q15 + Q16	0	3	0	2	0	1	0	0	0	0	0	0	
27	Recidivists from Q17 on													
28	NUMBER ENTERING IN Q8	56	122	2	36	43	35	0	0	2	0	4	0	
29	Recidivists in Q8	0	4	0	0	1	3	0	0	0	0	0	0	
30	Recidivists in Q9	3	3	0	1	1	1	0	0	0	0	0	0	
31	Recidivists in Q10	0	4	0	2	2	0	0	0	0	0	0	0	
32	Recidivists in Q11	1	3	0	1	1	1	0	0	0	0	0	0	
33	Recidivists in Q12 + Q13	0	4	0	1	1	2	0	0	0	0	0	0	
34	Recidivists in Q14 + Q15	1	2	0	1	1	0	0	0	0	0	0	0	
35	Recidivists in Q16 + Q17	1	0	0	0	0	0	0	0	0	0	0	0	
36	Recidivists from Q18 on													

TABLE 15

ANNUAL REHABILITATION RECIDIVISTS BY REHABILITATION PROGRAM - NON-PROBLEM DRINKERS

TABLE NO. 15C-3
PROJECT SD:ASAP
ANNUAL ENDING December, 1975

ROW NO.	EVALUATION MEASURE	NOT REFER	TOTAL TREAT. ENTER	TOTAL TREAT. DROP	TOTAL TREAT. NO SHOW	SPECIFIC MODALITY/COMB. ENTRIES						OTHER TREAT.	RANDOM CNTRL.	NON RANDO CNTRL
						DIS	PDDC	INPA-TIENT	OUTPA-TIENT	PDDC + AA	PDDC + TREAT.			
		1	2	3	4	5	6	7	8	9	10	11	12	13
1	NUMBER ENTERING IN Q9	33	110	2	30	19	52	0	0	1	0	6	23	
2	Recidivists in Q9	1	1	0	1	0	0	0	0	0	0	0	0	
3	Recidivists in Q10	0	5	0	2	2	1	0	0	0	0	0	1	
4	Recidivists in Q11	0	4	0	2	2	0	0	0	0	0	0	2	
5	Recidivists in Q12	0	4	1	2	0	1	0	0	0	0	0	1	
6	Recidivists in Q13 + Q14	0	3	0	2	1	0	0	0	0	0	0	0	
7	Recidivists in Q15 + Q16	3	4	0	1	1	2	0	0	0	0	0	0	
8	Recidivists in Q17 + Q18													
9	Recidivists from Q19 on													
10	NUMBER ENTERING IN Q10	14	105	1	52	22	30	0	0	0	0	0	17	
11	Recidivists in Q10	0	2	1	1	0	0	0	0	0	0	0	0	
12	Recidivists in Q11	0	5	0	5	0	0	0	0	0	0	0	0	
13	Recidivists in Q12	0	1	0	0	1	0	0	0	0	0	0	0	
14	Recidivists in Q13	0	3	0	3	0	0	0	0	0	0	0	0	
15	Recidivists in Q14 + Q15	2	4	0	1	1	2	0	0	0	0	0	2	
16	Recidivists in Q16 + Q17	0	0	0	0	0	0	0	0	0	0	0	0	
17	Recidivists in Q18 + Q19													
18	Recidivists from Q20 on													
19	NUMBER ENTERING IN Q11	12	73	2	29	9	30	0	0	0	0	3	11	
20	Recidivists in Q11	0	0	0	0	0	0	0	0	0	0	0	0	
21	Recidivists in Q12	0	0	0	0	0	0	0	0	0	0	0	0	
22	Recidivists in Q13	1	0	0	0	0	0	0	0	0	0	0	0	
23	Recidivists in Q14	0	2	0	0	0	2	0	0	0	0	0	0	
24	Recidivists in Q15 + Q16	0	2	0	1	0	1	0	0	0	0	0	0	
25	Recidivists in Q17 + Q18													
26	Recidivists in Q19 + Q20													
27	Recidivists from Q21 on													
28	NUMBER ENTERING IN Q12	6	86	2	33	15	36	0	0	0	0	0	19	
29	Recidivists in Q12	1	3	0	0	0	3	0	0	0	0	0	0	
30	Recidivists in Q13	1	0	0	0	0	0	0	0	0	0	0	0	
31	Recidivists in Q14	0	2	0	2	0	0	0	0	0	0	0	0	
32	Recidivists in Q15	0	3	0	1	1	1	0	0	0	0	0	0	
33	Recidivists in Q16 + Q17	0	0	0	0	0	0	0	0	0	0	0	0	
34	Recidivists in Q18 + Q19													
35	Recidivists in Q20 + Q21													
36	Recidivists from Q22 on													

TABLE 15

ANNUAL REHABILITATION RECIDIVISTS
BY REHABILITATION PROGRAM - NON-PROBLEM DRINKERS

TABLE NO. 15D-3
PROJECT SD:ASAP
ANNUAL ENDING December, 1975

ROW NO.	EVALUATION MEASURE	NOT REFER	TOTAL TREAT. ENTER	TOTAL TREAT. DROP	TOTAL TREAT. NO SHOW	SPECIFIC MODALITY/COMB. ENTRIES						OTHER TREAT.	RANDOM CNTRL.	NON RANDOM CNTRL
						DIS	PDDC	INPA-TIENT	OUTPA-TIENT	PDDC + AA	PDDC + TREAT.			
		1	2	3	4	5	6	7	8	9	10	11	12	13
1	NUMBER ENTERING IN Q13	8	60	0	20	16	24	0	0	0	0	0	8	
2	Recidivists in Q13	0	0	0	0	0	0	0	0	0	0	0	0	
3	Recidivists in Q14	0	1	0	0	1	0	0	0	0	0	0	0	
4	Recidivists in Q15	0	1	0	0	0	1	0	0	0	0	0	1	
5	Recidivists in Q16	2	0	0	0	0	0	0	0	0	0	0	0	
6	Recidivists in Q17 + Q18													
7	Recidivists in Q19 + Q20													
8	Recidivists in Q21 + Q22													
9	Recidivists from Q23 on													
10	NUMBER ENTERING IN Q14	4	73	0	29	23	21	0	0	0	0	0	10	
11	Recidivists in Q14	1	0	0	0	0	0	0	0	0	0	0	0	
12	Recidivists in Q15	0	1	0	1	0	0	0	0	0	0	0	1	
13	Recidivists in Q16	0	0	0	0	0	0	0	0	0	0	0	1	
14	Recidivists in Q17													
15	Recidivists in Q18 + Q19													
16	Recidivists in Q20 + Q21													
17	Recidivists in Q22 + Q23													
18	Recidivists from Q24 on													
19	NUMBER ENTERING IN Q15	9	61	1	19	15	26	0	0	0	0	0	22	
20	Recidivists in Q15	0	1	0	0	1	0	0	0	0	0	0	0	
21	Recidivists in Q16	1	0	0	0	0	0	0	0	0	0	0	1	
22	Recidivists in Q17													
23	Recidivists in Q18													
24	Recidivists in Q19 + Q20													
25	Recidivists in Q21 + Q22													
26	Recidivists in Q23 + Q24													
27	Recidivists from Q25 on													
28	NUMBER ENTERING IN Q16	4	61	0	21	24	16	0	0	0	0	0	23	
29	Recidivists in Q16	0	0	0	0	0	0	0	0	0	0	0	0	
30	Recidivists in Q17													
31	Recidivists in Q18													
32	Recidivists in Q19													
33	Recidivists in Q20 + Q21													
34	Recidivists in Q22 + Q23													
35	Recidivists in Q24 + Q25													
36	Recidivists from Q26 on													

TABLE 15

Tables 15A1-D1, A2-D2, and A3-D3 represent data for problem drinkers, unidentified drinker type, and non-problem drinkers, respectively. These tables are based on a total of 8494 cases with case data complete enough to permit tracking and the determination of recidivism. Individuals classified as problem drinkers and non-problem drinkers correspond to ODPP guidelines for those classifications (Tables 15A1, 15B1, 15C1, 15D1, 15A3, 15B3, 15C3, 15D3). The unidentified class (Tables 15A2, 15B2, 15C2, 15D2) represents cases in which sufficient information was not available to determine drinker type or cases in which drinker type was not communicated to evaluation.

Description of Column Headings

1. Not Referred: This column represents those cases in which referral was <u>not</u> affected as part of the court sentence.

2. Total Treatment Enter: The total number of cases referred by courts to rehabilitation alternatives and entering rehabilitation modalities, including dropouts after initial entry.

3. Total Treatment Drop: Total cases referred to rehabilitation countermeasure(s) but failing to complete after initial entry.

4. Total Treatment No Show: Total cases referred to rehabilitation countermeasure(s) but failing to enter.

5. DIS: Total entering and not dropping out of Driver Improvement School (one session alcohol safety school).

6. PDDC: Total cases entering Problem Drinker Driver Classes and not dropping out. PDDC is a four-session (1 per week x 2 hours duration) alcohol safety school designed primarily for problem drinkers.

7.	Inpatient:	Total cases entering and not dropping out of referral to innatient alcohol treatment programs. Referral consists of individual and group therapy/counseling.
8.	Outpatient:	Total cases entering and not dropping out of referral to out-patient treatment programs. Referral consists of combination group and individual therapy/ counseling.
9.	PDDC + AA	Total cases entering and not dropping combination referral to PDDC and Alcoholics Anonymous.
10.	PDDC + Treatment:	Total cases entering and not dropping PDDC and inpatient or outpatient alcohol treatment programs.
11.	Other Treatment:	Total cases entering and not dropping out of treatments or treatment combinations not listed in columns 5-10. Includes AA, outpatient or inpatient treatment plus AA.
12.	Random Control:	This column represents cases randomly selected to receive no forms of rehabilitation.

REFERENCES

Cutler, S. J. and Ederer, F. Maximum utilization of the life table method in analyzing survival. Journal of Chronic Diseases, December, 1958, 699-712.

Reis, R. E. SD:ASAP Analytic Study No. 6, An analysis of alcohol rehabilitation efforts, University of South Dakota, May, 1975.